European Food Safety Authority

ZOONOSES MONITORING

NETHERLANDS

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: Netherlands

Reporting Year: 2011

Laboratory name	Description	Contribution
CVI	Central Veterinary Institute	
VMDC	Veterinary Microbiological Diagnostic Centre	
PPE	Product Boards for Livestock, Meat ad Eggs	
PDV	Product Board Animal Feed	
GD	Animal Health Service	
RIVM	National Institute for Public Health and the Environment	
NVWA	Dutch Food and Consumer Product Safety Authority	

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 Netherlands 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.

Table Susceptible animal populations

* Only if different than current reporting year

		Number of herds or flocks		Number of slaughtered animals		Livestock numbers (live animals)		Number of holdings	
Animal species	Category of animals	Data	Year*	Data	Year*	Data	Year*	Data	Year*
Cattle (bovine animals)	meat production animals			47900		1207181			
	dairy cows and heifers			517110		1469720		22898	
	calves (under 1 year)			1453319		1235211			
	- in total			2018329		3912112		51119	
Ducks	- in total					900173		54	
Gallus gallus (fowl)	breeding flocks, unspecified - in total					8807772		395	
	laying hens			15218900		32672882		1012	
	broilers			490413200		46259050		654	
	mixed flocks/holdings			30900					
	- in total			505664400		101098652		2372	
Goats	milk goats							566	
	- in total			241039		380351		3541	
Pigs	breeding animals					1226662			

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	fattening pigs					5905007			
	- in total			12663714		12429138		7967	
Sheep	- in total			952535		1686868		48919	
Solipeds, domestic	horses - in total			3639					
Turkeys	- in total			1400		1724043		98	

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

2.1.2 Salmonella in foodstuffs

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 retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample		Single	25g	539	16	1	
Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample		Single	25g	496	17	0	
Meat from broilers (Gallus gallus) - meat products - raw but intended to be eaten cooked - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample		Single	25g	193	2	0	0
Meat from turkey - fresh - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample		Single	25g	123	1		
Meat from turkey - meat products - cooked, ready-to -eat - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample		Single	25g	34	2		
Meat from turkey - meat products - raw but intended to be eaten cooked - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample		Single	25g	10	1		

Table Salmonella in poultry meat and products thereof

	Salmonella spp., unspecified
Meat from broilers (Gallus gallus) - fresh - at retail - Surveillance	15
Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - at retail - Surveillance	17
Meat from broilers (Gallus gallus) - meat products - raw but intended to be eaten cooked - at retail - Surveillance	2
Meat from turkey - fresh - at retail - Surveillance	1
Meat from turkey - meat products - cooked, ready-to -eat - at retail - Surveillance	2
Meat from turkey - meat products - raw but intended to be eaten cooked - at retail - Surveillance	1

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 for manufacture - intended for manufacture of raw or low heat-treated products - at processing plant - Surveillance	NVWA	Suspect sampling	Official sampling	animal sample > milk		Single	25g	6	0		
Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance	NVWA	Suspect sampling	Official sampling	animal sample > milk		Single	25g	46	0		
Cheeses made from goats' milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance	NVWA	Suspect sampling	Official sampling	animal sample > milk		Single	25g	7	0		
Cheeses made from sheep's milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance	NVWA	Suspect sampling	Official sampling	animal sample > milk		Single	25g	4	0		
Dairy products (excluding cheeses) - ice-cream - made from raw or low heat-treated milk - at processing plant - Surveillance	NVWA	Suspect sampling	Official sampling	animal sample > milk		Single	25g	12	0		

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

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 retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample		Single	25g	8	0		
Live bivalve molluscs - unspecified - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample		Single	25g	7	0		
Seeds, sprouted - ready-to-eat - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample		Single	25g	17	0		
Vegetables - pre-cut - ready-to-eat - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample		Single	25g	12	0		
Live bivalve molluscs - mussels - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample		Single	25g	52	2	1	
Live bivalve molluscs - oysters - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample		Single	25g	75	1	1	
Other food - at retail - Surveillance (Fruitsalad)	NVWA	Objective sampling	Official sampling	food sample		Single	25g	423	0		
Other food of non-animal origin - at retail - Surveillance (Acacia leaf)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	1	0		
Other food of non-animal origin - at retail - Surveillance (Aniseed)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	1	0		
Other food of non-animal origin - at retail - Surveillance (Basil)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	10	2		
Other food of non-animal origin - at retail - Surveillance (Betel leaf)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	1	0		
Other food of non-animal origin - at retail - Surveillance (Black pepper)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	17	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
Other food of non-animal origin - at retail - Surveillance (Catering products cold storage)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	228	0		
Other food of non-animal origin - at retail - Surveillance (Catering products hot,presentation)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	538	0		
Other food of non-animal origin - at retail - Surveillance (Catering products, hot,storage)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	95	0		
Other food of non-animal origin - at retail - Surveillance (Celery)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	2	0		
Other food of non-animal origin - at retail - Surveillance (Chili powder)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	10	1		
Other food of non-animal origin - at retail - Surveillance (Cilantro)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	39	2		
Other food of non-animal origin - at retail - Surveillance (Cinnamon)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	10	0		
Other food of non-animal origin - at retail - Surveillance (Clove)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	5	0		
Other food of non-animal origin - at retail - Surveillance (Cumin)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	9	1		
Other food of non-animal origin - at retail - Surveillance (Curry)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	7	1		
Other food of non-animal origin - at retail - Surveillance (Garlic powder)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	1	0		
Other food of non-animal origin - at retail - Surveillance (Guichai leaf)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	2	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
Other food of non-animal origin - at retail - Surveillance (Houttuynia)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	5	1		
Other food of non-animal origin - at retail - Surveillance (Kardemom)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	5	0		
Other food of non-animal origin - at retail - Surveillance (Kayang leave limnophila)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	1	0		
Other food of non-animal origin - at retail - Surveillance (Kentjoer powder)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	1	0		
Other food of non-animal origin - at retail - Surveillance (Kinh gioi)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	4	1		
Other food of non-animal origin - at retail - Surveillance (La lot)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	8	8		
Other food of non-animal origin - at retail - Surveillance (Laos)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	1	0		
Other food of non-animal origin - at retail - Surveillance (Laurel)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	5	0		
Other food of non-animal origin - at retail - Surveillance (Malaysian papaya)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	1	0		
Other food of non-animal origin - at retail - Surveillance (Marjoram)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	2	0		
Other food of non-animal origin - at retail - Surveillance (Mint)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	12	3		
Other food of non-animal origin - at retail - Surveillance (Mixed spices)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	9	1		

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
Other food of non-animal origin - at retail - Surveillance (Mong Toi)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	2	1		
Other food of non-animal origin - at retail - Surveillance (Morning Glory)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	3	1		
Other food of non-animal origin - at retail - Surveillance (Ngo Gai)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	1	0		
Other food of non-animal origin - at retail - Surveillance (Ngo Om)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	2	0		
Other food of non-animal origin - at retail - Surveillance (Nutmeg)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	3	0		
Other food of non-animal origin - at retail - Surveillance (Oregano)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	1	0		
Other food of non-animal origin - at retail - Surveillance (Paprika powder)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	16	2		
Other food of non-animal origin - at retail - Surveillance (Parsley)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	13	4		
Other food of non-animal origin - at retail - Surveillance (Pennyworth)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	6	1		
Other food of non-animal origin - at retail - Surveillance (Rau day)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	2	0		
Other food of non-animal origin - at retail - Surveillance (Rau ram)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	5	3		
Other food of non-animal origin - at retail - Surveillance (Rosemary)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	4	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
Other food of non-animal origin - at retail - Surveillance (Sage)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	4	0		
Other food of non-animal origin - at retail - Surveillance (Spring onion)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	3	0		
Other food of non-animal origin - at retail - Surveillance (Star anise)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	4	0		
Other food of non-animal origin - at retail - Surveillance (Thyme)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	4	0		
Other food of non-animal origin - at retail - Surveillance (Tia To)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	3	0		
Other food of non-animal origin - at retail - Surveillance (Turneric)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	13	0		
Other food of non-animal origin - at retail - Surveillance (Water Mimosa)	NVWA	Objective sampling	Official sampling	food sample		Batch	25g	1	1		

	Salmonella spp., unspecified
Crustaceans - unspecified - cooked - at retail - Surveillance	
Live bivalve molluscs - unspecified - at retail - Surveillance	
Seeds, sprouted - ready-to-eat - at retail - Surveillance	

Table Salmonella in other food

	Salmonella spp., unspecified
Vegetables - pre-cut - ready-to-eat - at retail - Surveillance	
Live bivalve molluscs - mussels - at retail - Surveillance	1
Live bivalve molluscs - oysters - at retail - Surveillance	
Other food - at retail - Surveillance (Fruitsalad)	
Other food of non-animal origin - at retail - Surveillance (Acacia leaf)	
Other food of non-animal origin - at retail - Surveillance (Aniseed)	
Other food of non-animal origin - at retail - Surveillance (Basil)	2
Other food of non-animal origin - at retail - Surveillance (Betel leaf)	
Other food of non-animal origin - at retail - Surveillance (Black pepper)	
Other food of non-animal origin - at retail - Surveillance (Catering products cold storage)	
Other food of non-animal origin - at retail - Surveillance (Catering products hot,presentation)	
Other food of non-animal origin - at retail - Surveillance (Catering products, hot,storage)	

Table Salmonella in other food

	Salmonella spp., unspecified
Other food of non-animal origin - at retail - Surveillance (Celery)	
Other food of non-animal origin - at retail - Surveillance (Chili powder)	1
Other food of non-animal origin - at retail - Surveillance (Cilantro)	2
Other food of non-animal origin - at retail - Surveillance (Cinnamon)	
Other food of non-animal origin - at retail - Surveillance (Clove)	
Other food of non-animal origin - at retail - Surveillance (Cumin)	1
Other food of non-animal origin - at retail - Surveillance (Curry)	1
Other food of non-animal origin - at retail - Surveillance (Garlic powder)	
Other food of non-animal origin - at retail - Surveillance (Guichai leaf)	
Other food of non-animal origin - at retail - Surveillance (Houttuynia)	1
Other food of non-animal origin - at retail - Surveillance (Kardemom)	
Other food of non-animal origin - at retail - Surveillance (Kayang leave limnophila)	

Table Salmonella in other food

	Salmonella spp., unspecified
Other food of non-animal origin - at retail - Surveillance (Kentjoer powder)	
Other food of non-animal origin - at retail - Surveillance (Kinh gioi)	1
Other food of non-animal origin - at retail - Surveillance (La lot)	8
Other food of non-animal origin - at retail - Surveillance (Laos)	
Other food of non-animal origin - at retail - Surveillance (Laurel)	
Other food of non-animal origin - at retail - Surveillance (Malaysian papaya)	
Other food of non-animal origin - at retail - Surveillance (Marjoram)	
Other food of non-animal origin - at retail - Surveillance (Mint)	3
Other food of non-animal origin - at retail - Surveillance (Mixed spices)	1
Other food of non-animal origin - at retail - Surveillance (Mong Toi)	1
Other food of non-animal origin - at retail - Surveillance (Morning Glory)	1
Other food of non-animal origin - at retail - Surveillance (Ngo Gai)	

Table Salmonella in other food

	Salmonella spp., unspecified
Other food of non-animal origin - at retail - Surveillance (Ngo Om)	
Other food of non-animal origin - at retail - Surveillance (Nutmeg)	
Other food of non-animal origin - at retail - Surveillance (Oregano)	
Other food of non-animal origin - at retail - Surveillance (Paprika powder)	2
Other food of non-animal origin - at retail - Surveillance (Parsley)	4
Other food of non-animal origin - at retail - Surveillance (Pennyworth)	1
Other food of non-animal origin - at retail - Surveillance (Rau day)	
Other food of non-animal origin - at retail - Surveillance (Rau ram)	3
Other food of non-animal origin - at retail - Surveillance (Rosemary)	
Other food of non-animal origin - at retail - Surveillance (Sage)	
Other food of non-animal origin - at retail - Surveillance (Spring onion)	
Other food of non-animal origin - at retail - Surveillance (Star anise)	

Table Salmonella in other food

	Salmonella spp., unspecified
Other food of non-animal origin - at retail - Surveillance (Thyme)	
Other food of non-animal origin - at retail - Surveillance (Tia To)	
Other food of non-animal origin - at retail - Surveillance (Turneric)	
Other food of non-animal origin - at retail - Surveillance (Water Mimosa)	1

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 pig - fresh - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample		Single	25g	886	12	1	3
Meat from pig - minced meat - intended to be eaten cooked - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample		Single	25g	3	0		
Meat from pig - meat preparation - intended to be eaten raw - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample		Single	25g	11	0		
Meat from pig - meat preparation - intended to be eaten cooked - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample		Single	25g	1053	17		7
Meat from pig - meat products - cooked, ready-to-eat - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample		Single	25g	591	3		2
Meat from bovine animals - fresh - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample		Single	25g	756	1		
Meat from bovine animals - minced meat - intended to be eaten cooked - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample		Single	25g	100	0		
Meat from bovine animals - meat preparation - intended to be eaten cooked - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample		Single	25g	659	7		3
Meat from bovine animals - meat products - raw but intended to be eaten cooked - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample		Single	25g	646	3		1
Meat from bovine animals - meat products - cooked, ready-to-eat - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample		Single	25g	38	1		
Meat from sheep - fresh - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample		Single	25g	95	0		

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 horse - meat products - cooked, ready-to-eat - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample		Single	25g	6	0		
Meat from other animal species or not specified - meat preparation - intended to be eaten raw - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample		Single	25g	3	0		
Meat from other animal species or not specified - meat preparation - intended to be eaten cooked - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample		Single	25g	116	0		
Meat from other animal species or not specified - meat products - cooked, ready-to-eat - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample		Single	25g	161	0		
Meat from sheep - meat preparation - intended to be eaten cooked - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample		Single	25g	105	1		
Meat from sheep - meat products - cooked, ready-to -eat - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample		Single	25g	8	0		

	Salmonella spp., unspecified	S. 4,5,12:i:-
Meat from pig - fresh - at retail - Surveillance	8	
Meat from pig - minced meat - intended to be eaten cooked - at retail - Surveillance		
Meat from pig - meat preparation - intended to be eaten raw - at retail - Surveillance		

Table Salmonella in red meat and products thereof

	Salmonella spp., unspecified	S. 4,5,12:i:-
Meat from pig - meat preparation - intended to be eaten cooked - at retail - Surveillance	5	5
Meat from pig - meat products - cooked, ready-to-eat - at retail - Surveillance		1
Meat from bovine animals - fresh - at retail - Surveillance	1	
Meat from bovine animals - minced meat - intended to be eaten cooked - at retail - Surveillance		
Meat from bovine animals - meat preparation - intended to be eaten cooked - at retail - Surveillance	4	
Meat from bovine animals - meat products - raw but intended to be eaten cooked - at retail - Surveillance	2	
Meat from bovine animals - meat products - cooked, ready-to-eat - at retail - Surveillance	1	
Meat from sheep - fresh - at retail - Surveillance		
Meat from horse - meat products - cooked, ready-to-eat - at retail - Surveillance		
Meat from other animal species or not specified - meat preparation - intended to be eaten raw - at retail - Surveillance		
Meat from other animal species or not specified - meat preparation - intended to be eaten cooked - at retail - Surveillance		

Table Salmonella in red meat and products thereof

	Salmonella spp., unspecified	S. 4,5,12:i:-
Meat from other animal species or not specified - meat products - cooked, ready-to-eat - at retail - Surveillance		
Meat from sheep - meat preparation - intended to be eaten cooked - at retail - Surveillance	1	
Meat from sheep - meat products - cooked, ready-to -eat - at retail - Surveillance		

2.1.3 Salmonella in animals

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) - breeding flocks, unspecified - adult - Control and eradication programmes			Census	Official and industry sampling			yes				
Gallus gallus (fowl) - parent breeding flocks for egg production line - day-old chicks - Control and eradication programmes	42	PPE	Objective sampling	Official and industry sampling	environmental sample > delivery box liner		no	Flock	42	0	
Gallus gallus (fowl) - parent breeding flocks for egg production line - during rearing period - Control and eradication programmes	42	PPE	Objective sampling	Official and industry sampling	animal sample > faeces		no	Flock	42	0	
Gallus gallus (fowl) - parent breeding flocks for egg production line - adult - Control and eradication programmes	57	PPE	Census	Official and industry sampling	animal sample > faeces		yes	Flock	57	0	
Gallus gallus (fowl) - grandparent breeding flocks for egg production line - day-old chicks - Control and eradication programmes	11	PPE	Objective sampling	Official and industry sampling	environmental sample > delivery box liner		no	Flock	11	0	
Gallus gallus (fowl) - grandparent breeding flocks for egg production line - during rearing period - Control and eradication programmes	11	PPE	Objective sampling	Official and industry sampling	animal sample > faeces		no	Flock	11	0	
Gallus gallus (fowl) - grandparent breeding flocks for egg production line - adult - Control and eradication programmes	4	PPE	Census	Official and industry sampling	animal sample > faeces		yes	Flock	4	0	
Gallus gallus (fowl) - parent breeding flocks for broiler production line - day-old chicks - Control and eradication programmes	414	PPE	Objective sampling	Official and industry sampling	environmental sample > delivery box liner		no	Flock	414	0	

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 broiler production line - during rearing period - Control and eradication programmes	414	PPE	Objective sampling	Official and industry sampling	animal sample > faeces		no	Flock	414	0	
Gallus gallus (fowl) - parent breeding flocks for broiler production line - adult - Control and eradication programmes	601	PPE	Census	Official and industry sampling	animal sample > faeces		yes	Flock	601	0	
Gallus gallus (fowl) - grandparent breeding flocks for broiler production line - day-old chicks - Control and eradication programmes	118	PPE	Objective sampling	Official and industry sampling	environmental sample > delivery box liner		no	Flock	118	0	
Gallus gallus (fowl) - grandparent breeding flocks for broiler production line - during rearing period - Control and eradication programmes	118	PPE	Objective sampling	Official and industry sampling	animal sample > faeces		no	Flock	118	0	
Gallus gallus (fowl) - grandparent breeding flocks for broiler production line - adult - Control and eradication programmes	157	PPE	Census	Official and industry sampling	animal sample > faeces		yes	Flock	157	0	

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

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						
Gallus gallus (fowl) - grandparent breeding flocks for egg production line - day-old chicks - Control and eradication programmes						
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 - day-old chicks - Control and eradication programmes						
Gallus gallus (fowl) - parent breeding flocks for broiler production line - during rearing period - Control and eradication programmes						
Gallus gallus (fowl) - parent breeding flocks for broiler production line - adult - Control and eradication programmes						
Gallus gallus (fowl) - grandparent breeding flocks for broiler production line - day-old chicks - Control and eradication programmes						

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) - 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						

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:-
Cattle (bovine animals) - calves (under 1 year) - at farm - Monitoring	NVWA	Objective sampling		animal sample > faeces		Holding	175	25		4	
Cattle (bovine animals) - adult cattle over 2 years - at farm - Monitoring	GD	Unspecified	Industry sampling	animal sample		Animal	2664	38		13	
Sheep - at farm - Monitoring [1)]	GD	Suspect sampling	Industry sampling	animal sample		Animal	564	3			
Goats - at farm - Monitoring [2)]	GD		Industry sampling	animal sample		Animal	214	0			
Solipeds, domestic - horses - at farm - Monitoring	VMDC	Unspecified	Industry sampling	animal sample > faeces		Animal	147	5			
Cats - pet animals - unspecified - Surveillance (Other animals species, cats)	VMDC	Unspecified	Industry sampling	animal sample > faeces		Animal	280	3			
Cattle (bovine animals) - adult cattle over 2 years - at farm - Monitoring (feces)	GD	Unspecified	Industry sampling	animal sample > faeces		Animal	3369	248			
Dogs - pet animals - Clinical investigations (bacteriological culture)	VMDC	Unspecified	Industry sampling	animal sample > faeces		Animal	502	12			
Other animals - unspecified - Surveillance (Other animal species, wild birds)	VMDC	Unspecified	Industry sampling	animal sample > faeces		Animal	99	4			
Other animals - unspecified - Surveillance (Other animals species, primates)	VMDC	Unspecified	Industry sampling	animal sample > faeces		Animal	146	3			
Pigs - Monitoring (Sampling at farm and slaughterhouse)	PVV	Unspecified		animal sample > blood		Animal	212245	23343			
Pigs - unspecified - at farm - Monitoring	GD	Unspecified	Industry sampling	animal sample		Animal	2933	33		31	
Pigs - unspecified - at farm - Monitoring (feces)	GD	Unspecified	Industry sampling	animal sample		Animal	428	82			

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:-
Reptiles - unspecified - Surveillance (Other animals species, reptiles)	VMDC	Unspecified	Industry sampling	animal sample > faeces		Animal	19	5			
Rodents - unspecified - Surveillance (Other animals species, rodents)	VMDC	Unspecified	Industry sampling	animal sample > faeces		Animal	64	1			

	Salmonella spp., unspecified	S. 4,5,12:-:-	S. 4,5,12:d:-	S. 9,12:-:-	S. Agona	S. Dublin	S. Montevideo
Cattle (bovine animals) - calves (under 1 year) - at farm - Monitoring		5	1	1	1	9	4
Cattle (bovine animals) - adult cattle over 2 years - at farm - Monitoring	19					6	
Sheep - at farm - Monitoring [1)]	3						
Goats - at farm - Monitoring [2)]							
Solipeds, domestic - horses - at farm - Monitoring	5						
Cats - pet animals - unspecified - Surveillance (Other animals species, cats)	3						
Cattle (bovine animals) - adult cattle over 2 years - at farm - Monitoring (feces)	248						
Dogs - pet animals - Clinical investigations (bacteriological culture)	12						
Other animals - unspecified - Surveillance (Other animal species, wild birds)	4						

Table Salmonella in other animals

	Salmonella spp., unspecified	S. 4,5,12:-:-	S. 4,5,12:d:-	S. 9,12:-:-	S. Agona	S. Dublin	S. Montevideo
Other animals - unspecified - Surveillance (Other animals species, primates)	3						
Pigs - Monitoring (Sampling at farm and slaughterhouse)	23343						
Pigs - unspecified - at farm - Monitoring	2						
Pigs - unspecified - at farm - Monitoring (feces)	82						
Reptiles - unspecified - Surveillance (Other animals species, reptiles)	5						
Rodents - unspecified - Surveillance (Other animals species, rodents)	1						

Comments:

[1)] pathology

[2)] pathology

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 - during rearing period - Control and eradication programmes	1040	PPE	Objective sampling	Official and industry sampling	animal sample > faeces			Flock	1040	0	
Gallus gallus (fowl) - laying hens - adult - at farm - Control and eradication programmes	1839	PPE	Census	Official and industry sampling	animal sample > faeces		yes	Flock	1839	40	37
Gallus gallus (fowl) - broilers - day-old chicks - Control and eradication programmes	19578	PPE	Objective sampling	Official and industry sampling	environmental sample > delivery box liner		no	Flock	19578	49	
Gallus gallus (fowl) - broilers - before slaughter - at farm - Control and eradication programmes	19578	PPE	Census	Official and industry sampling	animal sample > faeces		yes	Flock	19578	554	1
Turkeys - breeding flocks, unspecified - adult - at farm - Control and eradication programmes			Census	Official and industry sampling			yes				
Turkeys - fattening flocks - before slaughter - at farm - Control and eradication programmes	173	PPE	Census	Official and industry sampling	animal sample > faeces		yes	Flock	173	6	

	S. Typhimurium	S. 1,4,[5],12:i:-	Salmonella spp., unspecified
Gallus gallus (fowl) - laying hens - during rearing period - Control and eradication programmes			
Gallus gallus (fowl) - laying hens - adult - at farm - Control and eradication programmes	3		
Gallus gallus (fowl) - broilers - day-old chicks - Control and eradication programmes	2		47

Table Salmonella in other poultry

	S. Typhimurium	S. 1,4,[5],12:i:-	Salmonella spp., unspecified
Gallus gallus (fowl) - broilers - before slaughter - at farm - Control and eradication programmes	26		527
Turkeys - breeding flocks, unspecified - adult - at farm - Control and eradication programmes			
Turkeys - fattening flocks - before slaughter - at farm - Control and eradication programmes			6

2.1.4 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 - final product - at feed mill - Surveillance	PDV	Unspecified	Official and industry sampling	feed sample		Batch	25g	1770	6	0	0
Compound feedingstuffs for pigs - final product - at feed mill - Surveillance	PDV	Unspecified	Official and industry sampling	feed sample		Batch	25g	2531	6	0	1
Compound feedingstuffs for poultry (non specified) - final product - at feed mill - Surveillance	PDV	Unspecified	Official and industry sampling	feed sample		Batch	25g	504	0		
Compound feedingstuffs for poultry - breeders - final product - at feed mill - Surveillance	PDV	Unspecified	Official and industry sampling	feed sample		Batch	25g	529	1	0	0
Compound feedingstuffs for poultry - laying hens - final product - at feed mill - Surveillance	PDV	Unspecified	Official and industry sampling	feed sample		Batch	25g	1839	6	1	0
Compound feedingstuffs for poultry - broilers - final product - at feed mill - Surveillance	PDV	Unspecified	Official and industry sampling	feed sample		Batch	25g	1461	0		
Pet food - at feed mill - Surveillance (Other compound feedingstuffs Pet food)	PDV	Unspecified	Official and industry sampling	feed sample		Batch	25g	520	0		
Pet food - at feed mill - Surveillance (Other compound feedingstuffs, Fur animals)	PDV	Unspecified	Official and industry sampling	feed sample		Batch	25g	5	0		
Pet food - at feed mill - Surveillance (Other compound feedingstuffs, Horses)	PDV	Unspecified	Official and industry sampling	feed sample		Batch	25g	47	0		
Pet food - at feed mill - Surveillance (Other compound feedingstuffs, rabbits)	PDV	Unspecified	Official and industry sampling	feed sample		Batch	25g	26	0		

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
Pet food - at feed mill - Surveillance (Other compound feedingstuffs, sheep and goats)	NVWA	Objective sampling	Official and industry sampling	feed sample		Batch	25g	65	0		

	Salmonella spp., unspecified
Compound feedingstuffs for cattle - final product - at feed mill - Surveillance	6
Compound feedingstuffs for pigs - final product - at feed mill - Surveillance	5
Compound feedingstuffs for poultry (non specified) - final product - at feed mill - Surveillance	
Compound feedingstuffs for poultry - breeders - final product - at feed mill - Surveillance	1
Compound feedingstuffs for poultry - laying hens - final product - at feed mill - Surveillance	5
Compound feedingstuffs for poultry - broilers - final product - at feed mill - Surveillance	
Pet food - at feed mill - Surveillance (Other compound feedingstuffs Pet food)	
Pet food - at feed mill - Surveillance (Other compound feedingstuffs, Fur animals)	
Pet food - at feed mill - Surveillance (Other compound feedingstuffs, Horses)	

Table Salmonella in compound feedingstuffs

	Salmonella spp., unspecified
Pet food - at feed mill - Surveillance (Other compound feedingstuffs, rabbits)	
Pet food - at feed mill - Surveillance (Other compound feedingstuffs, sheep and goats)	

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	PDV	Unspecified	Official and industry sampling	feed sample		Batch	25g	600	1	0	0
Feed material of land animal origin - meat meal - at feed mill - Surveillance	PDV	Unspecified	Official and industry sampling	feed sample		Batch	25g	15	1	0	0
Feed material of land animal origin - meat and bone meal - at feed mill - Surveillance	PDV	Unspecified	Official and industry sampling	feed sample		Batch	25g	4	0		
Feed material of land animal origin - bone meal - at feed mill - Surveillance	PDV	Unspecified	Official and industry sampling	feed sample		Batch	25g	17	0		
Feed material of land animal origin - poultry offal meal - at feed mill - Surveillance	PDV	Unspecified	Official and industry sampling	feed sample		Batch	25g	37	0		
Feed material of land animal origin - feather meal - at feed mill - Surveillance	PDV	Unspecified	Official and industry sampling	feed sample		Batch	25g	2	0		
Feed material of land animal origin - blood meal - at feed mill - Surveillance	PDV	Unspecified	Official and industry sampling	feed sample		Batch	25g	1	0		
Feed material of land animal origin - animal fat - at feed mill - Surveillance	PDV	Unspecified	Official and industry sampling	feed sample		Batch	25g	7	0		
Feed material of marine animal origin - fish meal - at feed mill - Surveillance	PDV	Unspecified	Official and industry sampling	feed sample		Batch	25g	123	0		
Feed material of marine animal origin - fish oil - at feed mill - Surveillance	PDV	Unspecified	Official and industry sampling	feed sample		Batch	25g	3	0		
Feed material of marine animal origin - fish silage - at feed mill - Surveillance	PDV	Unspecified	Official and industry sampling	feed sample		Batch	25g	0	0		

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 marine animal origin - other fish products - at feed mill - Surveillance	PDV	Unspecified	Official and industry sampling	feed sample		Batch	25g	0	0		
Other feed material - at feed mill - Surveillance (Other feed material of animal origin , petfood)	PDV	Unspecified	Official and industry sampling	feed sample		Batch	25g	21	0		

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

Table Salmonella in feed material of animal origin

	Salmonella spp., unspecified
Feed material of marine animal origin - fish meal - at feed mill - Surveillance	
Feed material of marine animal origin - fish oil - at feed mill - Surveillance	
Feed material of marine animal origin - fish silage - at feed mill - Surveillance	
Feed material of marine animal origin - other fish products - at feed mill - Surveillance	
Other feed material - at feed mill - Surveillance (Other feed material of animal origin , petfood)	

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	PDV	Unspecified	Official and industry sampling	feed sample		Batch	25g	271	1	0	0
Feed material of cereal grain origin - wheat derived - at feed mill - Surveillance	PDV	Unspecified	Official and industry sampling	feed sample		Batch	25g	990	1	1	0
Feed material of cereal grain origin - maize derived - at feed mill - Surveillance	PDV	Unspecified	Official and industry sampling	feed sample		Batch	25g	391	20	0	0
Feed material of oil seed or fruit origin - groundnut derived - at feed mill - Surveillance	PDV	Unspecified	Official and industry sampling	feed sample		Batch	25g	4	0		
Feed material of oil seed or fruit origin - rape seed derived - at feed mill - Surveillance	PDV	Unspecified	Official and industry sampling	feed sample		Batch	25g	2276	20	0	0
Feed material of oil seed or fruit origin - palm kernel derived - at feed mill - Surveillance	PDV	Unspecified	Official and industry sampling	feed sample		Batch	25g	59	0		
Feed material of oil seed or fruit origin - soya (bean) derived - at feed mill - Surveillance	PDV	Unspecified	Official and industry sampling	feed sample		Batch	25g	2531	18	4	0
Feed material of oil seed or fruit origin - sunflower seed derived - at feed mill - Surveillance	PDV	Unspecified	Official and industry sampling	feed sample		Batch	25g	645	3	0	0
Feed material of oil seed or fruit origin - linseed derived - at feed mill - Surveillance	PDV	Unspecified	Official and industry sampling	feed sample		Batch	25g	22	0		
Feed material of oil seed or fruit origin - other oil seeds derived - at feed mill - Surveillance	PDV	Unspecified	Official and industry sampling	feed sample		Batch	25g	10	0		
Other feed material - legume seeds and similar products - at feed mill - Surveillance	PDV	Unspecified	Official and industry sampling	feed sample		Batch	25g	10	0		

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
Other feed material - forages and roughages - at feed mill - Surveillance	PDV	Unspecified	Official and industry sampling	feed sample		Batch	25g	40	0		

	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	0
Feed material of cereal grain origin - maize derived - at feed mill - Surveillance	20
Feed material of oil seed or fruit origin - groundnut derived - at feed mill - Surveillance	
Feed material of oil seed or fruit origin - rape seed derived - at feed mill - Surveillance	20
Feed material of oil seed or fruit origin - palm kernel derived - at feed mill - Surveillance	
Feed material of oil seed or fruit origin - soya (bean) derived - at feed mill - Surveillance	14
Feed material of oil seed or fruit origin - sunflower seed derived - at feed mill - Surveillance	3
Feed material of oil seed or fruit origin - linseed derived - at feed mill - Surveillance	

Table Salmonella in other feed matter

	Salmonella spp., unspecified
Feed material of oil seed or fruit origin - other oil seeds derived - at feed mill - Surveillance	
Other feed material - legume seeds and similar products - at feed mill - Surveillance	
Other feed material - forages and roughages - at feed mill - Surveillance	

2.1.5 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													
Number of isolates serotyped	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of isolates per serovar													
S. Choleraesuis													
S. group B													
S. group C													
S. group D													

Table Salmonella serovars in animals

Serovar / Sources of isolates	Other poultry			Other animals - Clinical investigations			
	Monitoring	Clinical	Surveillance	Control program	Monitoring	Clinical	Surveillance
Number of isolates in the laboratory						33	
Number of isolates serotyped	0	0	0	0	0	27	0
Number of isolates per serovar							
S. Choleraesuis						3	
S. group B						15	
S. group C						2	
S. group D						7	

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										
Number of isolates serotyped	11	0	30	0	53	0	0	0	0	0
Number of isolates per serovar										
S. Enteritidis - PT 6					2					
S. Enteritidis - PT 8			1							
S. 21:-:-					1					
S. 4,5,12:d:-					1					
S. 4,5,12:i:-			6							
S. 6,7:-:1,5					1					
S. Brandenburg			1							
S. Derby	1		4							
S. Dublin	5									
S. Enteritidis			1		1					
S. Give			1							

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										
Number of isolates serotyped	11	0	30	0	53	0	0	0	0	0
Number of isolates per serovar										
S. Hadar					1					
S. Heidelberg					6					
S. Infantis			1		8					
S. Livingstone					1					
S. Minnesota					4					
S. Molade					1					
S. Ohio					1					
S. Ouakam					1					
S. Paratyphi B var. Java					22					
S. Rissen	1		1							
S. Senftenberg			1							

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										
Number of isolates serotyped	11	0	30	0	53	0	0	0	0	0
Number of isolates per serovar										
S. Thompson					1					
S. Typhimurium	4		12		1					
S. enterica subsp. enterica, rough			1							

Table Salmonella Enteritidis phagetypes in food

Phagetype	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										
Number of isolates phagetyped	0	0	2	0	3	0	0	0	0	0
Number of isolates per phagetype										
Other			1		1					
PT 6					2					
PT 8			1							

2.1.6 Antimicrobial resistance in Salmonella isolates

Table Antimicrobial susceptibility testing of Salmonella in Cattle (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						yes	
Number of isolates available in the laboratory					7						10	
Antimicrobials:	N	n	N	n	N	n	N	n	N	n	N	n
Fully sensitive					7	1					10	10
Resistant to 1 antimicrobial					7	0					10	0
Resistant to 2 antimicrobials					7	0					10	0
Resistant to 3 antimicrobials					7	0					10	0
Resistant to 4 antimicrobials					7	6					10	0
Resistant to >4 antimicrobials					7	0					10	0
Number of multiresistant S. Typhimurium - with penta resistance					7	0						
Number of multiresistant S. Typhimurium - resistant to other antimicrobials					7	6						

Table Antimicrobial susceptibility testing of Salmonella in Pigs

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		yes		yes	
Number of isolates available in the laboratory			7		3		3		6	
Antimicrobials:	N	n	N	n	N	n	N	n	N	n
Fully sensitive			7	1	3	0	3	2	6	3
Resistant to 1 antimicrobial			7	2	3	0	3	0	6	1
Resistant to 2 antimicrobials			7	1	3	0	3	0	6	1
Resistant to 3 antimicrobials			7	0	3	0	3	0	6	0
Resistant to 4 antimicrobials			7	2	3	3	3	1	6	1
Resistant to >4 antimicrobials			7	1	3	0	3	0	6	0
Number of multiresistant S. Typhimurium - with penta resistance			7	1	3	0				
Number of multiresistant S. Typhimurium - resistant to other antimicrobials			7	2	3	3				

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)	no		yes							
Number of isolates available in the laboratory	2		7							
Antimicrobials:	N	n	N	n	N	n	N	n	N	n
Aminoglycosides - Gentamicin	2	0	7	0						
Aminoglycosides - Kanamycin	2	0	7	0						
Aminoglycosides - Streptomycin	2	0	7	6						
Amphenicols - Chloramphenicol	2	0	7	4						
Amphenicols - Florfenicol	2	0	7	4						
Fluoroquinolones - Ciprofloxacin	2	0	7	2						
Fluoroquinolones - Enrofloxacin	2	0	7	2						
Penicillins - Ampicillin	2	0	7	6						
Quinolones - Nalidixic acid	2	0	7	2						
Tetracyclines - Tetracycline	2	0	7	6						
Trimethoprim			7	3						
Fully sensitive	2	2	7	1						
Resistant to 1 antimicrobial	2	0	7	0						
Resistant to 2 antimicrobials	2	0	7	0						
Resistant to 3 antimicrobials	2	0	7	0						
Resistant to 4 antimicrobials	2	0	7	1						
Resistant to >4 antimicrobials	2	0	7	6						
Cephalosporins - Cefotaxime	2	0	7	0						
Cephalosporins - Ceftazidim	2	0	7	0						

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)	no		yes							
Number of isolates available in the laboratory	2		7							
Antimicrobials:	N	n	N	n	N	n	N	n	N	n
Polymyxins - Colistin	2	0	7	0						
Sulfonamides - Sulfamethoxazol	2	0	7	6						

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

Salmonella	S. Enteritidis		S. Typhimurium		S. 1,4,[5],12:i:-		Salmonella spp.		S. Infantis	
Isolates out of a monitoring program (yes/no)									yes	
Number of isolates available in the laboratory									10	
Antimicrobials:	N	n	N	n	N	n	N	n	N	n
Fully sensitive									10	7
Resistant to 1 antimicrobial									10	1
Resistant to 2 antimicrobials									10	0
Resistant to 3 antimicrobials									10	1
Resistant to 4 antimicrobials									10	0
Resistant to >4 antimicrobials									10	1

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. Heidelberg		S. Infantis		S. Minnesota	
Isolates out of a monitoring program (yes/no)	yes		yes				yes				yes		yes		yes	
Number of isolates available in the laboratory	1		1				20				5		7		4	
Antimicrobials:	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n
Aminoglycosides - Gentamicin	1	0	1	0			20	0			5	0	7	0	4	0
Aminoglycosides - Kanamycin	1	0	1	0			20	3			5	0	7	0	4	3
Aminoglycosides - Streptomycin	1	0	1	0			20	9			5	0	7	1	4	0
Amphenicols - Chloramphenicol	1	0	1	0			20	1					7	1	4	0
Amphenicols - Florfenicol	1	0	1	0			20	2			5	1	7	0	4	0
Cephalosporins - 3rd generation cephalosporins											5	0				
Fluoroquinolones - Ciprofloxacin	1	0	1	0			20	19			5	5	7	5	4	0
Penicillins - Ampicillin	1	0	1	0			20	12			5	5	7	2	4	4
Quinolones - Nalidixic acid	1	0	1	0			20	18			5	5	7	5	4	0
Tetracyclines - Tetracycline	1	0	1	0			20	8			5	5	7	2	4	4
Trimethoprim	1	0	1	0			20	20			5	0	7	1	4	0
Fully sensitive	1	0	1	1			20	0			5	0	7	1	4	0
Resistant to 1 antimicrobial	1	1	1	0			20	0			5	0	7	0	4	0
Resistant to 2 antimicrobials	1	0	1	0			20	0			5	0	7	2	4	0
Resistant to 3 antimicrobials	1	0	1	0			20	4			5	0	7	1	4	0
Resistant to 4 antimicrobials	1	0	1	0			20	1			5	0	7	1	4	1
Resistant to >4 antimicrobials	1	0	1	0			20	15			5	5	7	2	4	3
Cephalosporins - Cefotaxime	1	0	1	0			20	7			5	4	7	1	4	3
Cephalosporins - Ceftazidim	1	0	1	0			20	7			5	4	7	1	4	3

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. Heidelberg		S. Infantis		S. Minnesota	
Isolates out of a monitoring program (yes/no)	yes		yes				yes				yes		yes		yes	
Number of isolates available in the laboratory	1		1				20				5		7		4	
Antimicrobials:	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n
Polymyxins - Colistin	1	1	1	0			20	1			5	0	7	0	4	2
Sulfonamides - Sulfamethoxazol	1	0	1	0			20	16			5	4	7	3	4	4

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. Braenderup		S. Paratyphi B var. Java	
Isolates out of a monitoring program (yes/no)	yes		yes		yes		yes		yes		yes	
Number of isolates available in the laboratory	26		4		2		16		14		5	
Antimicrobials:	N	n	N	n	N	n	N	n	N	n	N	n
Fully sensitive	26	25	4	1	2	1	16	15	14	14	5	1
Resistant to 1 antimicrobial	26	1	4	1	2	0	16	0	14	0	5	0
Resistant to 2 antimicrobials	26	0	4	1	2	0	16	0	14	0	5	3
Resistant to 3 antimicrobials	26	0	4	1	2	0	16	0	14	0	5	1
Resistant to 4 antimicrobials	26	0	4	0	2	1	16	1	14	0	5	0
Resistant to >4 antimicrobials	26	0	4	0	2	0	16	0	14	0	5	0
Number of multiresistant S. Typhimurium - with penta resistance			4	0	2	0						
Number of multiresistant S. Typhimurium - resistant to other antimicrobials			4	0	2	1						

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.	
Isolates out of a monitoring program (yes/no)	yes		yes				yes		yes	
Number of isolates available in the laboratory	5		11				45		42	
Antimicrobials:	N	n	N	n	N	n	N	n	N	n
Fully sensitive	5	3	11	10			45	0	42	24
Resistant to 1 antimicrobial	5	1	11	0			45	0	42	1
Resistant to 2 antimicrobials	5	1	11	0			45	6	42	5
Resistant to 3 antimicrobials	5	0	11	0			45	15	42	4
Resistant to 4 antimicrobials	5	0	11	0			45	7	42	2
Resistant to >4 antimicrobials	5	0	11	1			45	17	42	6
Number of multiresistant S. Typhimurium - with penta resistance			11	1						
Number of multiresistant S. Typhimurium - resistant to other antimicrobials			11	0						

Table Antimicrobial susceptibility testing of Salmonella in Cattle (bovine animals) - dairy cows

Salmonella	S. Dublin		S. Typhimurium	
Isolates out of a monitoring program (yes/no)	yes		yes	
Number of isolates available in the laboratory	18		11	
Antimicrobials:	N	n	N	n
Fully sensitive	18	18	11	6
Number of multiresistant S. Typhimurium - resistant to other antimicrobials			11	1
Number of multiresistant S. Typhimurium - with penta resistance			11	4
Resistant to 1 antimicrobial	18	0	11	0
Resistant to 2 antimicrobials	18	0	11	0
Resistant to 3 antimicrobials	18	0	11	0
Resistant to 4 antimicrobials	18	0	11	5
Resistant to >4 antimicrobials	18	0	11	0

Table Antimicrobial susceptibility testing of Salmonella in Cattle (bovine animals) - calves (under 1 year) - veal calves

Salmonella	S. Dublin		S. Typhimurium	
Isolates out of a monitoring program (yes/no)	yes		yes	
Number of isolates available in the laboratory	10		13	
Antimicrobials:	N	n	N	n
Fully sensitive	10	9	13	1
Number of multiresistant S. Typhimurium - resistant to other antimicrobials			13	3
Number of multiresistant S. Typhimurium - with penta resistance			13	1
Resistant to 1 antimicrobial	10	0	13	0
Resistant to 2 antimicrobials	10	0	13	0
Resistant to 3 antimicrobials	10	0	13	8
Resistant to 4 antimicrobials	10	1	13	1
Resistant to >4 antimicrobials	10	0	13	3

Table Antimicrobial susceptibility testing of Salmonella spp. in Meat from pig - at retail - Surveillance - Official sampling - food sample - quantitative data [Dilution method]

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

Salmonella spp.	Meat from pig - at retail - Surveillance																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	15																								
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	4	15	0	0	0	0	0	0	10	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0.25	32
Aminoglycosides - Kanamycin	16	15	0	0	0	0	0	0	0	0	0	0	15	0	0	0	0	0	0	0	0	0	0	4	128
Aminoglycosides - Streptomycin	32	15	8	0	0	0	0	0	0	0	0	0	2	2	2	1	1	2	5	0	0	0	0	2	128
Amphenicols - Chloramphenicol	16	15	4	0	0	0	0	0	0	0	0	0	0	7	4	0	0	4	0	0	0	0	0	2	64
Amphenicols - Florfenicol	16	15	4	0	0	0	0	0	0	0	0	0	2	9	0	2	1	1	0	0	0	0	0	2	64
Cephalosporins - Cefotaxime	2	15	0	0	0	0	2	10	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.06	4
Fluoroquinolones - Ciprofloxacin	1	15	0	0	2	10	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.008	8
Penicillins - Ampicillin	8	15	8	0	0	0	0	0	0	0	2	5	0	0	0	0	8	0	0	0	0	0	0	0.5	32
Quinolones - Nalidixic acid	16	15	3	0	0	0	0	0	0	0	0	0	11	1	0	0	0	3	0	0	0	0	0	4	64
Tetracyclines - Tetracycline	8	15	9	0	0	0	0	0	0	0	0	4	1	1	0	0	5	4	0	0	0	0	0	1	64
Cephalosporins - Ceftazidim	8	15	0	0	0	0	0	0	10	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0.25	16
Polymyxins - Colistin	2	15	0	0	0	0	0	0	0	0	0	15	0	0	0	0	0	0	0	0	0	0	0	2	4
Sulfonamides - Sulfamethoxazol		15	15	0	0	0	0	0	0	0	0	0	0	0	0	0	3	4	0	0	0	8	0	8	1024

Table Antimicrobial susceptibility testing of S. Dublin in Meat from bovine animals - at retail - Surveillance - Official sampling - food sample - quantitative data [Dilution method]

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

S. Dublin	Meat from bovine animals - at retail - Surveillance																								
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	4	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.25	32
Aminoglycosides - Kanamycin	16	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	4	128
Aminoglycosides - Streptomycin	32	2	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2	128
Amphenicols - Chloramphenicol	16	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	64
Amphenicols - Florfenicol	16	2	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	64
Cephalosporins - Cefotaxime	2	2	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.06	4
Fluoroquinolones - Ciprofloxacin	1	2	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.008	8
Penicillins - Ampicillin	8	2	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0.5	32
Quinolones - Nalidixic acid	16	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	4	64
Tetracyclines - Tetracycline	8	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	64
Trimethoprim	4	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	32
Cephalosporins - Ceftazidim	8	2	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.25	16
Polymyxins - Colistin	2	2	1	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2	4
Sulfonamides - Sulfamethoxazol		2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	8	1024

Table Antimicrobial susceptibility testing of Salmonella spp. in Meat from turkey - at retail - Surveillance - Official sampling - food sample - meat - quantitative data [Dilution method]

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

Salmonella spp.	Meat from turkey - at retail - Surveillance																								
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	4	2	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.25	32
Aminoglycosides - Kanamycin	16	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	4	128
Aminoglycosides - Streptomycin	32	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	128
Amphenicols - Chloramphenicol	16	2	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2	64
Amphenicols - Florfenicol	16	2	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2	64
Cephalosporins - Cefotaxime	2	2	1	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.06	4
Fluoroquinolones - Ciprofloxacin	1	2	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.008	8
Penicillins - Ampicillin	8	2	1	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0.5	32
Quinolones - Nalidixic acid	16	2	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	4	64
Tetracyclines - Tetracycline	8	2	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	64
Trimethoprim	4	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	32
Cephalosporins - Ceftazidim	8	2	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.25	16
Polymyxins - Colistin	2	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	4
Sulfonamides - Sulfamethoxazol		2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	8	1024

Table Antimicrobial susceptibility testing of S. Paratyphi B var. Java in Meat from broilers (Gallus gallus) - at retail - Surveillance - Official sampling - food sample - meat - quantitative data [Dilution method]

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

S. Paratyphi B var. Java	Meat from broilers (Gallus gallus) - at retail - Surveillance																								
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	4	20	0	0	0	0	0	0	19	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.25	32
Aminoglycosides - Kanamycin	16	20	3	0	0	0	0	0	0	0	0	0	17	0	0	0	0	0	3	0	0	0	0	4	128
Aminoglycosides - Streptomycin	32	20	9	0	0	0	0	0	0	0	0	0	0	0	0	11	3	3	3	0	0	0	0	2	128
Amphenicols - Chloramphenicol	16	20	1	0	0	0	0	0	0	0	0	0	0	7	12	0	0	1	0	0	0	0	0	2	64
Amphenicols - Florfenicol	16	20	2	0	0	0	0	0	0	0	0	0	5	6	7	2	0	0	0			0	0	2	64
Cephalosporins - Cefotaxime	2	20	7	0	0	0	0	2	7	4	0	0	0	7	0	0	0	0	0	0	0	0	0	.06	4
Fluoroquinolones - Ciprofloxacin	1	20	1	0	0	1	0	1	2	6	9	1	0	0	0	0	0	0	0	0	0	0	0	0.008	8
Penicillins - Ampicillin	8	20	12	0	0	0	0	0	0	0	0	3	5	0	0	0	12	0	0	0	0	0	0	0.5	32
Quinolones - Nalidixic acid	16	20	18	0	0	0	0	0	0	0	0	0	1	1	0	0	0	18	0	0	0	0	0	4	64
Tetracyclines - Tetracycline	8	20	8	0	0	0	0	0	0	0	0	3	7	2	0	0	0	8	0	0	0	0	0	1	64
Trimethoprim	4	20	20	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0.5	32
Cephalosporins - Ceftazidim	8	20	6	0	0	0	0	0	0	7	6	0	0	1	2	4	0	0	0	0	0	0	0	0.25	16
Sulfonamides - Sulfamethoxazol		20	20	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	16	0	8	1024

Table Antimicrobial susceptibility testing of Salmonella spp. in Meat from broilers (Gallus gallus) - at retail - Surveillance - Official sampling - food sample - meat - quantitative data [Dilution method]

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

Salmonella spp.	Meat from broilers (Gallus gallus) - at retail - Surveillance																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	27																								
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	4	27	0	0	0	0	0	0	16	9	2	0	0	0	0	0	0	0	0	0	0	0	0	0.25	32
Aminoglycosides - Kanamycin	16	27	5	0	0	0	0	0	0	0	0	0	22	0	0	0	0	0	5	0	0	0	0	4	128
Aminoglycosides - Streptomycin	32	27	3	0	0	0	0	0	0	0	0	0	3	12	5	4	3	0	0	0	0	0	0	2	128
Amphenicols - Chloramphenicol	16	27	2	0	0	0	0	0	0	0	0	0	1	15	9	1	0	1	0	0	0	0	0	2	64
Amphenicols - Florfenicol	16	27	0	0	0	0	0	0	0	0	0	0	3	17	7	0	0	0	0	0	0	0	0	2	64
Cephalosporins - Cefotaxime	2	27	8	0	0	0	1	10	5	3	0	0	0	8	0	0	0	0	0	0	0	0	0	0.06	4
Fluoroquinolones - Ciprofloxacin	1	27	0	0	1	12	0	0	2	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0.008	8
Penicillins - Ampicillin	8	27	10	0	0	0	0	0	0	0	6	6	4	1	0	0	10	0	0	0	0	0	0	0.5	32
Quinolones - Nalidixic acid	16	27	13	0	0	0	0	0	0	0	0	0	12	1	1	1	0	12	0	0	0	0	0	4	64
Tetracyclines - Tetracycline	8	27	14	0	0	0	0	0	0	0	0	6	6	1	0	0	1	13	0	0	0	0	0	1	64
Trimethoprim	4	27	2	0	0	0	0	0	0	20	5	0	0	0	0	0	2	0	0	0	0	0	0	0.5	32
Cephalosporins - Ceftazidim	8	27	7	0	0	0	0	0	4	10	5	0	1	0	4	3	0	0	0	0	0	0	0	0.25	16
Polymyxins - Colistin	2	27	3	0	0	0	0	0	0	0	0	24	2	1	0	0	0	0	0	0	0	0	0	2	4
Sulfonamides - Sulfamethoxazol		27	27	0	0	0	0	0	0	0	0	0	0	0	2	1	6	4	1	0	0	13	0	8	1024

Table Antimicrobial susceptibility testing of S. Typhimurium in Pigs - fattening pigs - animal sample - faeces - quantitative data [Dilution method]

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

S. Typhimurium	Pigs - fattening pigs																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	7																								
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	7	0						2	2	3													0.25	32
Aminoglycosides - Kanamycin	8	7	0										7											4	128
Aminoglycosides - Streptomycin	32	7	1											5	1				1					2	128
Amphenicols - Chloramphenicol	16	7	1											5	1			1						2	64
Amphenicols - Florfenicol	16	7	1										1	5				1						2	64
Cephalosporins - Cefotaxime	0.5	7	0				4	3																0.06	4
Fluoroquinolones - Ciprofloxacin	0.06	7	0		5	1	1																	0.008	4
Penicillins - Ampicillin	4	7	4								3						4							0.5	32
Quinolones - Nalidixic acid	16	7	0										7											4	64
Tetracyclines - Tetracycline	8	7	4									3					1	3						1	64
Trimethoprim	2	7	3							4							3							0.5	32
Cephalosporins - Ceftazidim	2	7	0						5	2														0.25	16
Sulfonamides - Sulfamethoxazol	256	7	4											3							4			8	1024

Table Antimicrobial susceptibility testing of Salmonella spp. in Spices and herbs - at retail - Surveillance - Official sampling - food sample (herbs) - quantitative data [Dilution method]

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

Salmonella spp.	Spices and herbs - at retail - Surveillance (herbs)																								
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	4	9	0	0	0	0	0	0	2	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0.25	32
Aminoglycosides - Kanamycin	16	9	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	4	128
Aminoglycosides - Streptomycin	32	9	0	0	0	0	0	0	0	0	0	0	2	3	4	0	0	0	0	0	0	0	0	2	128
Amphenicols - Chloramphenicol	16	9	0	0	0	0	0	0	0	0	0	0	1	8	0	0	0	0	0	0	0	0	0	2	64
Amphenicols - Florfenicol	16	9	0	0	0	0	0	0	0	0	0	0	3	6	0	0	0	0	0	0	0	0	0	2	64
Cephalosporins - Cefotaxime	2	9	0	0	0	0	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.06	4
Fluoroquinolones - Ciprofloxacin	1	9	0	0	0	8	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.008	8
Penicillins - Ampicillin	8	9	0	0	0	0	0	0	0	0	7	2	0	0	0	0	0	0	0	0	0	0	0	0.5	32
Quinolones - Nalidixic acid	16	9	1	0	0	0	0	0	0	0	0	0	8	0	0	0	0	1	0	0	0	0	0	4	64
Tetracyclines - Tetracycline	8	9	1	0	0	0	0	0	0	0	0	8	0	0	0	0	1	0	0	0	0	0	0	1	64
Trimethoprim	4	9	0	0	0	0	0	0	0	8	1	0	0	0	0	0	0	0	0	0	0	0	0	0.5	32
Cephalosporins - Ceftazidim	8	9	0	0	0	0	0	0	8	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.25	16
Polymyxins - Colistin	2	9	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	2	4
Sulfonamides - Sulfamethoxazol		9	9	0	0	0	0	0	0	0	0	0	0	0	0	3	4	2	0	0	0	0	0	8	1024

Table Antimicrobial susceptibility testing of S. Typhimurium in Gallus gallus (fowl) - broilers - quantitative data [Dilution method]

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

S. Typhimurium	Gallus gallus (fowl) - broilers																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	11																								
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	11	0						1	8	2														
Aminoglycosides - Kanamycin	8	11	0										11												
Aminoglycosides - Streptomycin	32	11	1											6	4		1								
Amphenicols - Chloramphenicol	16	11	1										5	5				1							
Amphenicols - Florfenicol	16	11	1									1	8	1		1									
Cephalosporins - Cefotaxime	0.5	11	0				7	4																	
Fluoroquinolones - Ciprofloxacin	0.06	11	0		4	7																			
Penicillins - Ampicillin	4	11	1								9	1					1								
Quinolones - Nalidixic acid	16	11	0										11												
Tetracyclines - Tetracycline	8	11	1									10					1								
Trimethoprim	2	11	0							11															
Cephalosporins - Ceftazidim	2	11	0						10	1															
Sulfonamides - Sulfamethoxazol	256	11	1											6	4							1			

Table Antimicrobial susceptibility testing of Salmonella spp. in Spices and herbs - at retail - Surveillance - Official sampling - food sample (spices) - quantitative data [Dilution method]

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

Salmonella spp.	Spices and herbs - at retail - Surveillance (spices)																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	27																								
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	4	27	1	0	0	0	0	0	10	12	3	1	0	0	1	0	0	0	0	0	0	0	0	0.25	32
Aminoglycosides - Kanamycin	16	27	1	0	0	0	0	0	0	0	0	0	26	0	0	0	0	0	1	0	0	0	0	4	128
Aminoglycosides - Streptomycin	32	27	1	0	0	0	0	0	0	0	0	0	5	5	15	1	0	0	1	0	0	0	0	2	128
Amphenicols - Chloramphenicol	16	27	1	0	0	0	0	0	0	0	0	0	0	24	2	0	0	1	0	0	0	0	0	2	64
Amphenicols - Florfenicol	16	27	1	0	0	0	0	0	0	0	0	0	4	22	0	0	0	1	0	0	0	0	0	2	64
Cephalosporins - Cefotaxime	2	27	0	0	0	0	12	12	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.06	4
Fluoroquinolones - Ciprofloxacin	1	27	1	0	4	20	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.008	8
Penicillins - Ampicillin	8	27	1	0	0	0	0	0	0	1	15	9	1	0	0	0	1	0	0	0	0	0	0	0.5	32
Quinolones - Nalidixic acid	16	27	2	0	0	0	0	0	0	0	0	0	24	1	0	0	0	2	0	0	0	0	0	4	64
Tetracyclines - Tetracycline	8	27	1	0	0	0	0	0	0	0	0	23	3	0	0	0	0	1	0	0	0	0	0	1	64
Cephalosporins - Ceftazidim	8	27	0	0	0	0	0	0	16	10	1	0	0	0	0	0	0	0	0	0	0	0	0	0.25	16
Polymyxins - Colistin	2	27	27	0	0	0	0	0	0	0	0	0	0	24	2	0	0	1	0	0	0	0	0	2	4
Sulfonamides - Sulfamethoxazol		27	27	0	0	0	0	0	0	0	0	0	0	0	0	2	10	10	2	0	0	3	0	8	1024

Table Antimicrobial susceptibility testing of S. Typhimurium in Gallus gallus (fowl) - laying hens - quantitative data [Dilution method]

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

S. Typhimurium	Gallus gallus (fowl) - laying hens																								
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	2	4	0							3	1														
Aminoglycosides - Kanamycin	8	4	0										4												
Aminoglycosides - Streptomycin	32	4	2											1		1		2							
Amphenicols - Chloramphenicol	16	4	0										1	3											
Amphenicols - Florfenicol	16	4	0										3	1											
Cephalosporins - Cefotaxime	0.5	4	0				1	2	1																
Fluoroquinolones - Ciprofloxacin	0.06	4	0			4																			
Penicillins - Ampicillin	4	4	1								2	1					1								
Quinolones - Nalidixic acid	16	4	0										4												
Tetracyclines - Tetracycline	8	4	1									3						1							
Trimethoprim	2	4	0							4															
Cephalosporins - Ceftazidim	2	4	0						3	1															
Sulfonamides - Sulfamethoxazol	256	4	2											2								2			

Table Antimicrobial susceptibility testing of S. Typhimurium in Cattle (bovine animals) - dairy cows - quantitative data [Dilution method]

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

S. Typhimurium	Cattle (bovine animals) - dairy cows																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	11																								
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	11	0							9	2														
Aminoglycosides - Kanamycin	8	11	0										11												
Aminoglycosides - Streptomycin	32	11	5											3	3			4	1						
Amphenicols - Chloramphenicol	16	11	4										2	5				4							
Amphenicols - Florfenicol	16	11	4										5	2				4							
Cephalosporins - Cefotaxime	0.5	11	0				6	5																	
Fluoroquinolones - Ciprofloxacin	0.06	11	0		7	4																			
Penicillins - Ampicillin	4	11	5								5	1					5								
Quinolones - Nalidixic acid	16	11	0										11												
Tetracyclines - Tetracycline	8	11	5									6				2	2	1							
Trimethoprim	2	11	1							10							1								
Cephalosporins - Ceftazidim	2	11	0						11																
Sulfonamides - Sulfamethoxazol	256	11	5											5	1							5			

Table Antimicrobial susceptibility testing of S. Typhimurium in Cattle (bovine animals) - calves (under 1 year) - veal calves - quantitative data [Dilution method]

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

S. Typhimurium	Cattle (bovine animals) - calves (under 1 year) - veal calves																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	13																								
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	13	0						2	10	1														
Aminoglycosides - Kanamycin	8	13	0										13												
Aminoglycosides - Streptomycin	32	13	12												1		1	2	9						
Amphenicols - Chloramphenicol	16	13	1										1	11				1							
Amphenicols - Florfenicol	16	13	1										8	4		1									
Cephalosporins - Cefotaxime	0.5	13	0				10	1	2																
Fluoroquinolones - Ciprofloxacin	0.06	13	0		9	4																			
Penicillins - Ampicillin	4	13	4								8	1					4								
Quinolones - Nalidixic acid	16	13	0										12	1											
Tetracyclines - Tetracycline	8	13	12										1			1		11							
Trimethoprim	2	13	2							11							2								
Cephalosporins - Ceftazidim	2	13	0						10	3															
Sulfonamides - Sulfamethoxazol	256	13	12												1							12			

Table Antimicrobial susceptibility testing of S. Dublin in Cattle (bovine animals) - dairy cows - quantitative data [Dilution method]

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

S. Dublin	Cattle (bovine animals) - dairy cows																								
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	18	0						9	9															
Aminoglycosides - Kanamycin	8	18	0										18												
Aminoglycosides - Streptomycin	32	18	0											5	13										
Amphenicols - Chloramphenicol	16	18	0										6	12											
Amphenicols - Florfenicol	16	18	0										11	7											
Cephalosporins - Cefotaxime	0.5	18	0				17	1																	
Fluoroquinolones - Ciprofloxacin	0.06	18	0		17	1																			
Penicillins - Ampicillin	4	18	0							5	13														
Quinolones - Nalidixic acid	16	18	0										17	1											
Tetracyclines - Tetracycline	8	18	0								2	14	2												
Trimethoprim	2	18	0							18															
Cephalosporins - Ceftazidim	2	18	0						18																
Sulfonamides - Sulfamethoxazol	256	18	0											18											

Table Antimicrobial susceptibility testing of S. Dublin in Cattle (bovine animals) - calves (under 1 year) - veal calves - quantitative data [Dilution method]

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

S. Dublin	Cattle (bovine animals) - calves (under 1 year) - veal calves																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	10																								
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						7	3															
Aminoglycosides - Kanamycin	8	10	0										10												
Aminoglycosides - Streptomycin	32	10	1											4	4	1			1						
Amphenicols - Chloramphenicol	16	10	0										3	7											
Amphenicols - Florfenicol	16	10	0										10												
Cephalosporins - Cefotaxime	0.5	10	0				8	2																	
Fluoroquinolones - Ciprofloxacin	0.06	10	0		6	4																			
Penicillins - Ampicillin	4	10	1							4	4	1					1								
Quinolones - Nalidixic acid	16	10	0										10												
Tetracyclines - Tetracycline	8	10	1									9						1							
Trimethoprim	2	10	0							10															
Cephalosporins - Ceftazidim	2	10	0						8	2															
Sulfonamides - Sulfamethoxazol	256	10	1											8	1							1			

Table Antimicrobial susceptibility testing of S. Paratyphi B var. Java in Gallus gallus (fowl) - broilers - quantitative data [Dilution method]

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

S. Paratyphi B var. Java	Gallus gallus (fowl) - broilers																								
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	1						37	7				1											
Aminoglycosides - Kanamycin	8	45	7										38						7						
Aminoglycosides - Streptomycin	32	45	17												4	24	4	8	5						
Amphenicols - Chloramphenicol	16	45	0									1	10	19	15										
Amphenicols - Florfenicol	16	45	0									7	20	16	2										
Cephalosporins - Cefotaxime	0.5	45	8				5	16	11	5				8											
Fluoroquinolones - Ciprofloxacin	0.06	45	29		4	9	3		10	8	10	1													
Penicillins - Ampicillin	4	45	31								6	2	6	2			29								
Quinolones - Nalidixic acid	16	45	29										13	3				29							
Tetracyclines - Tetracycline	8	45	13								1	18	13					13							
Trimethoprim	2	45	43							2							43								
Cephalosporins - Ceftazidim	2	45	8						6	24	6	1	1		3	4									
Sulfonamides - Sulfamethoxazol	256	45	37											7	1						1	36			

Table Antimicrobial susceptibility testing of S. Paratyphi B var. Java in Gallus gallus (fowl) - laying hens - quantitative data [Dilution method]

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

S. Paratyphi B var. Java	Gallus gallus (fowl) - laying hens																								
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						4	1															
Aminoglycosides - Kanamycin	8	5	0										5												
Aminoglycosides - Streptomycin	32	5	1											1		3	1								
Amphenicols - Chloramphenicol	16	5	0										1	4											
Amphenicols - Florfenicol	16	5	0										5												
Cephalosporins - Cefotaxime	0.5	5	0				2	3																	
Fluoroquinolones - Ciprofloxacin	0.06	5	4		1				1	3															
Penicillins - Ampicillin	4	5	0								4		1												
Quinolones - Nalidixic acid	16	5	4										1					4							
Tetracyclines - Tetracycline	8	5	0									5													
Trimethoprim	2	5	4								1						4								
Cephalosporins - Ceftazidim	2	5	0						1	4															
Sulfonamides - Sulfamethoxazol	256	5	0											4	1										

Table Antimicrobial susceptibility testing of S. Enteritidis in Gallus gallus (fowl) - broilers - quantitative data [Dilution method]

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

S. Enteritidis	Gallus gallus (fowl) - broilers																								
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						3	2															
Aminoglycosides - Kanamycin	8	5	0										5												
Aminoglycosides - Streptomycin	32	5	1									2	2				1								
Amphenicols - Chloramphenicol	16	5	0											5											
Amphenicols - Florfenicol	16	5	0										4	1											
Cephalosporins - Cefotaxime	0.5	5	0				1	4																	
Fluoroquinolones - Ciprofloxacin	0.06	5	1			4			1																
Penicillins - Ampicillin	4	5	0								2	2	1												
Quinolones - Nalidixic acid	16	5	1										4					1							
Tetracyclines - Tetracycline	8	5	0									5													
Trimethoprim	2	5	0							3	2														
Cephalosporins - Ceftazidim	2	5	0						4	1															
Sulfonamides - Sulfamethoxazol	256	5	1											4								1			

Table Antimicrobial susceptibility testing of S. Enteritidis in Gallus gallus (fowl) - laying hens - quantitative data [Dilution method]

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

S. Enteritidis	Gallus gallus (fowl) - laying hens																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	26																								
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	0						15	11															
Aminoglycosides - Kanamycin	8	26	0											26											
Aminoglycosides - Streptomycin	32	26	0									4	20	2											
Amphenicols - Chloramphenicol	16	26	0										5	21											
Amphenicols - Florfenicol	16	26	0										22	4											
Cephalosporins - Cefotaxime	0.5	26	0				11	15																	
Fluoroquinolones - Ciprofloxacin	0.06	26	1		1	24			1																
Penicillins - Ampicillin	4	26	0								11	13	2												
Quinolones - Nalidixic acid	16	26	1										24	1				1							
Tetracyclines - Tetracycline	8	26	0								4	21	1												
Trimethoprim	2	26	0							26															
Cephalosporins - Ceftazidim	2	26	0						23	3															
Sulfonamides - Sulfamethoxazol	256	26	0											13	13										

Table Antimicrobial susceptibility testing of S. Braenderup in Gallus gallus (fowl) - laying hens - quantitative data [Dilution method]

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

S. Braenderup	Gallus gallus (fowl) - laying hens																								
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	14	0						1	12	1														
Aminoglycosides - Kanamycin	8	14	0										14												
Aminoglycosides - Streptomycin	32	14	0											5	7	2									
Amphenicols - Chloramphenicol	16	14	0											12	2										
Amphenicols - Florfenicol	16	14	0											14											
Cephalosporins - Cefotaxime	0.5	14	0				10	3	1																
Fluoroquinolones - Ciprofloxacin	0.06	14	0		11	3																			
Penicillins - Ampicillin	4	14	0								13	1													
Quinolones - Nalidixic acid	16	14	0										13	1											
Tetracyclines - Tetracycline	8	14	0									14													
Trimethoprim	2	14	0							14															
Cephalosporins - Ceftazidim	2	14	0						13	1															
Sulfonamides - Sulfamethoxazol	256	14	0											14											

Table Antimicrobial susceptibility testing of S. Derby in Pigs - fattening pigs - quantitative data [Dilution method]

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

S. Derby	Pigs - fattening pigs																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	3																								
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	3	0							3															
Aminoglycosides - Kanamycin	8	3	0										3												
Aminoglycosides - Streptomycin	32	3	0												3										
Amphenicols - Chloramphenicol	16	3	0											1	2										
Amphenicols - Florfenicol	16	3	0											3											
Cephalosporins - Cefotaxime	0.5	3	0					2	1																
Fluoroquinolones - Ciprofloxacin	0.06	3	0		1	2																			
Penicillins - Ampicillin	4	3	1									2					1								
Quinolones - Nalidixic acid	16	3	0										3												
Tetracyclines - Tetracycline	8	3	1									1	1					1							
Trimethoprim	2	3	1							2							1								
Cephalosporins - Ceftazidim	2	3	0							1	2														
Sulfonamides - Sulfamethoxazol	256	3	1											2								1			

Table Antimicrobial susceptibility testing of S. Infantis in Gallus gallus (fowl) - quantitative data [Dilution method]

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

S. Infantis	Gallus gallus (fowl)																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	10																								
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						4	5	1														
Aminoglycosides - Kanamycin	8	10	0										10												
Aminoglycosides - Streptomycin	32	10	1											6		3	1								
Amphenicols - Chloramphenicol	16	10	0											7	3										
Amphenicols - Florfenicol	16	10	0										2	6	2										
Cephalosporins - Cefotaxime	0.5	10	1					6	3					1											
Fluoroquinolones - Ciprofloxacin	0.06	10	2		1	7				1	1														
Penicillins - Ampicillin	4	10	1								5	3	1				1								
Quinolones - Nalidixic acid	16	10	2										7	1				2							
Tetracyclines - Tetracycline	8	10	1									8	1					1							
Trimethoprim	2	10	1							8	1						1								
Cephalosporins - Ceftazidim	2	10	1							7	2			1											
Sulfonamides - Sulfamethoxazol	256	10	2											7	1							2			

Table Antimicrobial susceptibility testing of Other serovars in Gallus gallus (fowl) - broilers - quantitative data [Dilution method]

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

Other serovars	Gallus gallus (fowl) - broilers																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	42																								
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	42	1						13	24	4			1											
Aminoglycosides - Kanamycin	8	42	5										37			1			4						
Aminoglycosides - Streptomycin	32	42	3										6	14	14	5	2	1							
Amphenicols - Chloramphenicol	16	42	0										6	32	4										
Amphenicols - Florfenicol	16	42	0										18	22	2										
Cephalosporins - Cefotaxime	0.5	42	9				13	17	3					9											
Fluoroquinolones - Ciprofloxacin	0.06	42	9		21	12			3	4	2														
Penicillins - Ampicillin	4	42	12							1	21	8					12								
Quinolones - Nalidixic acid	16	42	8										32	2				8							
Tetracyclines - Tetracycline	8	42	12								3	23	3	1			1	11							
Trimethoprim	2	42	2							37	3						2								
Cephalosporins - Ceftazidim	2	42	9						14	16	3		1		4	4									
Sulfonamides - Sulfamethoxazol	256	42	14											21	7							14			

Table Antimicrobial susceptibility testing of Other serovars in Gallus gallus (fowl) - laying hens - quantitative data [Dilution method]

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

Other serovars	Gallus gallus (fowl) - laying hens																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	16																								
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	8	3														
Aminoglycosides - Kanamycin	8	16	0										16												
Aminoglycosides - Streptomycin	32	16	0										2	8	4	2									
Amphenicols - Chloramphenicol	16	16	0										4	12											
Amphenicols - Florfenicol	16	16	0										9	7											
Cephalosporins - Cefotaxime	0.5	16	0				7	9																	
Fluoroquinolones - Ciprofloxacin	0.06	16	0		9	7																			
Penicillins - Ampicillin	4	16	1								12	3					1								
Quinolones - Nalidixic acid	16	16	0										16												
Tetracyclines - Tetracycline	8	16	1									15						1							
Trimethoprim	2	16	1							15							1								
Cephalosporins - Ceftazidim	2	16	0						9	6	1														
Sulfonamides - Sulfamethoxazol	256	16	1											14	1							1			

Table Antimicrobial susceptibility testing of Other serovars in Cattle (bovine animals) - quantitative data [Dilution method]

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

Other serovars	Cattle (bovine animals)																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	10																								
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							8	2														
Aminoglycosides - Kanamycin	8	10	0										10												
Aminoglycosides - Streptomycin	32	10	0											5	4	1									
Amphenicols - Chloramphenicol	16	10	0											10											
Amphenicols - Florfenicol	16	10	0										6	4											
Cephalosporins - Cefotaxime	0.5	10	0				3	7																	
Fluoroquinolones - Ciprofloxacin	0.06	10	0		1	9																			
Penicillins - Ampicillin	4	10	0								7	2	1												
Quinolones - Nalidixic acid	16	10	0										9	1											
Tetracyclines - Tetracycline	8	10	0									9	1												
Trimethoprim	2	10	0							10															
Cephalosporins - Ceftazidim	2	10	0						5	5															
Sulfonamides - Sulfamethoxazol	256	10	0											7	2	1									

Table Antimicrobial susceptibility testing of Other serovars in Pigs - quantitative data [Dilution method]

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

Other serovars	Pigs																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	6																								
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	6	0						3	3															
Aminoglycosides - Kanamycin	8	6	0										5	1											
Aminoglycosides - Streptomycin	32	6	1										1	2	1	1			1						
Amphenicols - Chloramphenicol	16	6	0										1	3	2										
Amphenicols - Florfenicol	16	6	0										2	4											
Cephalosporins - Cefotaxime	0.5	6	0				2	3	1																
Fluoroquinolones - Ciprofloxacin	0.06	6	0			6																			
Penicillins - Ampicillin	4	6	1								2	3					1								
Quinolones - Nalidixic acid	16	6	0										6												
Tetracyclines - Tetracycline	8	6	1								1	3		1				1							
Trimethoprim	2	6	2							4							2								
Cephalosporins - Ceftazidim	2	6	0						3	1	2														
Sulfonamides - Sulfamethoxazol	256	6	2											3	1							2			

Table Antimicrobial susceptibility testing of S. 1,4,[5],12:i:- in Gallus gallus (fowl) - laying hens - quantitative data [Dilution method]

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

S. 1,4,[5],12:i:-	Gallus gallus (fowl) - laying hens																								
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							2															
Aminoglycosides - Kanamycin	8	2	0										2												
Aminoglycosides - Streptomycin	32	2	1												1				1						
Amphenicols - Chloramphenicol	16	2	0											2											
Amphenicols - Florfenicol	16	2	0										1	1											
Cephalosporins - Cefotaxime	0.5	2	0				1	1																	
Fluoroquinolones - Ciprofloxacin	0.06	2	0		1	1																			
Penicillins - Ampicillin	4	2	1								1						1								
Quinolones - Nalidixic acid	16	2	0										2												
Tetracyclines - Tetracycline	8	2	1									1						1							
Trimethoprim	2	2	0							2															
Cephalosporins - Ceftazidim	2	2	0						2																
Sulfonamides - Sulfamethoxazol	256	2	1												1							1			

Table Antimicrobial susceptibility testing of S. 1,4,[5],12:i:- in Pigs - fattening pigs - quantitative data [Dilution method]

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

S. 1,4,[5],12:i:-	Pigs - fattening pigs																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	3																								
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	3	0							2	1														
Aminoglycosides - Kanamycin	8	3	0										3												
Aminoglycosides - Streptomycin	32	3	3																3						
Amphenicols - Chloramphenicol	16	3	0											3											
Amphenicols - Florfenicol	16	3	0										1	2											
Cephalosporins - Cefotaxime	0.5	3	0				1	2																	
Fluoroquinolones - Ciprofloxacin	0.06	3	0			3																			
Penicillins - Ampicillin	4	3	3														3								
Quinolones - Nalidixic acid	16	3	0										3												
Tetracyclines - Tetracycline	8	3	3															3							
Trimethoprim	2	3	0							3															
Cephalosporins - Ceftazidim	2	3	0						2	1															
Sulfonamides - Sulfamethoxazol	256	3	3																			3			

Table Antimicrobial susceptibility testing of S. 1,4,[5],12:i:- in Cattle (bovine animals) - quantitative data [Dilution method]

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

S. 1,4,[5],12:i:-	Cattle (bovine animals)																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	7																								
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	7	0						1	6															
Aminoglycosides - Kanamycin	8	7	0										7												
Aminoglycosides - Streptomycin	32	7	6											1					6						
Amphenicols - Chloramphenicol	16	7	0										1	6											
Amphenicols - Florfenicol	16	7	0										2	5											
Cephalosporins - Cefotaxime	0.5	7	0				6	1																	
Fluoroquinolones - Ciprofloxacin	0.06	7	0		1	6																			
Penicillins - Ampicillin	4	7	6								1						6								
Quinolones - Nalidixic acid	16	7	0										7												
Tetracyclines - Tetracycline	8	7	6									1						6							
Trimethoprim	2	7	0							7															
Cephalosporins - Ceftazidim	2	7	0						4	3															
Sulfonamides - Sulfamethoxazol	256	7	6												1							6			

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

Test Method Used
Broth dilution

Standard methods used for testing
NCCLS/CLSI

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

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

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Tetracyclines	Tetracycline	EFSA	8	
Trimethoprim	Trimethoprim	EFSA	2	
Polymyxins	Colistin		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
Broth dilution

Standard methods used for testing
NCCLS/CLSI

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Aminoglycosides	Gentamicin	NON-EFSA	4	
	Kanamycin		16	
	Streptomycin	EFSA	32	
Amphenicols	Chloramphenicol	EFSA	16	
	Florfenicol		16	
Cephalosporins	Cefotaxime	NON-EFSA	2	
	Ceftazidim		8	
Fluoroquinolones	Ciprofloxacin	NON-EFSA	1	
Penicillins	Ampicillin	NON-EFSA	8	
Quinolones	Nalidixic acid	EFSA	16	
Sulfonamides	Sulfonamides	EFSA	256	
Tetracyclines	Tetracycline	EFSA	8	
Trimethoprim	Trimethoprim	NON-EFSA	4	

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

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Polymyxins	Colistin		2	

2.2 CAMPYLOBACTERIOSIS

2.2.1 General evaluation of the national situation

2.2.2 Campylobacter in foodstuffs

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 retail	NVWA	Objective sampling	Official and industry sampling	food sample		Single	25g	874	3		
Meat from pig - minced meat - intended to be eaten raw - at retail	NVWA	Objective sampling	Official and industry sampling	food sample > meat		Single	25g	105	0		
Meat from bovine animals - fresh - at retail	NVWA	Objective sampling	Official and industry sampling	food sample > meat		Single	25g	743	2		
Meat from sheep - fresh - at retail	NVWA	Objective sampling	Official and industry sampling	food sample		Single	25g	92	2		
Meat from bovine animals - meat preparation - intended to be eaten raw - at retail - Surveillance	NVWA	Objective sampling	Official and industry sampling	food sample		Single	25g	7	0		
Meat, mixed meat - at retail - Surveillance	NVWA	Objective sampling	Official and industry sampling	food sample		Single	25g	68	0		
Milk from other animal species or unspecified - raw milk - intended for direct human consumption - at farm - Surveillance (Milk Horse raw)	NVWA	Objective sampling	Official and industry sampling	food sample		Single	25g	128	0		

Table Campylobacter in other food

	C. lari	C. upsaliensis	Thermophilic Campylobacter spp., unspecified
Meat from pig - fresh - at retail			3
Meat from pig - minced meat - intended to be eaten raw - at retail			
Meat from bovine animals - fresh - at retail			2
Meat from sheep - fresh - at retail			2
Meat from bovine animals - meat preparation - intended to be eaten raw - at retail - Surveillance			
Meat, mixed meat - at retail - Surveillance			
Milk from other animal species or unspecified - raw milk - intended for direct human consumption - at farm - Surveillance (Milk Horse 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) - fresh - at processing plant	NVWA	Objective sampling	Official sampling	food sample > meat		Single	25g	180	62	15	34
Meat from broilers (Gallus gallus) - fresh - at retail	NVWA	Objective sampling	Official and industry sampling	food sample > meat		Single	25g	500	114		
Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - at retail	NVWA	Objective sampling	Official and industry sampling	food sample > meat		Single	25g	539	23		
Meat from broilers (Gallus gallus) - minced meat - intended to be eaten cooked - at retail	NVWA	Objective sampling	Official and industry sampling	food sample > meat		Single	25g	20	1		
Meat from turkey - meat preparation - intended to be eaten cooked - at processing plant	NVWA	Objective sampling	Official and industry sampling	food sample > meat		Single	25g	17	1		
Meat from turkey - fresh - at retail - Surveillance	NVWA	Objective sampling	Official and industry sampling	food sample		Single	25g	106	10		

	C. lari	C. upsaliensis	Thermophilic Campylobacter spp., unspecified
Meat from broilers (Gallus gallus) - fresh - at processing plant			13
Meat from broilers (Gallus gallus) - fresh - at retail			114
Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - at retail			23

Table Campylobacter in poultry meat

	C. lari	C. upsaliensis	Thermophilic Campylobacter spp., unspecified
Meat from broilers (Gallus gallus) - minced meat - intended to be eaten cooked - at retail			1
Meat from turkey - meat preparation - intended to be eaten cooked - at processing plant			1
Meat from turkey - fresh - at retail - Surveillance			10

2.2.3 Campylobacter in animals

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
Sheep - at farm - Monitoring [1)]	GD		Industry sampling	animal sample		Animal	564	5			
Goats - at farm - Monitoring [2)]	GD		Industry sampling	animal sample		Animal	214	3			
Dogs	VMDC	Unspecified	Industry sampling	animal sample > faeces		Animal	172	87			
Cats	VMDC	Unspecified	Industry sampling	animal sample > faeces		Animal	61	18			
Cattle (bovine animals) - adult cattle over 2 years - at farm - Monitoring	GD	Unspecified	Industry sampling	animal sample		Animal	2680	14			
Other animals - unspecified - Surveillance (Other animals , wild birds miscellaneous species)	VMDC	Unspecified	Industry sampling	animal sample > faeces		Animal	65	11			
Other animals - unspecified - Surveillance (Other farm,wild or pet animals, miscellaneous species)	VMDC	Unspecified	Industry sampling	animal sample > faeces		Animal	122	14			
Other animals - unspecified - Surveillance (Other farm,wild or pet animals, primates)	VMDC	Unspecified	Industry sampling	animal sample > faeces		Animal	153	30			
Other animals - unspecified - Surveillance (Other farm,wild or pet animals, rodents)	VMDC	Unspecified	Industry sampling	animal sample > faeces		Animal	42	4			

Table Campylobacter in animals

	C. upsaliensis	Thermophilic Campylobacter spp., unspecified
Sheep - at farm - Monitoring [1)]		5
Goats - at farm - Monitoring [2)]		3
Dogs		87
Cats		18
Cattle (bovine animals) - adult cattle over 2 years - at farm - Monitoring		14
Other animals - unspecified - Surveillance (Other animals , wild birds miscellaneous species)		11
Other animals - unspecified - Surveillance (Other farm,wild or pet animals, miscellaneous species)		14
Other animals - unspecified - Surveillance (Other farm,wild or pet animals, primates)		30
Other animals - unspecified - Surveillance (Other farm,wild or pet animals, rodents)		4

Comments:

[1)] pathology

[2)] pathology

2.2.4 Antimicrobial resistance in Campylobacter isolates

Table Antimicrobial susceptibility testing of Campylobacter in Pigs

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	156		3			
Antimicrobials:	N	n	N	n	N	n
Fully sensitive	156	6	3	0		
Resistant to 1 antimicrobial	156	31	3	1		
Resistant to 2 antimicrobials	156	96	3	2		
Resistant to 3 antimicrobials	156	23	3	0		
Resistant to 4 antimicrobials	156	0	3	0		
Resistant to >4 antimicrobials	156	0	3	0		

Footnote:

Resistance to one or more antimicrobial classes was calculated by using susceptibility results for ciprofloxacin, erythromycin, gentamicin, streptomycin and tetracyclin as described by EFSA.

Table Antimicrobial susceptibility testing of Campylobacter in Cattle (bovine animals) - calves (under 1 year) - veal calves - at farm - animal sample - faeces

Campylobacter	C. coli		C. jejuni	
Isolates out of a monitoring program (yes/no)	yes		yes	
Number of isolates available in the laboratory	68		67	
Antimicrobials:	N	n	N	n
Fully sensitive	68	2	67	9
Resistant to 1 antimicrobial	68	9	67	24
Resistant to 2 antimicrobials	68	28	67	28
Resistant to 3 antimicrobials	68	19	67	6
Resistant to 4 antimicrobials	68	8	67	0
Resistant to >4 antimicrobials	68	2	67	0

Footnote:

Resistance to one or more antimicrobial classes was calculated by using susceptibility results for ciprofloxacin, erythromycin, gentamicin, streptomycin and tetracyclin as described by EFSA.

Table Antimicrobial susceptibility testing of Campylobacter in Gallus gallus (fowl) - broilers - at slaughterhouse - Monitoring - Objective sampling - Official sampling - animal sample - caecum

Campylobacter	C. coli		C. jejuni	
Isolates out of a monitoring program (yes/no)	yes		yes	
Number of isolates available in the laboratory	18		104	
Antimicrobials:	N	n	N	n
Fully sensitive	18	9	104	26
Resistant to 1 antimicrobial	18	4	104	30
Resistant to 2 antimicrobials	18	5	104	45
Resistant to 3 antimicrobials	18	0	104	3
Resistant to 4 antimicrobials	18	0	104	0
Resistant to >4 antimicrobials	18	0	104	0

Footnote:

Resistance to one or more antimicrobial classes was calculated by using susceptibility results for ciprofloxacin, erythromycin, gentamicin, streptomycin and tetracyclin as described by EFSA.

Table Antimicrobial susceptibility testing of Campylobacter in Cattle (bovine animals) - dairy cows - at slaughterhouse - Monitoring - Objective sampling - Official sampling - animal sample - faeces

Campylobacter	C. coli		C. jejuni	
Isolates out of a monitoring program (yes/no)	yes		yes	
Number of isolates available in the laboratory	3		41	
Antimicrobials:	N	n	N	n
Fully sensitive	3	1	41	3
Resistant to 1 antimicrobial	3	0	41	0
Resistant to 2 antimicrobials	3	2	41	2
Resistant to 3 antimicrobials	3	0	41	1
Resistant to 4 antimicrobials	3	0	41	3
Resistant to >4 antimicrobials	3	0	41	0

Footnote:

Resistance to one or more antimicrobial classes was calculated by using susceptibility results for ciprofloxacin, erythromycin, gentamicin, streptomycin and tetracyclin as described by EFSA.

Table Antimicrobial susceptibility testing of Campylobacter in Turkeys - fattening flocks - at farm - animal sample - faeces (Faeces was collected from the floor of the farm. Animals were derived from fattening or meat production farms.)

Campylobacter	C. coli		C. jejuni	
Isolates out of a monitoring program (yes/no)	yes		yes	
Number of isolates available in the laboratory	9		35	
Antimicrobials:	N	n	N	n
Fully sensitive	9	3	35	6
Resistant to 1 antimicrobial	9	0	35	21
Resistant to 2 antimicrobials	9	2	35	8
Resistant to 3 antimicrobials	9	1	35	0
Resistant to 4 antimicrobials	9	3	35	0
Resistant to >4 antimicrobials	9	0	35	0

Footnote:

Resistance to one or more antimicrobial classes was calculated by using susceptibility results for ciprofloxacin, erythromycin, gentamicin, streptomycin and tetracyclin as described by EFSA.

Table Antimicrobial susceptibility testing of C. coli in Cattle (bovine animals) - calves (under 1 year) - veal calves - at farm - animal sample - faeces - quantitative data [Dilution method]

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

C. coli	Cattle (bovine animals) - calves (under 1 year) - veal calves - at farm																							
Isolates out of a monitoring program (yes/no)	yes																							
Number of isolates available in the laboratory	68																							
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	68	3						22	40	2	1				2		1						0.25	32
Aminoglycosides - Neomycin	2	68	27							25	14	2				1	3	23						0.5	64
Aminoglycosides - Streptomycin	4	68	51								15	1	1	1	7	25	11	3	4					1	128
Amphenicols - Chloramphenicol	16	68	4									2	17	31	14	3			1					2	128
Fluoroquinolones - Ciprofloxacin	1	68	57					6	5					9	31	17								0.12	16
Penicillins - Ampicillin	8	68	58										1	9	23	22		13						0.25	32
Quinolones - Nalidixic acid	16	68	57										1	6	4			21	36					1	128
Tetracyclines - Tetracycline	2	68	66								1	1					1	65						0.5	64
Macrolides - Clarithromycin	32	68	27							1	1	14	16	8	1			27						0.5	64
Macrolides - Erythromycin	8	68	28							1	1	21	11	6	1			27						0.5	64
Macrolides - Tulathromycin	16	68	27							24	14	3				2	3	22						0.5	64
Sulfonamides - Sulfamethoxazol	256	68	27											1	4	11	18	6	1	6	13	8		8	1024

Footnote:

Values for "lowest" and "highest" are applicable to all susceptibility tests in animals in Campylobacter (coli and jejuni).

Table Antimicrobial susceptibility testing of C. jejuni in Cattle (bovine animals) - calves (under 1 year) - veal calves - at farm - animal sample - faeces - quantitative data [Dilution method]

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

C. jejuni	Cattle (bovine animals) - calves (under 1 year) - veal calves - at farm																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	67																								
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	67	0						62	4	1														
Aminoglycosides - Neomycin	1	67	8							55	4				4	3	1								
Aminoglycosides - Streptomycin	4	67	6								61				3		1		2						
Amphenicols - Chloramphenicol	16	67	1									21	32	13			1								
Fluoroquinolones - Ciprofloxacin	0.5	67	37					25	4	1				6	19	12									
Penicillins - Ampicillin	8	67	19								1	2	23	22	4	2		13							
Quinolones - Nalidixic acid	16	67	38									2	15	10	2	1		8	29						
Tetracyclines - Tetracycline	1	67	53							13	1			1	1	1	5	45							
Macrolides - Clarithromycin	8	67	0							2	16	28	16	5											
Macrolides - Erythromycin	4	67	1							5	26	27	8			1									
Macrolides - Tulathromycin	16	67	1							52	11	2		1				1							
Sulfonamides - Sulfamethoxazol	256	67	2											1	2	9	25	24	4	1	1				

Table Antimicrobial susceptibility testing of C. coli in Gallus gallus (fowl) - broilers - before slaughter - at slaughterhouse - Monitoring - Objective sampling - Official sampling - animal sample - caecum - quantitative data [Dilution method]

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

C. coli	Gallus gallus (fowl) - broilers - before slaughter - at slaughterhouse - Monitoring																								
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	18	0						12	6															
Aminoglycosides - Neomycin	2	18	1							13	2	2		1											
Aminoglycosides - Streptomycin	4	18	3								15				2	1									
Amphenicols - Chloramphenicol	16	18	0										9	9											
Fluoroquinolones - Ciprofloxacin	1	18	8					6	3	1			2	2	3	1									
Penicillins - Ampicillin	8	18	7										1	10	2	3		2							
Quinolones - Nalidixic acid	16	18	8										3	6	1		1	7							
Tetracyclines - Tetracycline	2	18	8							5	4	1						8							
Macrolides - Clarithromycin	32	18	0							2	4	5	4	1		2									
Macrolides - Erythromycin	8	18	2							1	4	9	1	1			2								
Macrolides - Tulathromycin	16	18	2							10	4	1	1			1	1								
Sulfonamides - Sulfamethoxazol	256	18	5												2	7	3	1		2	2	1			

Table Antimicrobial susceptibility testing of C. jejuni in Gallus gallus (fowl) - broilers - before slaughter - at slaughterhouse - Monitoring - Objective sampling - Official sampling - animal sample - caecum - quantitative data [Dilution method]

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

C. jejuni	Gallus gallus (fowl) - broilers - before slaughter - at slaughterhouse - Monitoring																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	104																								
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	104	0						94	8	2														
Aminoglycosides - Neomycin	1	104	1							97	6				1										
Aminoglycosides - Streptomycin	4	104	2								96	4	2		1				1						
Amphenicols - Chloramphenicol	16	104	0									33	48	13	10										
Fluoroquinolones - Ciprofloxacin	0.5	104	72					28	2	2	2	1		36	21	12									
Penicillins - Ampicillin	8	104	66									2	11	25	6	7		53							
Quinolones - Nalidixic acid	16	104	71									2	19	10	2	1	1	23	46						
Tetracyclines - Tetracycline	1	104	58							38	8	5	1				15	37							
Macrolides - Clarithromycin	8	104	1							24	44	28	5	2		1									
Macrolides - Erythromycin	4	104	2							32	55	11	4	2											
Macrolides - Tulathromycin	16	104	0							83	15	4	1		1										
Sulfonamides - Sulfamethoxazol	256	104	3												4	23	47	22	5		2	1			

Table Antimicrobial susceptibility testing of C. coli in Pigs - fattening pigs - at slaughterhouse - Monitoring - Objective sampling - Official sampling - animal sample - faeces - quantitative data [Dilution method]

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

C. coli	Pigs - fattening pigs - at slaughterhouse - Monitoring																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	156																								
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	156	0						51	100	3	2													
Aminoglycosides - Neomycin	2	156	3							81	69	3	1	1			1								
Aminoglycosides - Streptomycin	4	156	120								20	11	5	2	45	55	7		11						
Amphenicols - Chloramphenicol	16	156	0									10	76	62	8										
Fluoroquinolones - Ciprofloxacin	1	156	17					89	46	4				7	8	2									
Penicillins - Ampicillin	8	156	70						1	1		9	22	53	27	3		40							
Quinolones - Nalidixic acid	16	156	18								1		47	79	11	1		10	7						
Tetracyclines - Tetracycline	2	156	135							14	4	3	2	2	1	5	14	111							
Macrolides - Clarithromycin	32	156	33							5	13	50	43	6	3	3	2	31							
Macrolides - Erythromycin	8	156	38							2	24	55	32	5	3	1	1	33							
Macrolides - Tulathromycin	16	156	35							69	36	12	2	1	1	3	11	21							
Sulfonamides - Sulfamethoxazol	256	156	85											11	37	12	2	1	8	51	31	3			

Table Antimicrobial susceptibility testing of C. jejuni in Meat from turkey - at retail - Surveillance - Official sampling - food sample - meat - quantitative data [Dilution method]

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

C. jejuni	Meat from turkey - at retail - Surveillance																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	6																								
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	6	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.25	32
Aminoglycosides - Neomycin		6	6	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	64
Aminoglycosides - Streptomycin	4	6	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	1	128
Amphenicols - Chloramphenicol		6	6	0	0	0	0	0	0	0	0	3	2	0	1	0	0	0	0	0	0	0	0	2	128
Fluoroquinolones - Ciprofloxacin	0.5	6	3	0	0	0	0	3	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0.12	16
Penicillins - Ampicillin	8	6	3	0	0	0	0	0	0	0	0	0	1	2	1	0	2	0	0	0	0	0	0	0.25	32
Quinolones - Nalidixic acid	16	6	3	0	0	0	0	0	0	0	0	0	3	0	0	0	0	1	2	0	0	0	0	1	128
Tetracyclines - Tetracycline	1	6	3	0	0	0	0	0	0	3	0	0	0	0	0	0	1	2	0	0	0	0	0	0.5	64
Macrolides - Clarithromycin		6	6	0	0	0	0	0	0	0	5	0	0	1	0	0	0	0	0	0	0	0	0	0.5	64
Macrolides - Erythromycin	4	6	1	0	0	0	0	0	0	3	2	0	0	0	1	0	0	0	0	0	0	0	0	0.5	64
Macrolides - Tulathromycin		6	6	0	0	0	0	0	0	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0.5	64
Sulfonamides - Sulfamethoxazol		6	6	0	0	0	0	0	0	0	0	0	0	0	2	2	2	0	0	0	0	0	0	8	1024

Table Antimicrobial susceptibility testing of C. jejuni in Pigs - fattening pigs - at slaughterhouse - Monitoring - Objective sampling - Official sampling - animal sample - faeces - quantitative data [Dilution method]

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

C. jejuni	Pigs - fattening pigs - at slaughterhouse - Monitoring																							
Isolates out of a monitoring program (yes/no)	yes																							
Number of isolates available in the laboratory	3																							
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	3	0						1	2														
Aminoglycosides - Neomycin	1	3	0						1	2														
Aminoglycosides - Streptomycin	4	3	3												1	1			1					
Amphenicols - Chloramphenicol	16	3	0									1		1	1									
Fluoroquinolones - Ciprofloxacin	0.5	3	0					1	2															
Penicillins - Ampicillin	8	3	1											2		1								
Quinolones - Nalidixic acid	16	3	0											2	1									
Tetracyclines - Tetracycline	1	3	2							1								2						
Macrolides - Clarithromycin	8	3	0								1		1	1										
Macrolides - Erythromycin	4	3	0								1	1	1											
Macrolides - Tulathromycin	16	3	0							2	1													
Sulfonamides - Sulfamethoxazol	256	3	1												2						1			

Table Antimicrobial susceptibility testing of C. jejuni in Cattle (bovine animals) - dairy cows - Monitoring - Objective sampling - Official sampling - animal sample - faeces - quantitative data [Dilution method]

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

C. jejuni	Cattle (bovine animals) - dairy cows - Monitoring																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	41																								
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	41	0						33	5	3														
Aminoglycosides - Neomycin	1	41	2							37	2	1		1											
Aminoglycosides - Streptomycin	4	41	0								41														
Amphenicols - Chloramphenicol	16	41	0									21	18	1	1										
Fluoroquinolones - Ciprofloxacin	0.5	41	9					29	1	2				2	6	1									
Penicillins - Ampicillin	8	41	5									5	19	12	2	1		2							
Quinolones - Nalidixic acid	16	41	10									1	27	3		1		3	6						
Tetracyclines - Tetracycline	1	41	9							29	3	1				1	1	6							
Macrolides - Clarithromycin	8	41	0							6	17	16	1	1											
Macrolides - Erythromycin	4	41	0							12	22	5	2												
Macrolides - Tulathromycin	16	41	0							33	8														
Sulfonamides - Sulfamethoxazol	256	41	0												6	14	9	11	1						

Table Antimicrobial susceptibility testing of C. jejuni in Meat from broilers (Gallus gallus) - at retail - Surveillance - Official sampling - food sample - meat - quantitative data [Dilution method]

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

C. jejuni	Meat from broilers (Gallus gallus) - at retail - Surveillance																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	83																								
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	83	0	0	0	0	0	0	79	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0.25	32
Aminoglycosides - Neomycin		83	83	0	0	0	0	0	0	77	2	3	0	0	1	0	0	0	0	0	0	0	0	0.5	64
Aminoglycosides - Streptomycin	4	83	3	0	0	0	0	0	0	0	77	3	0	3	0	0	0	0	0	0	0	0	0	1	128
Amphenicols - Chloramphenicol		83	83	0	0	0	0	0	0	0	0	38	17	15	11	1	1	0	0	0	0	0	0	2	128
Fluoroquinolones - Ciprofloxacin	0.5	83	53	0	0	0	0	28	1	1	0	0	0	27	9	17	0	0	0	0	0	0	0	0.12	16
Penicillins - Ampicillin	8	83	61	0	0	0	0	0	0	0	0	0	6	16	10	6	45	0	0	0	0	0	0	0.25	32
Quinolones - Nalidixic acid	16	83	53	0	0	0	0	0	0	0	0	1	21	7	1	0	0	11	42	0	0	0	0	1	128
Tetracyclines - Tetracycline	1	83	44	0	0	0	0	0	0	29	10	3	2	0	0	0	4	35	0	0	0	0	0	0.5	64
Macrolides - Clarithromycin		83	83	0	0	0	0	0	0	16	48	13	3	0	0	0	3	0	0	0	0	0	0	0.5	64
Macrolides - Erythromycin	4	83	3	0	0	0	0	0	0	48	29	2	1	0	0	0	3	0	0	0	0	0	0	0.5	64
Macrolides - Tulathromycin		83	83	0	0	0	0	0	0	71	7	2	0	0	0	0	3	0	0	0	0	0	0	0.5	64
Sulfonamides - Sulfamethoxazol		83	83	0	0	0	0	0	0	0	0	0	0	1	5	25	35	12	3	2	0	0	0	8	1024

Table Antimicrobial susceptibility testing of C. jejuni in Turkeys - fattening flocks - at farm - animal sample - faeces (Faeces was collected from the ground at the farm. Animals were from fattening or meat production flocks.) - quantitative data [Dilution method]

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

C. jejuni	Turkeys - fattening flocks - at farm (Faeces was collected from the ground at the farm. Animals were from fattening or meat production flocks.)																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	35																								
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	35	0						33	2															
Aminoglycosides - Neomycin	1	35	2							32	1	1		1											
Aminoglycosides - Streptomycin	4	35	1								33	1		1											
Amphenicols - Chloramphenicol	16	35	2									11	16	5	1	2									
Fluoroquinolones - Ciprofloxacin	0.5	35	19					15	1					7	5	7									
Penicillins - Ampicillin	8	35	21									2	9	3				21							
Quinolones - Nalidixic acid	16	35	17									3	9	3	3		1	3	13						
Tetracyclines - Tetracycline	1	35	29							6					1	3	6	19							
Macrolides - Clarithromycin	8	35	0							5	15	8	7												
Macrolides - Erythromycin	4	35	0							9	17	7	2												
Macrolides - Tulathromycin	16	35	0							29	4		1		1										
Sulfonamides - Sulfamethoxazol	256	35	2												2	4	12	9	6	2					

Table Antimicrobial susceptibility testing of C. coli in Meat from turkey - at retail - Surveillance - Official sampling - food sample - meat - quantitative data [Dilution method]

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

C. coli	Meat from turkey - at retail - Surveillance																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	42																								
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	3	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.25	32
Aminoglycosides - Neomycin	4	3	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0.5	64
Aminoglycosides - Streptomycin	4	3	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	1	0	0	0	0	0	1	128
Amphenicols - Chloramphenicol		3	3	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	2	128
Fluoroquinolones - Ciprofloxacin	1	3	2	0	0	0	0	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0.12	16
Penicillins - Ampicillin	8	3	3	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0.25	32
Quinolones - Nalidixic acid	16	3	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	0	0	0	0	1	128
Tetracyclines - Tetracycline	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0.5	64
Macrolides - Clarithromycin	8	3	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0.5	64
Macrolides - Erythromycin	8	3	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	1	0	0	0	0	0	0.5	64
Macrolides - Tulathromycin	4	3	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0.5	64
Sulfonamides - Sulfamethoxazol	64	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	8	1024

Table Antimicrobial susceptibility testing of C. coli in Turkeys - fattening flocks - at farm - animal sample - faeces (Faeces was collected from the ground at the farmd. Animals were from fattening or meat production flocks) - quantitative data [Dilution method]

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

C. coli	Turkeys - fattening flocks - at farm (Faeces was collected from the ground at the farmd. Animals were from fattening or meat production flocks)																								
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 - Neomycin	2	9	0							7	1	1													
Aminoglycosides - Streptomycin	4	9	3								6					3									
Amphenicols - Chloramphenicol	16	9	2									1	4		2	2									
Fluoroquinolones - Ciprofloxacin	1	9	9											2	2	5									
Penicillins - Ampicillin	8	9	8										1		3			5							
Quinolones - Nalidixic acid	16	9	9															3	6						
Tetracyclines - Tetracycline	2	9	6							3								6							
Macrolides - Clarithromycin	32	9	4							3				1		1		4							
Macrolides - Erythromycin	8	9	5							1	2			1			1	4							
Macrolides - Tulathromycin	16	9	5							3	1						1	4							
Sulfonamides - Sulfamethoxazol	256	9	1												1		4	1	2			1			

Table Antimicrobial susceptibility testing of C. coli in Cattle (bovine animals) - dairy cows - at slaughterhouse - Monitoring - Objective sampling - Official sampling - animal sample - faeces - quantitative data [Dilution method]

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

C. coli	Cattle (bovine animals) - dairy cows - at slaughterhouse - Monitoring																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	3																								
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	3	0						1	2															
Aminoglycosides - Neomycin	2	3	0							1	2														
Aminoglycosides - Streptomycin	4	3	1								2				1										
Amphenicols - Chloramphenicol	16	3	0										2	1											
Fluoroquinolones - Ciprofloxacin	1	3	1					1	1					1											
Penicillins - Ampicillin	8	3	1										1	1	1										
Quinolones - Nalidixic acid	16	3	1											2				1							
Tetracyclines - Tetracycline	2	3	2								1							2							
Macrolides - Clarithromycin	32	3	0									3													
Macrolides - Erythromycin	8	3	0								1	1	1												
Macrolides - Tulathromycin	16	3	0							1	2														
Sulfonamides - Sulfamethoxazol	256	3	1												1		1				1				

Table Antimicrobial susceptibility testing of C. coli in Meat from broilers (Gallus gallus) - at retail - Surveillance - Official sampling - food sample - meat - quantitative data [Dilution method]

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

C. coli	Meat from broilers (Gallus gallus) - at retail - Surveillance																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	42																								
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	42	1	0	0	0	0	0	35	6	0	0	0	0	0	0	1	0	0	0	0	0	0	0.25	32
Aminoglycosides - Neomycin	4	42	4	0	0	0	0	0	0	36	2	0	0	0	1	3	0	0	0	0	0	0	0	0.5	64
Aminoglycosides - Streptomycin	4	42	8	0	0	0	0	0	0	0	30	4	0	0	1	3	2	0	2	0	0	0	0	1	128
Amphenicols - Chloramphenicol		42	42	0	0	0	0	0	0	0	0	5	22	13	1	1	0	0	0	0	0	0	0	2	128
Fluoroquinolones - Ciprofloxacin	1	42	33	0	0	0	0	7	2	0	0	0	1	18	10	4	0	0	0	0	0	0	0	0.12	16
Penicillins - Ampicillin	8	42	31	0	0	0	0	0	0	0	0	0	1	10	15	3	13	0	0	0	0	0	0	0.25	32
Quinolones - Nalidixic acid	16	42	33	0	0	0	0	0	0	0	0	0	7	2	0	0	0	26	7	0	0	0	0	1	128
Tetracyclines - Tetracycline	2	42	28	0	0	0	0	0	0	8	3	3	0	0	0	0	0	28	0	0	0		0	0.5	64
Macrolides - Clarithromycin	8	42	9	0	0	0	0	0	0	6	6	16	3	2	0	1	0	8	0	0	0	0	0	0.5	64
Macrolides - Erythromycin	8	42	9	0	0	0	0	0	0	8	5	17	2	1	0	0	0	9	0	0	0	0	0	0.5	64
Macrolides - Tulathromycin	4	84	9	0	0	0	0	0	0	28	46	1	0	0	0	1	7	1	0	0	0	0	0	0.5	64
Sulfonamides - Sulfamethoxazol	64	42	10	0	0	0	0	0	0	0	0	0	0	6	5	18	3	0	0	2	6	2	0	8	1024

Table Antimicrobial susceptibility testing of Campylobacter spp., unspecified in Meat from broilers (Gallus gallus) - at retail - Surveillance - Official sampling - food sample - meat - quantitative data [Dilution method]

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

Campylobacter spp., unspecified	Meat from broilers (Gallus gallus) - at retail - Surveillance																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	41																								
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	41	1	0	0	0	0	0	39		1			1	0	0	0	0	0	0	0	0	0	0.25	32
Aminoglycosides - Neomycin	1	41	4	0	0	0	0	0	0	37	0	1	1	0	0	1	1	0	0	0	0	0	0	0.5	64
Aminoglycosides - Streptomycin	4	41	2	0	0	0	0	0	0	0	38	1	0	1	0	0	0	0	1	0	0	0	0	1	128
Amphenicols - Chloramphenicol	16	41	2	0	0	0	0	0	0	0	0	27	6	6	0	1	1	0	0	0	0	0	0	2	128
Fluoroquinolones - Ciprofloxacin	0.5	41	32	0	0	0	0	8	1	0	0	0	3	25	4	0	0	0	0	0	0	0	0	0.12	16
Penicillins - Ampicillin	8	41	33	0	0	0	0	0	0	0	0	0	2	6	5	1	27	0	0	0	0	0	0	0.25	32
Quinolones - Nalidixic acid	16	41	32	0	0	0	0	0	0	0	0	2	7	0	0	0	0	20	12	0	0	0	0	1	128
Tetracyclines - Tetracycline	1	41	31	0	0	0	0	0	0	10	0	0	0	0	0	0	10	21	0	0	0	0	0	0.5	64
Macrolides - Clarithromycin	8	41	2	0	0	0	0	0	0	11	24	4	0	0	0	0	1	1	0	0	0	0	0	0.5	64
Macrolides - Erythromycin	4	41	2	0	0	0	0	0	0	32	5	2	0	0	0	0	1	1	0	0	0	0	0	0.5	64
Macrolides - Tulathromycin	4	41	2	0	0	0	0	0	0	38	1	0	0	0	0	0	1	1	0	0	0	0	0	0.5	64
Sulfonamides - Sulfamethoxazol	32	41	18	0	0	0	0	0	0	0	0	0	0	3	3	17	10	7	0	0	0	1	0	8	1024

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

Test Method Used	Standard methods used for testing
Broth dilution	NCCLS/CLSI ISO 20776

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Aminoglycosides	Gentamicin		2	
	Streptomycin		4	
	Neomycin		1	
Fluoroquinolones	Ciprofloxacin		0.5	
Macrolides	Erythromycin		4	
	Clarithromycin		8	
	Tulathromycin		4	
Penicillins	Ampicillin		8	
Quinolones	Nalidixic acid		16	
Sulfonamides	Sulfamethoxazol		32	
Tetracyclines	Tetracycline		1	
Amphenicols	Chloramphenicol		16	

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

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

Test Method Used	Standard methods used for testing
Broth dilution	NCCLS/CLSI ISO 20776

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Aminoglycosides	Gentamicin		2	
	Streptomycin		4	
	Neomycin		1	
Fluoroquinolones	Ciprofloxacin		0.5	
Macrolides	Erythromycin		4	
	Clarithromycin		8	
	Tulathromycin		4	
Penicillins	Ampicillin		8	
Quinolones	Nalidixic acid		16	
Sulfonamides	Sulfamethoxazol		32	
Tetracyclines	Tetracycline		1	
Amphenicols	Chloramphenicol		16	

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

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

Test Method Used	Standard methods used for testing
Broth dilution	NCCLS/CLSI ISO 20776

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Aminoglycosides	Gentamicin	EFSA	2	
	Streptomycin	EFSA	4	
	Neomycin		2	
Fluoroquinolones	Ciprofloxacin	EFSA	1	
Macrolides	Erythromycin	NON-EFSA	8	
	Clarithromycin		32	
	Tulathromycin		16	
Penicillins	Ampicillin		8	
Quinolones	Nalidixic acid		16	
Sulfonamides	Sulfamethoxazol		256	
Tetracyclines	Tetracycline	EFSA	2	
Amphenicols	Chloramphenicol		16	

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

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
Broth dilution	NCCLS/CLSI ISO 20776

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Aminoglycosides	Gentamicin	EFSA	2	
	Streptomycin	EFSA	4	
	Neomycin		4	
Fluoroquinolones	Ciprofloxacin	EFSA	1	
Macrolides	Erythromycin	NON-EFSA	8	
	Clarithromycin		8	
	Tulathromycin		4	
Penicillins	Ampicillin		8	
Quinolones	Nalidixic acid		16	
Sulfonamides	Sulfamethoxazol		64	
Tetracyclines	Tetracycline	EFSA	2	

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

Test Method Used	Standard methods used for testing
Broth dilution	NCCLS/CLSI ISO 20776

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Aminoglycosides	Gentamicin	NON-EFSA	2	
	Streptomycin	NON-EFSA	4	
	Neomycin		1	
Fluoroquinolones	Ciprofloxacin	NON-EFSA	0.5	
Macrolides	Erythromycin	EFSA	4	
	Clarithromycin		8	
	Tulathromycin		16	
Penicillins	Ampicillin		8	
Quinolones	Nalidixic acid		16	
Sulfonamides	Sulfamethoxazol		256	
Tetracyclines	Tetracycline	NON-EFSA	1	
Amphenicols	Chloramphenicol		16	

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

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
Broth dilution	NCCLS/CLSI ISO 20776

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Aminoglycosides	Gentamicin	NON-EFSA	2	
	Streptomycin	NON-EFSA	4	
Fluoroquinolones	Ciprofloxacin	NON-EFSA	0.5	
Macrolides	Erythromycin	EFSA	4	
Penicillins	Ampicillin		8	
Quinolones	Nalidixic acid		16	
Tetracyclines	Tetracycline	NON-EFSA	1	

2.3 LISTERIOSIS

2.3.1 General evaluation of the national situation

2.3.2 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' - pasteurised milk - at retail - Surveillance	NVWA	Objective sampling	Official sampling	animal sample > milk		Single	25g	2	0	0	0
Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - at retail - Surveillance	NVWA	Objective sampling	Official sampling			Single	25g	33	0	30	
Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - at retail - Surveillance	NVWA	Objective sampling	Official sampling			Single	25g	492	2	375	2
Cheeses made from cows' milk - hard - made from raw or low heat-treated milk - at retail - Surveillance	NVWA	Objective sampling	Official sampling			Single	25g	1	0	0	
Cheeses made from cows' milk - hard - made from pasteurised milk - at retail - Surveillance	NVWA	Objective sampling	Official sampling			Single	25g	19	0	1	
Cheeses made from goats' milk - soft and semi-soft - made from raw or low heat-treated milk - at retail - Surveillance	NVWA	Objective sampling	Official sampling			Single	25g	1	0	0	0
Cheeses made from goats' milk - soft and semi-soft - made from pasteurised milk - at retail - Surveillance	NVWA	Objective sampling	Official sampling			Single	25g	60	0	41	0

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 sheep's milk - soft and semi-soft - made from raw or low heat-treated milk - at retail - Surveillance	NVWA	Objective sampling	Official sampling			Single	25g	2	0	0	0
Cheeses made from sheep's milk - soft and semi-soft - made from pasteurised milk - at retail - Surveillance	NVWA	Objective sampling	Official sampling			Single	25g	23	0	21	0
Milk, cows' - raw milk - intended for direct human consumption - at farm - Clinical investigations (after sickness)	NVWA	Suspect sampling	Official sampling	animal sample > milk		Single	25g	1	1	1	1

	Units tested with enumeration method	> detection limit but <= 100 cfu/g	L. monocytogenes > 100 cfu/g
Milk, cows' - pasteurised milk - at retail - Surveillance	2		
Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - at retail - Surveillance	33		
Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - at retail - Surveillance	492		
Cheeses made from cows' milk - hard - made from raw or low heat-treated milk - at retail - Surveillance	1		
Cheeses made from cows' milk - hard - made from pasteurised milk - at retail - Surveillance	19		

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 - soft and semi-soft - made from raw or low heat-treated milk - at retail - Surveillance	1		
Cheeses made from goats' milk - soft and semi-soft - made from pasteurised milk - at retail - Surveillance	60		
Cheeses made from sheep's milk - soft and semi-soft - made from raw or low heat-treated milk - at retail - Surveillance	2		
Cheeses made from sheep's milk - soft and semi-soft - made from pasteurised milk - at retail - Surveillance	23		
Milk, cows' - raw milk - intended for direct human consumption - at farm - Clinical investigations (after sickness)	1		1

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 retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample		Single	25g	383	19	216	18
Meat from bovine animals - meat products - cooked, ready-to-eat - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample		Single	25g	33	2	11	1
Fish - smoked - at processing plant - Surveillance	NVWA	Objective sampling	Official sampling	food sample		Single	25g	258	14	125	11
Fish - smoked - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample		Single	25g	772	5		
Vegetables - pre-cut - ready-to-eat - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample		Single	25g	193	0		
Fruits - pre-cut - ready-to-eat - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample		Single	25g	425	2	402	2
Meat from bovine animals - meat preparation - at retail - Surveillance (ready to eat)	NVWA	Objective sampling	Official sampling	food sample		Single	25g	620	1	3	0
Meat from other animal species or not specified - meat products - cooked, ready-to-eat - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample		Single	25g	129	1	7	0
Meat from pig - meat preparation - at retail - Surveillance (ready to eat)	NVWA	Objective sampling	Official sampling	food sample		Single	25g	10	0	3	0
Meat, mixed meat - meat products - cooked, ready-to-eat - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample		Single	25g	84	1	51	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 pig - meat products - cooked, ready-to-eat - at retail - Surveillance	382	0	1
Meat from bovine animals - meat products - cooked, ready-to-eat - at retail - Surveillance	33	1	0
Fish - smoked - at processing plant - Surveillance	133	1	2
Fish - smoked - at retail - Surveillance	772	3	2
Vegetables - pre-cut - ready-to-eat - at retail - Surveillance	193	0	0
Fruits - pre-cut - ready-to-eat - at retail - Surveillance	425	0	0
Meat from bovine animals - meat preparation - at retail - Surveillance (ready to eat)	620	1	0
Meat from other animal species or not specified - meat products - cooked, ready-to-eat - at retail - Surveillance	129	0	1
Meat from pig - meat preparation - at retail - Surveillance (ready to eat)	10	0	0
Meat, mixed meat - meat products - cooked, ready-to-eat - at retail - Surveillance	84	0	0

2.3.3 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) - at farm - Monitoring	GD	Unspecified	Industry sampling	animal sample		Animal	2686	4		4
Pigs - at farm - Monitoring [1)]	GD	Unspecified	Industry sampling	animal sample		Animal	3341	0		
Gallus gallus (fowl) - at farm - Monitoring [2)]	GD	Suspect sampling	Industry sampling	animal sample		Flock	1430	0		
Other animals - unspecified - Surveillance (Other animals, rabbit)	VMDC	Unspecified	Industry sampling	animal sample		Animal	344	1	1	

Comments:

[1)] pathology

[2)] pathology

2.4 E. COLI INFECTIONS

2.4.1 General evaluation of the national situation

2.4.2 Escherichia coli, pathogenic in foodstuffs

Table VT E. coli in food

	Source of information	Sampling 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 bovine animals - fresh - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample > meat			Single	25g	702	2	2
Meat from bovine animals - minced meat - intended to be eaten raw - at processing plant - Surveillance	NVWA	Objective sampling	Official sampling	food sample > meat			Single	25g	663	5	
Meat from sheep - fresh - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample > meat			Single	25g	86	0	
Fruits - pre-cut - ready-to-eat - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample			Single	25g	99	0	
Seeds, sprouted - ready-to-eat - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample			Single	25g	83	3	
Meat from bovine animals - meat preparation - intended to be eaten raw - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample > meat			Single	25g	513	1	1
Meat from bovine animals - meat preparation - intended to be eaten cooked - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample > meat			Single	25g	722	8	1
Meat from bovine animals - meat products - unspecified, ready-to-eat - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample > meat			Single	25g	63	1	

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 other animal species or not specified - meat preparation - intended to be eaten cooked - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample > meat			Single	25g	9	0	
Meat from other animal species or not specified - meat products - unspecified, ready-to-eat - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample > meat			Single	25g	40	0	
Meat from pig - meat preparation - intended to be eaten raw - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample > meat			Single	25g	17	0	
Meat from pig - meat preparation - intended to be eaten cooked - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample > meat			Single	25g	86	0	
Meat from pig - meat products - unspecified, ready-to-eat - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample > meat			Single	25g	291	0	
Meat from sheep - meat preparation - intended to be eaten cooked - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample > meat			Single	25g	45	0	
Meat, mixed meat - meat preparation - intended to be eaten cooked - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample > meat			Single	25g	64	0	
Meat, mixed meat - meat preparation - intended to be eaten raw - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample > meat			Single	25g	5	0	
Meat, mixed meat - meat products - at retail - Surveillance (ready to eat)	NVWA	Objective sampling	Official sampling	food sample > meat			Single	25g	92	0	
Meat, mixed meat - minced meat - at retail - Surveillance	NVWA	Objective sampling	Official sampling	food sample > meat			Single	25g	3	0	
Vegetables - pre-cut - ready-to-eat - at retail - Surveillance (Cucumber)	NVWA	Objective sampling	Official sampling	food sample			Single	25g	170	0	
Vegetables - pre-cut - ready-to-eat - at retail - Surveillance (Vegetables, different sorts)	NVWA	Objective sampling	Official sampling	food sample			Single	25g	556	0	

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 retail - Surveillance		
Meat from bovine animals - minced meat - intended to be eaten raw - at processing plant - Surveillance		5
Meat from sheep - fresh - at retail - Surveillance		
Fruits - pre-cut - ready-to-eat - at retail - Surveillance		
Seeds, sprouted - ready-to-eat - at retail - Surveillance		3
Meat from bovine animals - meat preparation - intended to be eaten raw - at retail - Surveillance		
Meat from bovine animals - meat preparation - intended to be eaten cooked - at retail - Surveillance		7
Meat from bovine animals - meat products - unspecified, ready-to-eat - at retail - Surveillance		1
Meat from other animal species or not specified - meat preparation - intended to be eaten cooked - at retail - Surveillance		
Meat from other animal species or not specified - meat products - unspecified, ready-to-eat - at retail - Surveillance		
Meat from pig - meat preparation - intended to be eaten raw - at retail - Surveillance		

Table VT E. coli in food

	Verotoxigenic E. coli (VTEC) - VTEC non-O157	Verotoxigenic E. coli (VTEC) - VTEC, unspecified
Meat from pig - meat preparation - intended to be eaten cooked - at retail - Surveillance		
Meat from pig - meat products - unspecified, ready-to-eat - at retail - Surveillance		
Meat from sheep - meat preparation - intended to be eaten cooked - at retail - Surveillance		
Meat, mixed meat - meat preparation - intended to be eaten cooked - at retail - Surveillance		
Meat, mixed meat - meat preparation - intended to be eaten raw - at retail - Surveillance		
Meat, mixed meat - meat products - at retail - Surveillance (ready to eat)		
Meat, mixed meat - minced meat - at retail - Surveillance		
Vegetables - pre-cut - ready-to-eat - at retail - Surveillance (Cucumber)		
Vegetables - pre-cut - ready-to-eat - at retail - Surveillance (Vegetables, different sorts)		

2.4.3 Escherichia coli, pathogenic in animals

Table VT E. coli in animals

	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
Cattle (bovine animals) - at farm - Monitoring	NVWA	Objective sampling		animal sample > faeces		ISO 16654:2001	Herd	25g	807	40	40
Cattle (bovine animals) - calves (under 1 year) - at farm - Monitoring	NVWA	Objective sampling		animal sample > faeces		ISO 16654:2001	Herd		175	20	20
Sheep - at farm - Monitoring	GD	Unspecified	Industry sampling	animal sample			Animal		564	0	
Goats - at farm - Monitoring	GD	Unspecified	Industry sampling	animal sample			Animal		214	0	
Sheep - at slaughterhouse - Survey (wool)	NVWA	Selective sampling	Not applicable	animal sample		ISO 16654:2001		10g	374	51	51

	Verotoxigenic E. coli (VTEC) - VTEC non-O157	Verotoxigenic E. coli (VTEC) - VTEC, unspecified
Cattle (bovine animals) - at farm - Monitoring		
Cattle (bovine animals) - calves (under 1 year) - at farm - Monitoring		
Sheep - at farm - Monitoring		
Goats - at farm - Monitoring		
Sheep - at slaughterhouse - Survey (wool)		

Table VT E. coli in animals

2.4.4 Antimicrobial resistance in Escherichia coli, pathogenic isolates

Table Antimicrobial susceptibility testing of Escherichia coli, pathogenic in Vegetables - at retail - Surveillance - Objective sampling - Official sampling - food sample (Vegetables)

Escherichia coli, pathogenic	Verotoxigenic E. coli (VTEC) - VTEC O157	
Isolates out of a monitoring program (yes/no)	yes	
Number of isolates available in the laboratory	56	
Antimicrobials:	N	n
Aminoglycosides - Gentamicin	56	0
Aminoglycosides - Kanamycin	56	0
Aminoglycosides - Streptomycin	56	1
Amphenicols - Chloramphenicol	56	0
Amphenicols - Florfenicol	56	0
Cephalosporins - Cefotaxime	56	0
Fluoroquinolones - Ciprofloxacin	56	1
Penicillins - Ampicillin	56	1
Quinolones - Nalidixic acid	56	1
Tetracyclines - Tetracycline	56	2
Trimethoprim	56	1
Cephalosporins - Ceftazidim	56	1
Fully sensitive	56	50
Polymyxins - Colistin	56	2
Resistant to 1 antimicrobial	56	4
Resistant to 2 antimicrobials	56	1

Table Antimicrobial susceptibility testing of Escherichia coli, pathogenic in Vegetables - at retail - Surveillance - Objective sampling - Official sampling - food sample (Vegetables)

Escherichia coli, pathogenic	Verotoxigenic E. coli (VTEC) - VTEC O157	
Isolates out of a monitoring program (yes/no)	yes	
Number of isolates available in the laboratory	56	
Antimicrobials:	N	n
Resistant to 3 antimicrobials	56	0
Resistant to 4 antimicrobials	56	0
Resistant to >4 antimicrobials	56	1
Sulfonamides - Sulfamethoxazol	56	1

Table Antimicrobial susceptibility testing of Escherichia coli, pathogenic in Fruits - at retail - Surveillance - Objective sampling - Official sampling - food sample (Fruits)

Escherichia coli, pathogenic	Verotoxigenic E. coli (VTEC) - VTEC O157	
Isolates out of a monitoring program (yes/no)	yes	
Number of isolates available in the laboratory	9	
Antimicrobials:	N	n
Aminoglycosides - Gentamicin	9	0
Aminoglycosides - Kanamycin	9	0
Aminoglycosides - Streptomycin	9	0
Amphenicols - Chloramphenicol	9	0
Amphenicols - Florfenicol	9	0
Cephalosporins - Cefotaxime	9	0
Fluoroquinolones - Ciprofloxacin	9	0
Penicillins - Ampicillin	9	0
Quinolones - Nalidixic acid	9	0
Tetracyclines - Tetracycline	9	0
Trimethoprim	9	0
Cephalosporins - Ceftazidim	9	0
Fully sensitive	9	9
Polymyxins - Colistin	9	0
Resistant to 1 antimicrobial	9	0
Resistant to 2 antimicrobials	9	0
Resistant to 3 antimicrobials	9	0
Resistant to 4 antimicrobials	9	0

Table Antimicrobial susceptibility testing of Escherichia coli, pathogenic in Fruits - at retail - Surveillance - Objective sampling - Official sampling - food sample (Fruits)

Escherichia coli, pathogenic	Verotoxigenic E. coli (VTEC) - VTEC O157	
Isolates out of a monitoring program (yes/no)	yes	
Number of isolates available in the laboratory	9	
Antimicrobials:	N	n
Resistant to >4 antimicrobials	9	0
Sulfonamides - Sulfamethoxazol	9	0

Table Antimicrobial susceptibility testing of Escherichia coli, pathogenic in Spices and herbs - at retail - Surveillance - Objective sampling - Official sampling - food sample (Only herbs)

Escherichia coli, pathogenic	Verotoxigenic E. coli (VTEC) - VTEC O157	
Isolates out of a monitoring program (yes/no)	yes	
Number of isolates available in the laboratory	33	
Antimicrobials:	N	n
Aminoglycosides - Gentamicin	33	2
Aminoglycosides - Kanamycin	33	1
Aminoglycosides - Streptomycin	33	12
Amphenicols - Chloramphenicol	33	8
Amphenicols - Florfenicol	33	6
Cephalosporins - Cefotaxime	33	0
Fluoroquinolones - Ciprofloxacin	33	11
Penicillins - Ampicillin	33	11
Quinolones - Nalidixic acid	33	7
Tetracyclines - Tetracycline	33	14
Trimethoprim	33	11
Cephalosporins - Ceftazidim	33	1
Fully sensitive	33	14
Polymyxins - Colistin	33	2
Resistant to 1 antimicrobial	33	4
Resistant to 2 antimicrobials	33	0
Resistant to 3 antimicrobials	33	3
Resistant to 4 antimicrobials	33	2

Table Antimicrobial susceptibility testing of Escherichia coli, pathogenic in Spices and herbs - at retail - Surveillance - Objective sampling - Official sampling - food sample (Only herbs)

Escherichia coli, pathogenic	Verotoxigenic E. coli (VTEC) - VTEC O157	
Isolates out of a monitoring program (yes/no)	yes	
Number of isolates available in the laboratory	33	
Antimicrobials:	N	n
Resistant to >4 antimicrobials	33	10
Sulfonamides - Sulfamethoxazol	33	11

Table Antimicrobial susceptibility testing of Escherichia coli, pathogenic in Meat from bovine animals - at retail - Surveillance - Objective sampling - Official sampling - food sample (Meat bovine)

Escherichia coli, pathogenic	Verotoxigenic E. coli (VTEC) - VTEC O157	
Isolates out of a monitoring program (yes/no)	yes	
Number of isolates available in the laboratory	224	
Antimicrobials:	N	n
Aminoglycosides - Gentamicin	224	1
Aminoglycosides - Kanamycin	224	12
Aminoglycosides - Streptomycin	224	34
Amphenicols - Chloramphenicol	224	7
Amphenicols - Florfenicol	224	3
Cephalosporins - Cefotaxime	224	4
Fluoroquinolones - Ciprofloxacin	224	9
Penicillins - Ampicillin	224	26
Quinolones - Nalidixic acid	224	9
Tetracyclines - Tetracycline	224	33
Trimethoprim	224	31
Cephalosporins - Ceftazidim	224	4
Fully sensitive	224	159
Polymyxins - Colistin	224	0
Resistant to 1 antimicrobial	224	25
Resistant to 2 antimicrobials	224	5
Resistant to 3 antimicrobials	224	7
Resistant to 4 antimicrobials	224	7

Table Antimicrobial susceptibility testing of Escherichia coli, pathogenic in Meat from bovine animals - at retail - Surveillance - Objective sampling - Official sampling - food sample (Meat bovine)

Escherichia coli, pathogenic	Verotoxigenic E. coli (VTEC) - VTEC O157	
Isolates out of a monitoring program (yes/no)	yes	
Number of isolates available in the laboratory	224	
Antimicrobials:	N	n
Resistant to >4 antimicrobials	224	21
Sulfonamides - Sulfamethoxazol	224	47

Table Antimicrobial susceptibility testing of Escherichia coli, pathogenic in Meat from bovine animals - at retail - Surveillance - Objective sampling - Official sampling - food sample (Meat bovine calf)

Escherichia coli, pathogenic	Verotoxigenic E. coli (VTEC) - VTEC O157	
Isolates out of a monitoring program (yes/no)	yes	
Number of isolates available in the laboratory	31	
Antimicrobials:	N	n
Aminoglycosides - Gentamicin	31	0
Aminoglycosides - Kanamycin	31	2
Aminoglycosides - Streptomycin	31	11
Amphenicols - Chloramphenicol	31	4
Amphenicols - Florfenicol	31	3
Cephalosporins - Cefotaxime	31	1
Fluoroquinolones - Ciprofloxacin	31	2
Penicillins - Ampicillin	31	10
Quinolones - Nalidixic acid	31	2
Tetracyclines - Tetracycline	31	14
Trimethoprim	31	9
Cephalosporins - Ceftazidim	31	0
Fully sensitive	31	16
Polymyxins - Colistin	31	0
Resistant to 1 antimicrobial	31	2
Resistant to 2 antimicrobials	31	1
Resistant to 3 antimicrobials	31	2
Resistant to 4 antimicrobials	31	2

Table Antimicrobial susceptibility testing of Escherichia coli, pathogenic in Meat from bovine animals - at retail - Surveillance - Objective sampling - Official sampling - food sample (Meat bovine calf)

Escherichia coli, pathogenic	Verotoxigenic E. coli (VTEC) - VTEC O157	
Isolates out of a monitoring program (yes/no)	yes	
Number of isolates available in the laboratory	31	
Antimicrobials:	N	n
Resistant to >4 antimicrobials	31	8
Sulfonamides - Sulfamethoxazol	31	10

Table Antimicrobial susceptibility testing of Escherichia coli, pathogenic in Meat from sheep - at retail - Surveillance - Objective sampling - Official sampling - food sample (Meat sheep lamb)

Escherichia coli, pathogenic	Verotoxigenic E. coli (VTEC) - VTEC O157	
Isolates out of a monitoring program (yes/no)	yes	
Number of isolates available in the laboratory	7	
Antimicrobials:	N	n
Aminoglycosides - Gentamicin	7	0
Aminoglycosides - Kanamycin	7	1
Aminoglycosides - Streptomycin	7	1
Amphenicols - Chloramphenicol	7	0
Amphenicols - Florfenicol	7	0
Cephalosporins - Cefotaxime	7	0
Fluoroquinolones - Ciprofloxacin	7	0
Penicillins - Ampicillin	7	1
Quinolones - Nalidixic acid	7	0
Tetracyclines - Tetracycline	7	2
Trimethoprim	7	1
Cephalosporins - Ceftazidim	7	0
Fully sensitive	7	5
Polymyxins - Colistin	7	0
Resistant to 1 antimicrobial	7	0
Resistant to 2 antimicrobials	7	0
Resistant to 3 antimicrobials	7	1
Resistant to 4 antimicrobials	7	0

Table Antimicrobial susceptibility testing of Escherichia coli, pathogenic in Meat from sheep - at retail - Surveillance - Objective sampling - Official sampling - food sample (Meat sheep lamb)

Escherichia coli, pathogenic	Verotoxigenic E. coli (VTEC) - VTEC O157	
Isolates out of a monitoring program (yes/no)	yes	
Number of isolates available in the laboratory	7	
Antimicrobials:	N	n
Resistant to >4 antimicrobials	7	1
Sulfonamides - Sulfamethoxazol	7	2

Table Antimicrobial susceptibility testing of Escherichia coli, pathogenic in Meat from pig - at retail - Surveillance - Objective sampling - Official sampling - food sample

Escherichia coli, pathogenic	Verotoxigenic E. coli (VTEC) - VTEC O157	
Isolates out of a monitoring program (yes/no)	yes	
Number of isolates available in the laboratory	178	
Antimicrobials:	N	n
Aminoglycosides - Gentamicin	178	9
Aminoglycosides - Kanamycin	178	9
Aminoglycosides - Streptomycin	178	46
Amphenicols - Chloramphenicol	178	11
Amphenicols - Florfenicol	178	4
Cephalosporins - Cefotaxime	178	3
Fluoroquinolones - Ciprofloxacin	178	5
Penicillins - Ampicillin	178	41
Quinolones - Nalidixic acid	178	4
Tetracyclines - Tetracycline	178	54
Trimethoprim	178	43
Cephalosporins - Ceftazidim	178	4
Fully sensitive	178	95
Polymyxins - Colistin	178	1
Resistant to 1 antimicrobial	178	17
Resistant to 2 antimicrobials	178	12
Resistant to 3 antimicrobials	178	14
Resistant to 4 antimicrobials	178	11

Table Antimicrobial susceptibility testing of Escherichia coli, pathogenic in Meat from pig - at retail - Surveillance - Objective sampling - Official sampling - food sample

Escherichia coli, pathogenic	Verotoxigenic E. coli (VTEC) - VTEC O157	
Isolates out of a monitoring program (yes/no)	yes	
Number of isolates available in the laboratory	178	
Antimicrobials:	N	n
Resistant to >4 antimicrobials	178	29
Sulfonamides - Sulfamethoxazol	178	60

Table Antimicrobial susceptibility testing of Escherichia coli, pathogenic in Meat from turkey - at retail - Surveillance - Objective sampling - Official sampling - food sample

Escherichia coli, pathogenic	Verotoxigenic E. coli (VTEC) - VTEC O157	
Isolates out of a monitoring program (yes/no)	yes	
Number of isolates available in the laboratory	46	
Antimicrobials:	N	n
Aminoglycosides - Gentamicin	46	6
Aminoglycosides - Kanamycin	46	10
Aminoglycosides - Streptomycin	46	23
Amphenicols - Chloramphenicol	46	11
Amphenicols - Florfenicol	46	0
Cephalosporins - Cefotaxime	46	1
Fluoroquinolones - Ciprofloxacin	46	18
Penicillins - Ampicillin	46	35
Quinolones - Nalidixic acid	46	17
Tetracyclines - Tetracycline	46	32
Trimethoprim	46	16
Cephalosporins - Ceftazidim	46	1
Fully sensitive	46	5
Polymyxins - Colistin	46	4
Resistant to 1 antimicrobial	46	3
Resistant to 2 antimicrobials	46	6
Resistant to 3 antimicrobials	46	4
Resistant to 4 antimicrobials	46	3

Table Antimicrobial susceptibility testing of Escherichia coli, pathogenic in Meat from turkey - at retail - Surveillance - Objective sampling - Official sampling - food sample

Escherichia coli, pathogenic	Verotoxigenic E. coli (VTEC) - VTEC O157	
Isolates out of a monitoring program (yes/no)	yes	
Number of isolates available in the laboratory	46	
Antimicrobials:	N	n
Resistant to >4 antimicrobials	46	25
Sulfonamides - Sulfamethoxazol	46	2

Table Antimicrobial susceptibility testing of Escherichia coli, pathogenic in Meat from broilers (Gallus gallus) - at retail - Surveillance - Objective sampling - Official sampling - food sample

Escherichia coli, pathogenic	Verotoxigenic E. coli (VTEC) - VTEC O157	
Isolates out of a monitoring program (yes/no)	yes	
Number of isolates available in the laboratory	191	
Antimicrobials:	N	n
Aminoglycosides - Gentamicin	191	25
Aminoglycosides - Kanamycin	191	26
Aminoglycosides - Streptomycin	191	105
Amphenicols - Chloramphenicol	191	31
Amphenicols - Florfenicol	191	0
Cephalosporins - Cefotaxime	191	43
Fluoroquinolones - Ciprofloxacin	191	108
Penicillins - Ampicillin	191	126
Quinolones - Nalidixic acid	191	100
Tetracyclines - Tetracycline	191	101
Trimethoprim	191	78
Cephalosporins - Ceftazidim	191	40
Fully sensitive	191	15
Polymyxins - Colistin	191	5
Resistant to 1 antimicrobial	191	8
Resistant to 2 antimicrobials	191	27
Resistant to 3 antimicrobials	191	15
Resistant to 4 antimicrobials	191	31

Table Antimicrobial susceptibility testing of Escherichia coli, pathogenic in Meat from broilers (Gallus gallus) - at retail - Surveillance - Objective sampling - Official sampling - food sample

Escherichia coli, pathogenic	Verotoxigenic E. coli (VTEC) - VTEC O157	
Isolates out of a monitoring program (yes/no)	yes	
Number of isolates available in the laboratory	191	
Antimicrobials:	N	n
Resistant to >4 antimicrobials	191	95
Sulfonamides - Sulfamethoxazol	191	111

Table Antimicrobial susceptibility testing of Verotoxigenic E. coli (VTEC) - VTEC O157 in Vegetables - at retail - Surveillance - Objective sampling - Official sampling - food sample - quantitative data [Dilution method]

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

VTEC O157	Vegetables - at retail - Surveillance																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	56																								
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	56	0	0	0	0	0	0	1	35	20	0	0	0	0	0	0	0	0	0	0	0	0	0.25	32
Aminoglycosides - Kanamycin	8	56	0	0	0	0	0	0	0	0	0	0	54	2	0	0	0	0	0	0	0	0	0	4	128
Aminoglycosides - Streptomycin	16	56	1	0	0	0	0	0	0	0	0	0	5	45	5			1	0	0	0	0	0	2	128
Amphenicols - Chloramphenicol	16	56	0	0	0	0	0	0	0	0	0	0	19	33	4	0	0	0	0	0	0	0	0	2	64
Amphenicols - Florfenicol	16	56	0	0	0	0	0	0	0	0	0	0	27	29	0	0	0	0	0	0	0	0	0	2	64
Cephalosporins - Cefotaxime	0.25	56	0	0	0	0	52	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.06	4
Fluoroquinolones - Ciprofloxacin	0.006	56	56	2	40	13	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.008	8
Penicillins - Ampicillin	8	56	1	0	0	0	0	0	0	0	0	11	41	3	1	0	0	0	0	0	0	0	0	0.5	32
Quinolones - Nalidixic acid	16	56	1	0	0	0	0	0	0	0	0	0	55	0	0	0	1	0	0	0	0	0	0	4	64
Tetracyclines - Tetracycline	8	56	2	0	0	0	0	0	0	0	1	50	3	0	0	0	0	2	0	0	0	0	0	1	64
Trimethoprim	2	56	1	0	0	0	0	0	0	45	10	0	0	0	0	0	1	0	0	0	0	0	0	0.5	32
Cephalosporins - Ceftazidim	0.5	56	1	0	0	0	0	0	52	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0.25	16
Polymyxins - Colistin	2	56	2	0	0	0	0	0	0	0	0	54	2	0	0	0	0	0	0	0	0	0	0	2	4
Sulfonamides - Sulfamethoxazol	64	56	1	0	0	0	0	0	0	0	0	0	0	11	14	24	6	0	0	0	0	1	0	8	1024

Table Antimicrobial susceptibility testing of Verotoxigenic E. coli (VTEC) - VTEC O157 in Fruits - at retail - Surveillance - Objective sampling - Official sampling - food sample - quantitative data [Dilution method]

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

VTEC O157	Fruits - at retail - Surveillance																								
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	0	0	0	0	0	1	4	3	1	0	0	0	0	0	0	0	0	0	0	0	0.25	32
Aminoglycosides - Kanamycin	8	9	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	4	128
Aminoglycosides - Streptomycin	16	9	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	2	128
Amphenicols - Chloramphenicol	16	9	0	0	0	0	0	0	0	0	0	0	4	5	0	0	0	0	0	0	0	0	0	2	64
Amphenicols - Florfenicol	16	7	0	0	0	0	0	0	0	0	0	1	2	4	0	0	0	0	0	0	0	0	0	2	64
Cephalosporins - Cefotaxime	0.25	9	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.06	4
Fluoroquinolones - Ciprofloxacin	0.006	9	9	4	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.008	8
Penicillins - Ampicillin	8	9	0	0	0	0	0	0	0	0	0	6	3	0	0	0	0	0	0	0	0	0	0	0.5	32
Quinolones - Nalidixic acid	16	9	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	4	64
Tetracyclines - Tetracycline	8	9	0	0	0	0	0	0	0	0	2	6	1	0	0	0	0	0	0	0	0	0	0	1	64
Trimethoprim	2	9	0	0	0	0	0	0	0	6	2	1		0	0		0	0	0	0	0	0	0	0.5	32
Cephalosporins - Ceftazidim	0.5	9	0	0	0	0	0	0	8	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.25	16
Polymyxins - Colistin	2	9	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	2	4
Sulfonamides - Sulfamethoxazol	64	9	0	0	0	0	0	0	0	0	0	0	0	4	0	4	1	0	0	0	0	0	0	8	1024

Table Antimicrobial susceptibility testing of Verotoxigenic E. coli (VTEC) - VTEC O157 in Meat from bovine animals - at retail - Surveillance - Objective sampling - Official sampling - food sample - meat - quantitative data [Dilution method]

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

VTEC O157	Meat from bovine animals - at retail - Surveillance																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	224																								
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	224	1	0	0	0	0	0	6	123	71	23	1	0	0	0	0	0	0	0	0	0	0	0.25	32
Aminoglycosides - Kanamycin	8	224	12	0	0	0	0	0	0	0	0	0	191	21	1	0	0	0	11	0	0	0	0	4	128
Aminoglycosides - Streptomycin	16	224	34	0	0	0	0	0	0	0	0	0	27	135	28	6	1	10	17	0	0	0	0	2	128
Amphenicols - Chloramphenicol	16	224	7	0	0	0	0	0	0	0	0	0	13	162	42	0	2	5	0	0	0	0	0	2	64
Amphenicols - Florfenicol	16	224	3	0	0	0	0	0	0	0	0	0	13	183	25	1	1	1	0	0	0	0	0	2	64
Cephalosporins - Cefotaxime	0.25	224	4	0	0	0	171	41	8				3	1	0	0	0	0	0	0	0	0	0	0.06	4
Fluoroquinolones - Ciprofloxacin	0.006	224	224	17	150	47	1	1	3	1	0	0	1	1	2	0	0	0	0	0	0	0	0	0.008	8
Penicillins - Ampicillin	8	224	26	0	0	0	0	0	0	0	3	44	138	13	0	0	26	0	0	0	0	0	0	0.5	32
Quinolones - Nalidixic acid	16	224	9	0	0	0	0	0	0	0	0	0	213	2	0	0	1	8	0	0	0	0	0	4	64
Tetracyclines - Tetracycline	8	224	33	0	0	0	0	0	0	0	16	77	86	12	1	0	12	20	0	0	0	0	0	1	64
Trimethoprim	2	224	31	0	0	0	0	0	0	141	36	16	6	1	0	0	24	0	0	0	0	0	0	0.5	32
Cephalosporins - Ceftazidim	0.5	224	4	0	0	0	0	0	208	12	2			1	1	0	0	0	0	0	0	0	0	0.25	16
Polymyxins - Colistin	2	224	0	0	0	0	0	0	0	0	0	224	0	0	0	0	0	0	0	0	0	0	0	2	4
Sulfonamides - Sulfamethoxazol	64	224	47	0	0	0	0	0	0	0	0	0	0	24	50	86	17	1	0	1	0	45	0	8	1024

Table Antimicrobial susceptibility testing of Verotoxigenic E. coli (VTEC) - VTEC O157 in Meat from bovine animals - at retail - Surveillance - Objective sampling - Official sampling - food sample - meat (Calf meat) - quantitative data [Dilution method]

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

VTEC O157	Meat from bovine animals - at retail - Surveillance (Calf meat)																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	31																								
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	31	0	0	0	0	0	0	1	15	12	3	0	0	0	0	0	0	0	0	0	0	0	0.25	32
Aminoglycosides - Kanamycin	8	31	2	0	0	0	0	0	0	0	0	0	26	3	0	0	0	0	2	0	0	0	0	4	128
Aminoglycosides - Streptomycin	16	31	11	0	0	0	0	0	0	0	0	0	2	15	3	1	4	2	4	0	0	0	0	2	128
Amphenicols - Chloramphenicol	16	31	4	0	0	0	0	0	0	0	0	0	1	20	6	0	1	3	0	0	0	0	0	2	64
Amphenicols - Florfenicol	16	31	3	0	0	0	0	0	0	0	0	0	1	22	5	0	1	2	0	0	0	0	0	2	64
Cephalosporins - Cefotaxime	0.25	31	1	0	0	0	23	5	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.06	4
Fluoroquinolones - Ciprofloxacin	0.006	31	31	0	23	6	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0.008	8
Penicillins - Ampicillin	8	31	10	0	0	0	0	0	0	0	1	5	14	1	0	0	10	0	0	0	0	0	0	0.5	32
Quinolones - Nalidixic acid	16	31	2	0	0	0	0	0	0	0	0	0	29	0	0	0	0	2	0	0	0	0	0	4	64
Tetracyclines - Tetracycline	8	31	14	0	0	0	0	0	0	0	3	5	8	1	0	1	3	10	0	0	0	0	0	1	64
Trimethoprim	2	31	9	0	0	0	0	0	0	16	6	0	0	0	1	0	8	0	0	0	0	0	0	0.5	32
Cephalosporins - Ceftazidim	0.5	31	0	0	0	0	0	0	29	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0.25	16
Polymyxins - Colistin	2	31	0	0	0	0	0	0	0	0	0	31	0	0	0	0	0	0	0	0	0	0	0	2	4
Sulfonamides - Sulfamethoxazol	64	31	10	0	0	0	0	0	0	0	0	0	0	7	5	8	1	0	0	0	0	10	0	8	1024

Table Antimicrobial susceptibility testing of Verotoxigenic E. coli (VTEC) - VTEC O157 in Meat from sheep - at retail - Surveillance - Objective sampling - Official sampling - food sample - meat (Lamb meat) - quantitative data [Dilution method]

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

VTEC O157	Meat from sheep - at retail - Surveillance (Lamb meat)																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	7																								
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	7	0	0	0	0	0	0	0	3	2	2	0	0	0	0	0	0	0	0	0	0	0	0.25	32
Aminoglycosides - Kanamycin	8	7	1	0	0	0	0	0	0	0	0	0	6	0	0	1	0	0	0	0	0	0	0		
Aminoglycosides - Streptomycin	16	7	1	0	0	0	0	0	0	0	0	0	1	4	1	0	0	1	0	0	0	0	0	2	128
Amphenicols - Chloramphenicol	16	7	0	0	0	0	0	0	0	0	0	0	0	6	1	0	0	0	0	0	0	0	0	2	64
Amphenicols - Florfenicol	16	7	0	0	0	0	0	0	0	0	0	0	1	4	2	0	0	0	0	0	0	0	0	2	64
Cephalosporins - Cefotaxime	0.25	7	0	0	0	0	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.06	4
Fluoroquinolones - Ciprofloxacin	0.006	7	7	0	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.008	8
Penicillins - Ampicillin	8	7	1	0	0	0	0	0	0	0	0	1	5	0	0	0	1	0	0	0	0	0	0	0.5	32
Quinolones - Nalidixic acid	16	7	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	4	64
Tetracyclines - Tetracycline	8	7	2	0	0	0	0	0	0	0	0	4	1	0	0	0	0	2	0	0	0	0	0	1	64
Trimethoprim	2	7	1	0	0	0	0	0	0	5	1	0	0	0	0	0	1	0	0	0	0	0	0	0.5	32
Cephalosporins - Ceftazidim	0.5	7	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.25	16
Polymyxins - Colistin	2	7	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	2	4
Sulfonamides - Sulfamethoxazol	64	7	2	0	0	0	0	0	0	0	0	0	0	1	1	3	0	0	0	0	0	2	0	8	1024

Table Antimicrobial susceptibility testing of Verotoxigenic E. coli (VTEC) - VTEC O157 in Meat from pig - at retail - Surveillance - Objective sampling - Official sampling - food sample - meat - quantitative data [Dilution method]

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

VTEC O157	Meat from pig - at retail - Surveillance																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	178																								
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	178	9	0	0	0	0	0	12	80	58	19	8	0	1	0	0	0	0	0	0	0	0	0.25	32
Aminoglycosides - Kanamycin	8	178	9	0	0	0	0	0	0	0	0	0	150	19	2	1	0	1	5	0	0	0	0	4	128
Aminoglycosides - Streptomycin	16	178	46	0	0	0	0	0	0	0	0	0	15	91	26	3	4	16	23	0	0	0	0	2	128
Amphenicols - Chloramphenicol	16	178	11	0	0	0	0	0	0	0	0	1	9	130	27	1	3	7	0	0	0	0	0	2	64
Amphenicols - Florfenicol	16	178	4	0	0	0	0	0	0	0	0	2	22	135	15	2	0	2	0	0	0	0	0	2	64
Cephalosporins - Cefotaxime	0.25	178	3	0	0	0	135	37	3	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0.06	4
Fluoroquinolones - Ciprofloxacin	0.006	178	178	10	126	34	3	0	1	2	0	0	0	1	1	0	0	0	0	0	0	0	0	0.008	8
Penicillins - Ampicillin	8	178	41	0	0	0	0	0	0	0	0	34	91	12	2	0	39	0	0	0	0	0	0	0.5	32
Quinolones - Nalidixic acid	16	178	4	0	0	0	0	0	0	0	0	0	170	4	0	0	0	4	0	0	0	0	0	4	64
Tetracyclines - Tetracycline	8	178	54	0	0	0	0	0	0	0	11	51	52	10	1	1	13	39	0	0	0	0	0	1	64
Trimethoprim	2	178	43	0	0	0	0	0	0	96	27	12	1	0	0	1	41	0	0	0	0	0	0	0.5	32
Cephalosporins - Ceftazidim	0.5	178	4	0	0	0	0	0	160	14	1	3	0	0	0	0	0	0	0	0	0	0	0	0.25	16
Polymyxins - Colistin	2	178	1	0	0	0	0	0	0	0	0	177	1	0	0	0	0	0	0	0	0	0	0	2	4
Sulfonamides - Sulfamethoxazol	64	178	60	0	0	0	0	0	0	0	0	0	0	17	36	58	7	1	0	0	0	59	0	8	1024

Table Antimicrobial susceptibility testing of Verotoxigenic E. coli (VTEC) - VTEC O157 in Meat from turkey - at retail - Surveillance - Objective sampling - Official sampling - food sample - meat - quantitative data [Dilution method]

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

VTEC O157	Meat from turkey - at retail - Surveillance																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	46																								
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	46	6	0	0	0	0	0	2	22	10	6	1	0	1	3	1	0	0	0	0	0	0	0.25	32
Aminoglycosides - Kanamycin	8	46	10	0	0	0	0	0	0	0	0	0	35	1	1	0	0	0	9	0	0	0	0	4	128
Aminoglycosides - Streptomycin	16	46	23	0	0	0	0	0	0	0	0	0	5	16	2	1	5	2	15	0	0	0	0	2	128
Amphenicols - Chloramphenicol	16	46	11	0	0	0	0	0	0	0	0	0	2	27	6	3	1	7	0	0	0	0	0	2	64
Amphenicols - Florfenicol	16	46	0	0	0	0	0	0	0	0	0	0	2	37	7	0	0	0	0	0	0	0	0	2	64
Cephalosporins - Cefotaxime	0.25	46	1	0	0	0	26	16	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.06	4
Fluoroquinolones - Ciprofloxacin	0.006	46	46	1	13	14	0	0	2	5	2	2	0	3	4	0	0	0	0	0	0	0	0	0.008	8
Penicillins - Ampicillin	8	46	35	0	0	0	0	0	0	0	0	2	8	1	1	0	34	0	0	0	0	0	0	0.5	32
Quinolones - Nalidixic acid	16	46	17	0	0	0	0	0	0	0	0	0	28	0	1	1	0	16	0	0	0	0	0	4	64
Tetracyclines - Tetracycline	8	46	32	0	0	0	0	0	0	0	0	8	4	2	0	0	11	21	0	0	0	0	0	1	64
Trimethoprim	2	46	16	0	0	0	0	0	0	21	6	3	1	0	0	0	15	0	0	0	0	0	0	0.5	32
Cephalosporins - Ceftazidim	0.5	46	1	0	0	0	0	0	40	5	0	0	0	0	0	1	0	0	0	0	0	0	0	0.25	16
Polymyxins - Colistin	2	46	4	0	0	0	0	0	0	0	0	42	0	4	0	0	0	0	0	0	0	0	0	2	4
Sulfonamides - Sulfamethoxazol	64	46	26	0	0	0	0	0	0	0	0	0	0	0	5	12	3	0	0	0	0	26	0	8	1024

Table Antimicrobial susceptibility testing of Verotoxigenic E. coli (VTEC) - VTEC O157 in Meat from broilers (Gallus gallus) - at retail - Surveillance - Objective sampling - Official sampling - food sample - meat - quantitative data [Dilution method]

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

VTEC O157	Meat from broilers (Gallus gallus) - at retail - Surveillance																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	191																								
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	191	25	0	0	0	0	0	4	82	66	14	2	1	3	12	7	0	0	0	0	0	0	0.25	32
Aminoglycosides - Kanamycin	8	191	26	0	0	0	0	0	0	0	0	0	141	24	2	1	0	1	22	0	0	0	0	4	128
Aminoglycosides - Streptomycin	16	191	105	0	0	0	0	0	0	0	0	0	14	55	17	15	13	15	62	0	0	0	0	2	128
Amphenicols - Chloramphenicol	16	191	31	0	0	0	0	0	0	0	0	0	7	115	38	5	13	13	0	0	0	0	0	2	64
Amphenicols - Florfenicol	16	191	0	0	0	0	0	0	0	0	0	1	11	138	41	0	0	0	0	0	0	0	0	2	64
Cephalosporins - Cefotaxime	0.25	191	43	0	0	0	93	54	1	0	2	2	6	33	0	0	0	0	0	0	0	0	0	0.06	4
Fluoroquinolones - Ciprofloxacin	0.006	191	191	5	49	29	0	1	49	17	7	1	7	9	17	0	0	0	0	0	0	0	0	0.008	8
Penicillins - Ampicillin	8	191	126	0	0	0	0	0	0	0	0	11	49	5	0	0	126	0	0	0	0	0	0	0.5	32
Quinolones - Nalidixic acid	16	191	100	0	0	0	0	0	0	0	0	0	83	3	5	0	3	97	0	0	0	0	0	4	64
Tetracyclines - Tetracycline	8	191	101	0	0	0	0	0	0	0	3	49	34	4	0	2	20	79	0	0	0	0	0	1	64
Trimethoprim	2	191	78	0	0	0	0	0	0	73	28	12	1	0	0	1	76	0	0	0	0	0	0	0.5	32
Cephalosporins - Ceftazidim	0.5	191	40	0	0	0	0	0	137	14	7	3	5	8	14	3	0	0	0	0	0	0	0	0.25	16
Polymyxins - Colistin	2	191	5	0	0	0	0	0	0	0	0	186	2	3	0	0	0	0	0	0	0	0	0	2	4
Sulfonamides - Sulfamethoxazol	64	191	111	0	0	0	0	0	0	0	0	0	0	11	8	42	19	0	0	0	0	111	0	8	1024

Table Cut-off values for antibiotic resistance testing of Escherichia coli, pathogenic in Animals

Test Method Used	Standard methods used for testing
Broth dilution	NCCLS/CLSI

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Aminoglycosides	Gentamicin		2	
	Kanamycin		8	
	Streptomycin		16	
Amphenicols	Chloramphenicol		16	
	Florfenicol		16	
Cephalosporins	Cefotaxime		0.25	
	Ceftazidim		0.5	
Fluoroquinolones	Ciprofloxacin		0.006	
Penicillins	Ampicillin		8	
Quinolones	Nalidixic acid		16	
Sulfonamides	Sulfamethoxazol		64	
Tetracyclines	Tetracycline		8	
Trimethoprim	Trimethoprim		2	

Table Cut-off values for antibiotic resistance testing of Escherichia coli, pathogenic in Animals

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Polymyxins	Colistin		2	

Table Cut-off values for antibiotic resistance testing of Escherichia coli, pathogenic in Food

Test Method Used	Standard methods used for testing
Broth dilution	NCCLS/CLSI

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Aminoglycosides	Gentamicin		2	
	Kanamycin		8	
	Streptomycin		16	
Amphenicols	Chloramphenicol		16	
	Florfenicol		16	
Cephalosporins	Cefotaxime		0.25	
	Ceftazidim		0.5	
Fluoroquinolones	Ciprofloxacin		0.006	
Penicillins	Ampicillin		8	
Quinolones	Nalidixic acid		16	
Sulfonamides	Sulfamethoxazol		64	
Tetracyclines	Tetracycline		8	
Trimethoprim	Trimethoprim		2	

Table Cut-off values for antibiotic resistance testing of Escherichia coli, pathogenic in Food

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Polymyxins	Colistin		2	

2.5 TUBERCULOSIS, MYCOBACTERIAL DISEASES

2.5.1 General evaluation of the national situation

2.5.2 Mycobacterium in animals

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	GD	Suspect sampling		animal sample		Animal	564	0			
Goats	GD	Suspect sampling		animal sample		Animal	214	0			
Pigs	GD	Suspect sampling		animal sample		Animal	3341	0			
Other animals - Clinical investigations (wild, pet and zoo animals)	GD	Suspect sampling		animal sample		Animal	181	0			
Other animals - at farm - Clinical investigations	GD	Suspect sampling		animal sample		Animal	1430	0			

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			
Nederland	51119	3912112	51115	99.99	4	.01	no routine test			9	5
Total : [1)]	51119	3912112	51115	99.99	4	.01	N.A.	0	0	9	5

Comments:

[1)] N.A.

2.6 BRUCELLOSIS

2.6.1 General evaluation of the national situation

2.6.2 Brucella in animals

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	GD	Selective sampling	Industry sampling	animal sample		Animal	5929	0			

	Brucella spp., unspecified
Pigs	

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
Nederland	48919	1686868	48919	100	0	0	1544	15027	0	9	1	1	0	0
Total : [1)]	48919	1686868	48919	100	0	0	1544	15027	0	9	1	1	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		
Nederland	51119	3912112	51119	100	0	0	0	0	0	0	0	0	11499	0	0	11499	94	8	0	8	0
Total : [1)]	51119	3912112	51119	100	0	0	0	0	0	0	0	0	11499	0	0	11499	94	8	0	8	0

Comments:

[1)] N.A.

2.7 YERSINIOSIS

2.7.1 General evaluation of the national situation

2.7.2 Yersinia in animals

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
Sheep [1)]	GD		Industry sampling	animal sample		Animal	564	0			
Goats [2)]	GD		Industry sampling	animal sample		Animal	214	0			
Pigs - fattening pigs - at slaughterhouse - Monitoring	NVWA	Objective sampling	Official sampling	animal sample > vaginal swab		Animal	335	88	88		
Solipeds, domestic	VMDC	Unspecified	Industry sampling	animal sample		Animal	3	0			
Poultry, unspecified [3)]	GD		Industry sampling	animal sample		Flock	1430	0			
Dogs	VMDC	Unspecified	Industry sampling	animal sample		Animal	2	0			
Other animals - unspecified - Surveillance (Other farm,wild and pet animals, miscellaneous species)	VMDC	Unspecified	Industry sampling	animal sample > faeces		Animal	118	1		1	
Other animals - unspecified - Surveillance (Other farm,wild or pet animals, bird miscellaneous)	VMDC	Unspecified	Industry sampling	animal sample > faeces		Animal	53	1		1	
Other animals - unspecified - Surveillance (Other farm,wild or pet animals, primates)	VMDC	Unspecified	Industry sampling	animal sample > faeces		Animal	147	1		1	

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
Other animals - unspecified - Surveillance (Other farm,wild or pet animals, reptiles)	VMDC	Unspecified	Industry sampling	animal sample > faeces		Animal	18	0			
Other animals - unspecified - Surveillance (Other farm,wild or pet animals, rodents)	VMDC	Unspecified	Industry sampling	animal sample > faeces		Animal	63	1		1	
Pigs - unspecified [4]	GD		Industry sampling	animal sample		Animal	2933	0			

	Y. enterocolitica - O:3	Y. enterocolitica - O:9	Y. enterocolitica - unspecified
Sheep [1]			
Goats [2]			
Pigs - fattening pigs - at slaughterhouse - Monitoring			88
Solipeds, domestic			
Poultry, unspecified [3]			
Dogs			
Other animals - unspecified - Surveillance (Other farm,wild and pet animals, miscellaneous species)			
Other animals - unspecified - Surveillance (Other farm,wild or pet animals, bird miscellaneous)			
Other animals - unspecified - Surveillance (Other farm,wild or pet animals, primates)			

Table Yersinia in animals

	Y. enterocolitica - O:3	Y. enterocolitica - O:9	Y. enterocolitica - unspecified
Other animals - unspecified - Surveillance (Other farm,wild or pet animals, reptiles)			
Other animals - unspecified - Surveillance (Other farm,wild or pet animals, rodents)			
Pigs - unspecified [4)]			

Comments:

[1)] pathology

[2)] pathology

[3)] pathology

[4)] pathology

2.8 TRICHINELLOSIS

2.8.1 General evaluation of the national situation

2.8.2 Trichinella in animals

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 - raised under controlled housing conditions - at slaughterhouse - Surveillance	NVWA	Census	Official sampling	animal sample > organ/tissue		Animal	14520834	0		
Solipeds, domestic - horses - at slaughterhouse - Surveillance	NVWA	Census	Official sampling	animal sample > organ/tissue		Animal	5063	0		
Wild boars - wild - Surveillance	NVWA	Census	Official sampling	animal sample > organ/tissue		Animal	1332	0		
Foxes - Monitoring	RIVM	Unspecified	Industry sampling	animal sample > organ/tissue		Animal	260	0		
Rats - Monitoring	RIVM	Unspecified	Industry sampling	animal sample > organ/tissue		Animal	94	0		
Wild boars - from hunting - Surveillance	GD	Unspecified	Industry sampling	animal sample > blood		Animal	458	0		

2.9 ECHINOCOCCOSIS

2.9.1 General evaluation of the national situation

2.9.2 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
Sheep - at slaughterhouse - Surveillance [1)]	GD		Industry sampling	animal sample		Animal	Nederland	564	0		
Goats - at slaughterhouse - Surveillance [2)]	GD		Industry sampling	animal sample		Animal	Nederland	214	0		
Solipeds, domestic - horses - at slaughterhouse - Surveillance	RIVM	Objective sampling		animal sample		Animal	Nederland	1	1	1	
Foxes - Monitoring [3)]	RIVM	Objective sampling		animal sample		Animal	Nederland	165	1		1

	Echinococcus spp., unspecified
Sheep - at slaughterhouse - Surveillance [1)]	
Goats - at slaughterhouse - Surveillance [2)]	
Solipeds, domestic - horses - at slaughterhouse - Surveillance	
Foxes - Monitoring [3)]	

Table Echinococcus in animals

Comments:

[1] pathology

[2] pathology

[3] from hunting

2.10 TOXOPLASMOSIS

2.10.1 General evaluation of the national situation

2.10.2 Toxoplasma in animals

Table Toxoplasma in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Analytical Method	Sampling unit	Units tested	Total units positive for Toxoplasma	T. gondii	Toxoplasma spp., unspecified
Sheep - at farm - Clinical investigations	GD		Industry sampling	animal sample > blood		ELISA	Animal	564	0		
Goats - at farm - Clinical investigations	GD		Industry sampling	animal sample > blood		ELISA	Animal	214	0		
Dogs - Clinical investigations	VMDC	Suspect sampling	Industry sampling	animal sample > blood		ELISA	Animal	77	9	9	
Cats - Clinical investigations	VMDC	Suspect sampling	Industry sampling	animal sample > blood		ELISA	Animal	23	2	2	
Cats - pet animals - unspecified - Surveillance (Cats seroprevalence)	RIVM	Unspecified	Industry sampling	animal sample > blood		ELISA	Animal	450	91	91	

2.11 RABIES

2.11.1 General evaluation of the national situation

2.11.2 Lyssavirus (rabies) in animals

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
Sheep [1)]	GD		Industry sampling	animal sample		Animal	Nederland	654	0		
Goats [2)]	GD		Industry sampling	animal sample		Animal	Nederland	214	0		
Bats - wild - Monitoring	VWA	Suspect sampling	Official sampling	animal sample		Animal	Nederland	164	7		7
Foxes - wild - Monitoring	NVWA	Suspect sampling	Official sampling	animal sample		Animal	Nederland	6	0		
Cats - pet animals - Clinical investigations	NVWA	Suspect sampling	Official sampling	animal sample		Animal	Nederland	6	0		
Dogs - pet animals - Clinical investigations	NVWA	Suspect sampling	Official sampling	animal sample		Animal	Nederland	9	0		
Ferrets - Clinical investigations	NVWA	Suspect sampling	Official and industry sampling	animal sample		Animal	Nederland	1	0		
Polecats - zoo animal - Clinical investigations	NVWA	Suspect sampling	Official sampling	animal sample		Animal	Nederland	1	0		
Squirrels - wild - Clinical investigations	NVWA	Suspect sampling	Official sampling	animal sample		Animal	Nederland	4	0		

Table Rabies in animals

	EBLV-2	Lyssavirus (unspecified virus)
Sheep [1)]		
Goats [2)]		
Bats - wild - Monitoring		
Foxes - wild - Monitoring		
Cats - pet animals - Clinical investigations		
Dogs - pet animals - Clinical investigations		
Ferrets - Clinical investigations		
Polecats - zoo animal - Clinical investigations		
Squirrels - wild - Clinical investigations		

Comments:

[1)] patholoogy

[2)] pathology

2.12 STAPHYLOCOCCUS INFECTION

2.12.1 General evaluation of the national situation

2.12.2 Staphylococcus in animals

Table Staphylococcus in Animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for Staphylococcus	S. aureus, meticillin resistant (MRSA)	S. aureus, meticillin resistant (MRSA) - spa -type t011
Sheep - at farm - Monitoring [1)]	GD	Unspecified	Industry sampling	animal sample		Animal		564	0		
Goats - at farm - Monitoring [2)]	GD	Unspecified	Industry sampling	animal sample		Animal		214	0		
Cattle (bovine animals) - at slaughterhouse - Monitoring [3)]	NVWA	Objective sampling	Official sampling	animal sample > nasal swab		Herd		100	83	83	
Gallus gallus (fowl) - at slaughterhouse - Monitoring [4)]	NVWA	Objective sampling	Official sampling	animal sample > nasal swab		Herd		48	14	14	
Other animals - unspecified - Surveillance (Other animals, bovine)	VMDC	Unspecified	Industry sampling	animal sample		Animal		13	0		
Pigs - at slaughterhouse - Monitoring [5)]	NVWA	Objective sampling	Official sampling	animal sample > nasal swab		Herd		110	88	88	

	S. aureus, meticillin resistant (MRSA) - spa -type t108	S. aureus, meticillin resistant (MRSA) - spa -type t034	S. aureus, meticillin resistant (MRSA) - MRSA, unspecified
Sheep - at farm - Monitoring [1)]			

Table Staphylococcus in Animals

	S. aureus, meticillin resistant (MRSA) - spa -type t108	S. aureus, meticillin resistant (MRSA) - spa -type t034	S. aureus, meticillin resistant (MRSA) - MRSA, unspecified
Goats - at farm - Monitoring [2)]			
Cattle (bovine animals) - at slaughterhouse - Monitoring [3)]			83
Gallus gallus (fowl) - at slaughterhouse - Monitoring [4)]			14
Other animals - unspecified - Surveillance (Other animals, bovine)			
Pigs - at slaughterhouse - Monitoring [5)]			88

Comments:

[1)] MRSA

[2)] MRSA

[3)] 10 animals per herd

[4)] 10 animals per herd

[5)] 10 animals per herd

2.13 Q-FEVER

2.13.1 General evaluation of the national situation

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
Sheep - at farm - Clinical investigations	GD	Unspecified	Industry sampling	animal sample > vaginal swab		PCR	Animal	564	0		
Goats - at farm - Clinical investigations	GD	Unspecified	Industry sampling	animal sample > vaginal swab		PCR	Animal	214	0		

3. INFORMATION ON SPECIFIC INDICATORS OF ANTIMICROBIAL RESISTANCE

3.1 ESCHERICHIA COLI, NON-PATHOGENIC

3.1.1 General evaluation of the national situation

3.1.2 Antimicrobial resistance in Escherichia coli, non-pathogenic

Table 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	287	
Antimicrobials:	N	n
Fully sensitive	287	51
Resistant to 1 antimicrobial	287	36
Resistant to 2 antimicrobials	287	45
Resistant to 3 antimicrobials	287	41
Resistant to 4 antimicrobials	287	37
Resistant to >4 antimicrobials	287	77

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	95	
Antimicrobials:	N	n
Fully sensitive	95	1
Resistant to 1 antimicrobial	95	1
Resistant to 2 antimicrobials	95	0
Resistant to 3 antimicrobials	95	2
Resistant to 4 antimicrobials	95	3
Resistant to >4 antimicrobials	95	13

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic in Cattle (bovine animals) - calves (under 1 year) - veal calves - at farm - animal sample - faeces

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	166	
Antimicrobials:	N	n
Fully sensitive	166	41
Resistant to 1 antimicrobial	166	23
Resistant to 2 antimicrobials	166	4
Resistant to 3 antimicrobials	166	7
Resistant to 4 antimicrobials	166	18
Resistant to >4 antimicrobials	166	73

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic in Cattle (bovine animals) - dairy cows - at slaughterhouse - Monitoring - Objective sampling - Official sampling - animal sample - faeces

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	265	
Antimicrobials:	N	n
Fully sensitive	265	258
Resistant to 1 antimicrobial	265	5
Resistant to 2 antimicrobials	265	0
Resistant to 3 antimicrobials	265	0
Resistant to 4 antimicrobials	265	0
Resistant to >4 antimicrobials	265	2

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic in Gallus gallus (fowl) - broilers - before slaughter - at slaughterhouse - Monitoring - Objective sampling - Official sampling - animal sample - caecum

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	283	
Antimicrobials:	N	n
Fully sensitive	283	33
Resistant to 1 antimicrobial	283	25
Resistant to 2 antimicrobials	283	31
Resistant to 3 antimicrobials	283	27
Resistant to 4 antimicrobials	283	32
Resistant to >4 antimicrobials	283	135

Table Antimicrobial susceptibility testing of E.coli, non-pathogenic, unspecified in Cattle (bovine animals) - dairy cows - at slaughterhouse - Monitoring - Objective sampling - animal sample - faeces - 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) - dairy cows - at slaughterhouse - Monitoring																							
Isolates out of a monitoring program (yes/no)	yes																							
Number of isolates available in the laboratory	265																							
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	265	0						17	172	62	14												0.25	32
Aminoglycosides - Kanamycin	8	265	2										251	12	2									4	128
Aminoglycosides - Neomycin		265	265										251	12	2										
Aminoglycosides - Streptomycin	16	265	3									2	77	168	15	1		2						2	128
Amphenicols - Chloramphenicol	16	265	3									1	19	213	29	1	1	1						2	64
Amphenicols - Florfenicol	16	265	2									1	25	215	22	2								2	64
Cephalosporins - Cefotaxime	0.25	265	0				216	47	2															0.06	4
Fluoroquinolones - Ciprofloxacin	0.06	265	1		227	35	2		1															0.008	4
Penicillins - Ampicillin	8	265	3								8	62	173	19			3							0.5	32
Quinolones - Nalidixic acid	16	265	1										261	3				1						4	64
Tetracyclines - Tetracycline	8	265	4								22	146	92	1			1	3						1	64
Trimethoprim	2	265	2							257	5	1					2							0.5	32
Cephalosporins - Ceftazidim	0.5	265	0						256	9														0.25	16
Sulfonamides - Sulfamethoxazol	256	265	2											259	2	2						2			

Table Antimicrobial susceptibility testing of E.coli, non-pathogenic, unspecified in Gallus gallus (fowl) - broilers - before slaughter - at slaughterhouse - Monitoring - Objective sampling - Official sampling - animal sample - caecum - 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) - broilers - before slaughter - at slaughterhouse - Monitoring																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	283																								
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	283	20						10	156	83	14	3	3	9	2	3								
Aminoglycosides - Kanamycin	8	283	38										224	21	5				33						
Aminoglycosides - Streptomycin	16	283	176									1	17	76	13	16	24	23	113						
Amphenicols - Chloramphenicol	16	283	58										24	174	27	7	20	31							
Amphenicols - Florfenicol	16	283	11										38	185	49	10	1								
Cephalosporins - Cefotaxime	0.25	283	23				212	40	8		3		1	19											
Fluoroquinolones - Ciprofloxacin	0.06	283	156		107	17	3	13	82	31	11	2	1	11	5										
Penicillins - Ampicillin	8	283	187								1	35	53	7	1		186								
Quinolones - Nalidixic acid	16	283	158										125			5	12	141							
Tetracyclines - Tetracycline	8	283	146								15	83	37	2	1	3	22	120							
Trimethoprim	2	283	159							120	4		2				157								
Cephalosporins - Ceftazidim	0.5	283	23						244	16	4	2	5	9	1	2									
Sulfonamides - Sulfamethoxazol	256	283	179											104						2		177			

Table Antimicrobial susceptibility testing of E.coli, non-pathogenic, unspecified in Pigs - fattening pigs - at slaughterhouse - Monitoring - Official sampling - animal sample - faeces - 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 - Monitoring																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	287																								
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	287	6						20	146	99	16	5	1											
Aminoglycosides - Kanamycin	8	287	7										252	28	3	1			3						
Aminoglycosides - Streptomycin	16	287	166									1	21	71	28	28	33	28	77						
Amphenicols - Chloramphenicol	16	287	35									1	34	200	17	14	7	14							
Amphenicols - Florfenicol	16	287	2									4	47	210	24	1		1							
Cephalosporins - Cefotaxime	0.25	287	5				242	39	1	1		1		3											
Fluoroquinolones - Ciprofloxacin	0.06	287	5		251	30	1	1	1	2					1										
Penicillins - Ampicillin	8	287	102								7	74	93	11		1	101								
Quinolones - Nalidixic acid	16	287	3										281	2	1			3							
Tetracyclines - Tetracycline	8	287	192								12	61	22		2	3	48	139							
Trimethoprim	2	287	136							148	2	1	1			1	134								
Cephalosporins - Ceftazidim	0.5	287	7						265	15	4	1			2										
Sulfonamides - Sulfamethoxazol	256	287	157											129	1							157			

Table Antimicrobial susceptibility testing of E.coli, non-pathogenic, unspecified in Cattle (bovine animals) - calves (under 1 year) - veal calves - at farm - animal sample - faeces - 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) - calves (under 1 year) - veal calves - at farm																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	166																								
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	166	19						6	78	49	14	1	1	7	6	4								
Aminoglycosides - Kanamycin	8	166	47										108	11	1	1	1		44						
Aminoglycosides - Streptomycin	16	166	95									1	19	44	7	6	7	14	68						
Amphenicols - Chloramphenicol	16	166	44										16	94	12	1	5	38							
Amphenicols - Florfenicol	16	166	28									1	22	98	17	2		26							
Cephalosporins - Cefotaxime	0.25	166	5				127	27	7	1				4											
Fluoroquinolones - Ciprofloxacin	0.06	166	39		103	23	1	2	14	5	2	1		3	12										
Penicillins - Ampicillin	8	166	81								4	25	52	4			81								
Quinolones - Nalidixic acid	16	166	37										124	5				37							
Tetracyclines - Tetracycline	8	166	122								4	19	21			1	18	103							
Trimethoprim	2	166	75							89	2						75								
Cephalosporins - Ceftazidim	0.5	166	4						153	9	2	2													
Sulfonamides - Sulfamethoxazol	256	166	93											73								93			

Table Antimicrobial susceptibility testing of E.coli, non-pathogenic, unspecified in Turkeys - fattening flocks - at farm - animal sample - faeces (Faeces was collected from the floor at the farm. Animals were derived from fattening or meat production flocks.) - quantitative data [Dilution method]

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

E.coli, non-pathogenic, unspecified	Turkeys - fattening flocks - at farm (Faeces was collected from the floor at the farm. Animals were derived from fattening or meat production flocks.)																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	95																								
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	95	8							41	34	12	1	1	2	3	1								
Aminoglycosides - Kanamycin	8	95	13										72	10	1	2			10						
Aminoglycosides - Streptomycin	16	95	53										1	35	6	14	12	10	17						
Amphenicols - Chloramphenicol	16	95	41										6	43	5	16	12	13							
Amphenicols - Florfenicol	16	95	5										10	52	28	5									
Cephalosporins - Cefotaxime	0.25	95	6				59	28	2		1	2	2	1											
Fluoroquinolones - Ciprofloxacin	0.06	95	30		53	12		2	8	8	2	1			9										
Penicillins - Ampicillin	8	95	76								1	7	11				76								
Quinolones - Nalidixic acid	16	95	26										66	1	2		1	25							
Tetracyclines - Tetracycline	8	95	76								4	7	8		2	1	15	58							
Trimethoprim	2	95	37							57	1						37								

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

Test Method Used	Standard methods used for testing
Broth dilution	NCCLS/CLSI

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Aminoglycosides	Gentamicin	EFSA	2	
	Kanamycin		8	
	Streptomycin	EFSA	16	
Amphenicols	Chloramphenicol	EFSA	16	
	Florfenicol		16	
Cephalosporins	Cefotaxime	EFSA	0.25	
	Ceftazidim		0.5	
Fluoroquinolones	Ciprofloxacin	NON-EFSA	0.06	
Penicillins	Ampicillin	EFSA	8	
	Amoxicillin		8	
Quinolones	Nalidixic acid	EFSA	16	
Sulfonamides	Sulfonamides	EFSA	256	
	Sulfamethoxazol		256	

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

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Tetracyclines	Tetracycline	EFSA	8	
Trimethoprim	Trimethoprim	EFSA	2	
Polymyxins	Colistin		8	

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

Test Method Used	Standard methods used for testing

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
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	EFSA	2	
	Streptomycin	EFSA	16	
Amphenicols	Chloramphenicol	EFSA	16	
Cephalosporins	Cefotaxime	EFSA	0.25	
Fluoroquinolones	Ciprofloxacin	EFSA	0.03	
Penicillins	Ampicillin	EFSA	8	
Quinolones	Nalidixic acid	EFSA	16	
Sulfonamides	Sulfonamides	EFSA	256	
Tetracyclines	Tetracycline	EFSA	8	
Trimethoprim	Trimethoprim	EFSA	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 Antimicrobial susceptibility testing of Enterococcus, non-pathogenic in Gallus gallus (fowl) - broilers - at slaughterhouse - Monitoring - Objective sampling - Official sampling - animal sample - caecum

Enterococcus, non-pathogenic	E. faecalis		E. faecium	
Isolates out of a monitoring program (yes/no)	yes		yes	
Number of isolates available in the laboratory	276		427	
Antimicrobials:	N	n	N	n
Fully sensitive	276	30	427	25
Resistant to 1 antimicrobial	276	44	427	40
Resistant to 2 antimicrobials	276	54	427	51
Resistant to 3 antimicrobials	276	140	427	90
Resistant to 4 antimicrobials	276	7	427	126
Resistant to >4 antimicrobials	276	1	427	95

Footnote:

resistance to 1, 2, 3, 4 and >4 antimicrobials for enterococcus species (also in other animal species) was calculated by using AMP, CHL, ERY, GEN, LZD, Q/D, STR, TET en VAN.

Table Antimicrobial susceptibility testing of Enterococcus, non-pathogenic in Pigs - fattening pigs - at slaughterhouse - Monitoring - Objective sampling - Official sampling - animal sample - faeces

Enterococcus, non-pathogenic	E. faecalis		E. faecium	
Isolates out of a monitoring program (yes/no)	yes		yes	
Number of isolates available in the laboratory	74		184	
Antimicrobials:	N	n	N	n
Fully sensitive	74	10	184	8
Resistant to 1 antimicrobial	74	21	184	32
Resistant to 2 antimicrobials	74	25	184	66
Resistant to 3 antimicrobials	74	10	184	48
Resistant to 4 antimicrobials	74	6	184	26
Resistant to >4 antimicrobials	74	2	184	4

Footnote:

see enterococ broilers

Table Antimicrobial susceptibility testing of Enterococcus, non-pathogenic in Vegetables - at retail - Surveillance - Objective sampling - Official sampling - food sample (Vegetables)

Enterococcus, non-pathogenic	E. faecalis		E. faecium	
Isolates out of a monitoring program (yes/no)	yes		yes	
Number of isolates available in the laboratory	60		34	
Antimicrobials:	N	n	N	n
Aminoglycosides - Gentamicin	60	0	34	0
Aminoglycosides - Streptomycin	60	1	34	1
Amphenicols - Chloramphenicol	60	0	34	0
Amphenicols - Florfenicol	60	0	34	0
Fluoroquinolones - Ciprofloxacin	60	0	34	0
Penicillins - Ampicillin	60	0	34	0
Tetracyclines - Tetracycline	60	6	34	4
Fully sensitive	60	24	34	7
Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin	60	1	34	0
Ionophores - Salinomycin	60	0	34	0
Macrolides - Erythromycin	60	3	34	12
Oxazolidines - Linezolid	60	0	34	0
Resistant to 1 antimicrobial	60	30	34	14
Resistant to 2 antimicrobials	60	3	34	11
Resistant to 3 antimicrobials	60	2	34	2
Resistant to 4 antimicrobials	60	1	34	0
Resistant to >4 antimicrobials	60	0	34	0
Streptogramins - Quinupristin/Dalfopristin	60	34	34	25

Table Antimicrobial susceptibility testing of Enterococcus, non-pathogenic in Vegetables - at retail - Surveillance - Objective sampling - Official sampling - food sample (Vegetables)

Table Antimicrobial susceptibility testing of Enterococcus, non-pathogenic in Cattle (bovine animals) - calves (under 1 year) - veal calves - at farm - animal sample - faeces

Enterococcus, non-pathogenic	E. faecalis		E. faecium	
Isolates out of a monitoring program (yes/no)	yes		yes	
Number of isolates available in the laboratory	60		145	
Antimicrobials:	N	n	N	n
Fully sensitive	60	25	145	8
Resistant to 1 antimicrobial	60	7	145	54
Resistant to 2 antimicrobials	60	5	145	24
Resistant to 3 antimicrobials	60	5	145	30
Resistant to 4 antimicrobials	60	18	145	18
Resistant to >4 antimicrobials	60	0	145	11

Table Antimicrobial susceptibility testing of Enterococcus, non-pathogenic in Cattle (bovine animals) - dairy cows - at slaughterhouse - Monitoring - Objective sampling - Official sampling - animal sample - faeces

Enterococcus, non-pathogenic	E. faecalis		E. faecium	
Isolates out of a monitoring program (yes/no)	yes		yes	
Number of isolates available in the laboratory	36		108	
Antimicrobials:	N	n	N	n
Fully sensitive	36	26	108	41
Resistant to 1 antimicrobial	36	10	108	58
Resistant to 2 antimicrobials	36	0	108	8
Resistant to 3 antimicrobials	36	0	108	1
Resistant to 4 antimicrobials	36	0	108	0
Resistant to >4 antimicrobials	36	0	108	0

Table Antimicrobial susceptibility testing of Enterococcus, non-pathogenic in Fruits - at retail - Surveillance - Objective sampling - Official sampling - food sample

Enterococcus, non-pathogenic	E. faecalis		E. faecium	
Isolates out of a monitoring program (yes/no)	yes		yes	
Number of isolates available in the laboratory	36		32	
Antimicrobials:	N	n	N	n
Aminoglycosides - Gentamicin	36	0	32	0
Aminoglycosides - Streptomycin	36	1	32	1
Amphenicols - Chloramphenicol	36	1	32	0
Amphenicols - Florfenicol	36	0	32	0
Fluoroquinolones - Ciprofloxacin	36	0	32	1
Penicillins - Ampicillin	36	0	32	0
Tetracyclines - Tetracycline	36	10	32	1
Fully sensitive	36	15	32	10
Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin	36	0	32	0
Ionophores - Salinomycin	36	0	32	0
Macrolides - Erythromycin	36	3	32	5
Oxazolidines - Linezolid	36	0	32	0
Resistant to 1 antimicrobial	36	17	32	15
Resistant to 2 antimicrobials	36	1	32	6
Resistant to 3 antimicrobials	36	1	32	1
Resistant to 4 antimicrobials	36	2	32	0
Resistant to >4 antimicrobials	36	0	32	0
Streptogramins - Quinupristin/Dalfopristin	36	15	32	22

Table Antimicrobial susceptibility testing of Enterococcus, non-pathogenic in Fruits - at retail - Surveillance - Objective sampling - Official sampling - food sample

Table Antimicrobial susceptibility testing of Enterococcus, non-pathogenic in Turkeys - fattening flocks - at farm - animal sample - faeces
(Faeces was collected from the floor of the farm. Animals were derived from fattening or meat production farms.)

Enterococcus, non-pathogenic	E. faecalis		E. faecium	
Isolates out of a monitoring program (yes/no)	yes		yes	
Number of isolates available in the laboratory	31		88	
Antimicrobials:	N	n	N	n
Fully sensitive	31	0	88	0
Resistant to 1 antimicrobial	31	5	88	8
Resistant to 2 antimicrobials	31	14	88	11
Resistant to 3 antimicrobials	31	6	88	31
Resistant to 4 antimicrobials	31	0	88	8

Table Antimicrobial susceptibility testing of Enterococcus, non-pathogenic in Spices and herbs - at retail - Surveillance - Objective sampling - Official sampling - food sample

Enterococcus, non-pathogenic	E. faecalis		E. faecium	
Isolates out of a monitoring program (yes/no)	yes		yes	
Number of isolates available in the laboratory	25		11	
Antimicrobials:	N	n	N	n
Aminoglycosides - Gentamicin	25	1	11	0
Aminoglycosides - Streptomycin	25	2	11	0
Amphenicols - Chloramphenicol	25	0	11	0
Amphenicols - Florfenicol	25	1	11	0
Fluoroquinolones - Ciprofloxacin	25	0	11	0
Penicillins - Ampicillin	25	0	11	0
Tetracyclines - Tetracycline	25	6	11	3
Fully sensitive	25	14	11	6
Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin	25	0	11	0
Ionophores - Salinomycin	25	0	11	0
Macrolides - Erythromycin	25	1	11	2
Oxazolidines - Linezolid	25	0	11	0
Resistant to 1 antimicrobial	25	9	11	5
Resistant to 2 antimicrobials	25	0	11	0
Resistant to 3 antimicrobials	25	1	11	0
Resistant to 4 antimicrobials	25	0	11	0
Resistant to >4 antimicrobials	25	1	11	0
Streptogramins - Quinupristin/Dalfopristin	25	6	11	0

Table Antimicrobial susceptibility testing of Enterococcus, non-pathogenic in Spices and herbs - at retail - Surveillance - Objective sampling - Official sampling - food sample

Table Antimicrobial susceptibility testing of Enterococcus, non-pathogenic in Meat from bovine animals - at retail - Surveillance - Objective sampling - Official sampling - food sample - meat

Enterococcus, non-pathogenic	E. faecalis		E. faecium	
Isolates out of a monitoring program (yes/no)	yes		yes	
Number of isolates available in the laboratory	199		125	
Antimicrobials:	N	n	N	n
Aminoglycosides - Gentamicin	199	2	125	0
Aminoglycosides - Streptomycin	199	11	125	7
Amphenicols - Chloramphenicol	199	3	125	0
Amphenicols - Florfenicol	199	0	125	0
Fluoroquinolones - Ciprofloxacin	199	0	125	5
Penicillins - Ampicillin	199	0	125	2
Tetracyclines - Tetracycline	199	37	125	12
Fully sensitive	199	98	125	40
Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin	199	0	125	0
Ionophores - Salinomycin	199	0	125	0
Macrolides - Erythromycin	199	8	125	22
Oxazolidines - Linezolid	199	0	125	0
Resistant to 1 antimicrobial	199	76	125	56
Resistant to 2 antimicrobials	199	15	125	22
Resistant to 3 antimicrobials	199	3	125	3
Resistant to 4 antimicrobials	199	3	125	4
Resistant to >4 antimicrobials	199	4	125	0
Streptogramins - Quinupristin/Dalfopristin	199	87	125	77

Table Antimicrobial susceptibility testing of Enterococcus, non-pathogenic in Meat from bovine animals - at retail - Surveillance - Objective sampling - Official sampling - food sample - meat

Table Antimicrobial susceptibility testing of Enterococcus, non-pathogenic in Meat from bovine animals - at retail - Surveillance - Objective sampling - Official sampling - food sample - meat (meat bovine calf)

Enterococcus, non-pathogenic	E. faecalis		E. faecium	
Isolates out of a monitoring program (yes/no)	yes		yes	
Number of isolates available in the laboratory	17		21	
Antimicrobials:	N	n	N	n
Aminoglycosides - Gentamicin	17	0	21	1
Aminoglycosides - Streptomycin	17	3	21	3
Amphenicols - Chloramphenicol	17	2	21	1
Amphenicols - Florfenicol	17	0	21	1
Fluoroquinolones - Ciprofloxacin	17	0	21	0
Penicillins - Ampicillin	17	0	21	0
Tetracyclines - Tetracycline	17	6	21	7
Fully sensitive	17	6	21	3
Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin	17	0	21	0
Ionophores - Salinomycin	17	0	21	0
Macrolides - Erythromycin	17	4	21	11
Oxazolidines - Linezolid	17	0	21	1
Resistant to 1 antimicrobial	17	7	21	7
Resistant to 2 antimicrobials	17	1	21	7
Resistant to 3 antimicrobials	17	0	21	3
Resistant to 4 antimicrobials	17	1	21	0
Resistant to >4 antimicrobials	17	2	21	1
Streptogramins - Quinupristin/Dalfopristin	17	8	21	13

Table Antimicrobial susceptibility testing of Enterococcus, non-pathogenic in Meat from bovine animals - at retail - Surveillance - Objective sampling - Official sampling - food sample - meat (meat bovine calf)

Table Antimicrobial susceptibility testing of Enterococcus, non-pathogenic in Meat from sheep - at retail - Surveillance - Objective sampling - Official sampling - food sample - meat (meat lamb E Faecalis)

Enterococcus, non-pathogenic	E. faecalis		E. faecium	
Isolates out of a monitoring program (yes/no)	yes		yes	
Number of isolates available in the laboratory	13		5	
Antimicrobials:	N	n	N	n
Aminoglycosides - Gentamicin	13	0	5	0
Aminoglycosides - Streptomycin	13	3	5	0
Amphenicols - Chloramphenicol	13	0	5	0
Amphenicols - Florfenicol	13	0	5	0
Fluoroquinolones - Ciprofloxacin	13	0	5	0
Penicillins - Ampicillin	13	0	5	0
Tetracyclines - Tetracycline	13	6	5	0
Fully sensitive	13	3	5	2
Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin	13	0	5	0
Ionophores - Salinomycin	13	0	5	0
Macrolides - Erythromycin	13	2	5	1
Oxazolidines - Linezolid	13	0	5	0
Resistant to 1 antimicrobial	13	5	5	2
Resistant to 2 antimicrobials	13	1	5	1
Resistant to 3 antimicrobials	13	3	5	0
Resistant to 4 antimicrobials	13	1	5	0
Resistant to >4 antimicrobials	13	0	5	0
Streptogramins - Quinupristin/Dalfopristin	13	9	5	3

Table Antimicrobial susceptibility testing of Enterococcus, non-pathogenic in Meat from sheep - at retail - Surveillance - Objective sampling - Official sampling - food sample - meat (meat lamb E Faecalis)

Table Antimicrobial susceptibility testing of Enterococcus, non-pathogenic in Meat from pig - at retail - Surveillance - Objective sampling - Official sampling - food sample - meat (meat pig E Faecalis)

Enterococcus, non-pathogenic	E. faecalis		E. faecium	
Isolates out of a monitoring program (yes/no)	yes		yes	
Number of isolates available in the laboratory	233		106	
Antimicrobials:	N	n	N	n
Aminoglycosides - Gentamicin	233	1	106	0
Aminoglycosides - Streptomycin	233	10	106	2
Amphenicols - Chloramphenicol	233	4	106	0
Amphenicols - Florfenicol	233	0	106	0
Fluoroquinolones - Ciprofloxacin	233	2	106	2
Penicillins - Ampicillin	233	0	106	0
Tetracyclines - Tetracycline	233	44	106	9
Fully sensitive	233	133	106	20
Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin	233	0	106	0
Ionophores - Salinomycin	233	0	106	0
Macrolides - Erythromycin	233	13	106	17
Oxazolidines - Linezolid	233	0	106	0
Resistant to 1 antimicrobial	233	73	106	66
Resistant to 2 antimicrobials	233	15	106	16
Resistant to 3 antimicrobials	233	3	106	3
Resistant to 4 antimicrobials	233	6	106	1
Resistant to >4 antimicrobials	233	3	106	0
Streptogramins - Quinupristin/Dalfopristin	233	78	106	80

Table Antimicrobial susceptibility testing of Enterococcus, non-pathogenic in Meat from pig - at retail - Surveillance - Objective sampling - Official sampling - food sample - meat (meat pig E Faecalis)

Table Antimicrobial susceptibility testing of Enterococcus, non-pathogenic in Meat from broilers (Gallus gallus) - at retail - Surveillance - Objective sampling - Official sampling - food sample - meat (meat chicken E Faecalis)

Enterococcus, non-pathogenic	E. faecalis		E. faecium	
Isolates out of a monitoring program (yes/no)	yes		yes	
Number of isolates available in the laboratory	110		24	
Antimicrobials:	N	n	N	n
Aminoglycosides - Gentamicin	110	3	24	0
Aminoglycosides - Streptomycin	110	55	24	6
Amphenicols - Chloramphenicol	110	5	24	0
Amphenicols - Florfenicol	110	0	24	0
Fluoroquinolones - Ciprofloxacin	110	2	24	11
Penicillins - Ampicillin	110	1	24	2
Tetracyclines - Tetracycline	110	82	24	11
Fully sensitive	110	13	24	0
Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin	110	9	24	0
Ionophores - Salinomycin	110	0	24	5
Macrolides - Erythromycin	110	69	24	16
Oxazolidines - Linezolid	110	0	24	0
Resistant to 1 antimicrobial	110	19	24	4
Resistant to 2 antimicrobials	110	10	24	4
Resistant to 3 antimicrobials	110	18	24	11
Resistant to 4 antimicrobials	110	43	24	1
Resistant to >4 antimicrobials	110	7	24	4
Streptogramins - Quinupristin/Dalfopristin	110	83	24	18

Table Antimicrobial susceptibility testing of Enterococcus, non-pathogenic in Meat from broilers (Gallus gallus) - at retail - Surveillance - Objective sampling - Official sampling - food sample - meat (meat chicken E Faecalis)

Table Antimicrobial susceptibility testing of Enterococcus, non-pathogenic in Meat from turkey - at retail - Surveillance - Objective sampling - Official sampling - food sample - meat (meat turkey E Faecalis)

Enterococcus, non-pathogenic	E. faecalis		E. faecium	
Isolates out of a monitoring program (yes/no)	yes		yes	
Number of isolates available in the laboratory	15		7	
Antimicrobials:	N	n	N	n
Aminoglycosides - Gentamicin	15	1	7	0
Aminoglycosides - Streptomycin	15	2	7	5
Amphenicols - Chloramphenicol	15	0	7	0
Amphenicols - Florfenicol	15	0	7	0
Fluoroquinolones - Ciprofloxacin	15	1	7	0
Penicillins - Ampicillin	15	0	7	4
Tetracyclines - Tetracycline	15	14	7	6
Fully sensitive	15	1	7	0
Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin	15	0	7	0
Ionophores - Salinomycin	15	0	7	1
Macrolides - Erythromycin	15	9	7	4
Oxazolidines - Linezolid	15	0	7	0
Resistant to 1 antimicrobial	15	4	7	0
Resistant to 2 antimicrobials	15	1	7	1
Resistant to 3 antimicrobials	15	6	7	2
Resistant to 4 antimicrobials	15	3	7	2
Resistant to >4 antimicrobials	15	0	7	2
Streptogramins - Quinupristin/Dalfopristin	15	9	7	7

Table Antimicrobial susceptibility testing of Enterococcus, non-pathogenic in Meat from turkey - at retail - Surveillance - Objective sampling - Official sampling - food sample - meat (meat turkey E Faecalis)

Table Antimicrobial susceptibility testing of E. faecium in Gallus gallus (fowl) - broilers - before slaughter - at slaughterhouse - Monitoring - Objective sampling - Official sampling - animal sample - caecum - quantitative data [Dilution method]

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

E. faecium	Gallus gallus (fowl) - broilers - before slaughter - at slaughterhouse - Monitoring																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	427																								
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	32	427	15										16	167	183	46	2	6	2		5			4	512
Aminoglycosides - Streptomycin	128	427	239													9	107	72	2	1	13	223		8	1024
Amphenicols - Chloramphenicol	32	427	2									1	33	238	57	96	2							1	128
Amphenicols - Florfenicol	8	427	0									39	382	6										1	64
Fluoroquinolones - Ciprofloxacin	4	427	45							1	37	105	239	43	2									0.5	64
Penicillins - Ampicillin	4	427	154								72	95	106	105	10	4	6	20	9					1	128
Tetracyclines - Tetracycline	4	427	311							111		1	4	3	4	11	71	222						0.5	64
Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin	4	427	2							216	174	30	5					2						0.5	64
Ionophores - Salinomycin	4	427	261								31	20	115	261										0.5	64
Macrolides - Erythromycin	4	427	335								58	28	6	2	5	2	2	2	322					1	128
Oxazolidines - Linezolid	4	427	0								41	370	16											0.25	32
Streptogramins - Quinupristin/Dalfopristin	1	427	345							25	57	38	214	82	7	4								0.25	32

Table Antimicrobial susceptibility testing of E. faecalis in Gallus gallus (fowl) - broilers - before slaughter - at slaughterhouse - Monitoring - Objective sampling - Official sampling - animal sample - caecum - quantitative data [Dilution method]

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

E. faecalis	Gallus gallus (fowl) - broilers - before slaughter - at slaughterhouse - Monitoring																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	276																								
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	32	276	5										1	67	199	4					5				
Aminoglycosides - Streptomycin	512	276	155														9	92	18	2		155			
Amphenicols - Chloramphenicol	32	276	9										17	246	4		6	3							
Amphenicols - Florfenicol	8	276	0								3	78	195												
Fluoroquinolones - Ciprofloxacin	4	276	10							60	199	5	2		2	8									
Penicillins - Ampicillin	4	276	0								236	39	1												
Tetracyclines - Tetracycline	4	276	218							42	15	1			2	66	78	72							
Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin	4	276	0								140	120	16												
Ionophores - Salinomycin	4	276	20							13	50	53	140	20											
Macrolides - Erythromycin	4	276	218								39	17	2	3	11	10		4	190						
Oxazolidines - Linezolid	4	276	0							5	133	138													
Streptogramins - Quinupristin/Dalfopristin	32	276	0								1		1	95	169	10									

Table Antimicrobial susceptibility testing of E. faecium in Pigs - fattening pigs - at slaughterhouse - Monitoring - Objective sampling - Official sampling - animal sample - faeces - quantitative data [Dilution method]

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

E. faecium	Pigs - fattening pigs - at slaughterhouse - Monitoring																							
Isolates out of a monitoring program (yes/no)	yes																							
Number of isolates available in the laboratory	184																							
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	32	184	0										30	89	58	7								
Aminoglycosides - Streptomycin	128	184	25													2	122	35	1	1	7	16		
Amphenicols - Chloramphenicol	32	184	0										12	150	18	4								
Amphenicols - Florfenicol	8	184	0									6	175	3										
Fluoroquinolones - Ciprofloxacin	4	184	6							37	73	47	21	4	2									
Penicillins - Ampicillin	4	184	43								19	38	84	41	1	1								
Tetracyclines - Tetracycline	4	184	142							42					1	1	96	44						
Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin	4	184	1							162	17	3	1					1						
Ionophores - Salinomycin	4	184	22								99	56	7	22										
Macrolides - Erythromycin	4	184	52								18	89	25	5					47					
Oxazolidines - Linezolid	4	184	0								3	160	21											
Streptogramins - Quinupristin/Dalfopristin	1	184	169						1	8	6	38	119	12										

Table Antimicrobial susceptibility testing of E. faecalis in Pigs - fattening pigs - at slaughterhouse - Monitoring - Objective sampling - Official sampling - animal sample - faeces - quantitative data [Dilution method]

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

E. faecalis	Pigs - fattening pigs - at slaughterhouse - Monitoring																							
Isolates out of a monitoring program (yes/no)	yes																							
Number of isolates available in the laboratory	74																							
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	32	74	5											11	54	4					5				
Aminoglycosides - Streptomycin	512	74	17														3	46	8			17			
Amphenicols - Chloramphenicol	32	74	9										4	57	4		6	3							
Amphenicols - Florfenicol	8	74	0									13	61												
Fluoroquinolones - Ciprofloxacin	4	74	2							7	59	6				2									
Penicillins - Ampicillin	4	74	0								64	10													
Tetracyclines - Tetracycline	4	74	64							8	2					6	26	32							
Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin	4	74	0								53	20	1												
Ionophores - Salinomycin	4	74	0							9	61	4													
Macrolides - Erythromycin	4	74	40								13	16	5	1		1			38						
Oxazolidines - Linezolid	4	74	0							1	12	61													
Streptogramins - Quinupristin/Dalfopristin	32	74	0								1		1	20	48	4									

Table Antimicrobial susceptibility testing of E. faecalis in Vegetables - at retail - Surveillance - Objective sampling - Official sampling - food sample - quantitative data [Dilution method]

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

E. faecalis	Vegetables - at retail - Surveillance																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	60																								
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	32	60	0	0	0	0	0	0	0	0	0	0	1	14	44	1	0	0	0	0	0	0	0	4	512
Aminoglycosides - Streptomycin	512	60	1	0	0	0	0	0	0	0	0	0	0	0	0	0	10	49	0	0	0	1	0	8	1024
Amphenicols - Chloramphenicol	32	60	1	0	0	0	0	0	0	0	0	0	8	51	0	0	1	0	0	0	0	0	0	1	128
Amphenicols - Florfenicol		60	60	0	0	0	0	0	0	0	0	9	51	0	0	0	0	0	0	0	0	0	0	1	64
Fluoroquinolones - Ciprofloxacin		60	60	0	0	0	0	0	0	1	31	27	1	0	0	0	0	0	0	0	0	0	0	0.5	64
Penicillins - Ampicillin	8	60	0	0	0	0	0	0	0	0	47	13	0	0	0	0	0	0	0	0	0	0	0	1	128
Tetracyclines - Tetracycline	4	60	6	0	0	0	0	0	0	34	19	0	1	0	0	0	3	3	0	0	0	0	0	0.5	64
Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin	4	60	1	0	0	0	0	0	0	1	18	33	7	1	0	0	0	0	0	0	0	0	0	0.5	64
Ionophores - Salinomycin	4	60	0	0	0	0	0	0	0	5	48	7	0	0	0	0	0	0	0	0	0	0	0	0.5	64
Macrolides - Erythromycin	4	60	3	0	0	0	0	0	0	0	42	11	4	1					2	0	0	0	0	1	128
Oxazolidines - Linezolid	4	60	0	0	0	0	0	0	0	0	2	57	1	0	0	0	0	0	0	0	0	0	0	0.25	32
Streptogramins - Quinupristin/Dalfopristin	8	60	34	0	0	0	0	0	0	0	0	0	2	24	34	0	0	0	0	0	0	0	0	0.25	32

Table Antimicrobial susceptibility testing of E. faecalis in Fruits - at retail - Surveillance - Objective sampling - Official sampling - food sample - quantitative data [Dilution method]

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

E. faecalis	Fruits - at retail - Surveillance																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	36																								
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	32	35	0	0	0	0	0	0	0	0	0	0	0	9	26	0	0	0	0	0	0	0	0	4	512
Aminoglycosides - Streptomycin	512	36	1	0	0	0	0	0	0	0	0	0	0	0	0	0	10	23	2	0	0	1	0	8	1024
Amphenicols - Chloramphenicol	32	36	1	0	0	0	0	0	0	0	0	0	11	24	0	0	1	0	0	0	0	0	0	1	128
Amphenicols - Florfenicol		36	36	0	0	0	0	0	0	0	0	15	21	0	0	0	0	0	0	0	0	0	0	1	64
Fluoroquinolones - Ciprofloxacin		36	36	0	0	0	0	0	0	5	20	11	0	0	0	0	0	0	0	0	0	0	0	0.5	64
Penicillins - Ampicillin	8	30	0	0	0	0	0	0	0	0	30	0	0	0	0	0	0	0	0	0	0	0	0	1	128
Tetracyclines - Tetracycline	4	36	10	0	0	0	0	0	0	24	2						9	1	0	0	0	0	0	0.5	64
Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin	4	36	0	0	0	0	0	0	0	0	20	13	3	0	0	0	0	0	0	0	0	0	0	0.5	64
Ionophores - Salinomycin	4	36	0	0	0	0	0	0	0	1	35	0	0	0	0	0	0	0	0	0	0	0	0	0.5	64
Macrolides - Erythromycin	4	36	3	0	0	0	0	0	0	0	23	10							3	0	0	0	0	1	128
Oxazolidines - Linezolid	4	36	0	0	0	0	0	0	0	0	3	33	0	0	0	0	0	0	0	0	0	0	0	0.25	32
Streptogramins - Quinupristin/Dalfopristin	8	36	15	0	0	0	0	0	0	0	0	0	0	21	15	0	0	0	0	0	0	0	0	0.25	32

Table Antimicrobial susceptibility testing of E. faecium in Cattle (bovine animals) - calves (under 1 year) - veal calves - at farm - animal sample - faeces - quantitative data [Dilution method]

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

E. faecium	Cattle (bovine animals) - calves (under 1 year) - veal calves - at farm																							
Isolates out of a monitoring program (yes/no)	yes																							
Number of isolates available in the laboratory	145																							
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	32	145	7										11	67	51	9				2	5				
Aminoglycosides - Streptomycin	128	145	51												2	8	64	20	2		1	48			
Amphenicols - Chloramphenicol	32	145	9									3	27	97	5	4	9								
Amphenicols - Florfenicol	8	145	13									18	114		1		9	3							
Fluoroquinolones - Ciprofloxacin	4	145	6							10	42	30	57	6											
Penicillins - Ampicillin	4	145	18								53	58	16	9		1	2	4	2						
Tetracyclines - Tetracycline	4	145	80							63	2				1		6	73							
Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin	4	145	0							79	47	18	1												
Ionophores - Salinomycin	4	145	0							2	82	60	1												
Macrolides - Erythromycin	4	145	68								27	24	26	8	1	1			58						
Oxazolidines - Linezolid	4	145	3								19	108	15	3											
Streptogramins - Quinupristin/Dalfopristin	1	145	95							27	23	31	55	8		1									

Table Antimicrobial susceptibility testing of E. faecalis in Cattle (bovine animals) - calves (under 1 year) - veal calves - at farm - animal sample - faeces - quantitative data [Dilution method]

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

E. faecalis	Cattle (bovine animals) - calves (under 1 year) - veal calves - at farm																							
Isolates out of a monitoring program (yes/no)	yes																							
Number of isolates available in the laboratory	60																							
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	32	60	2										5	13	40						2			
Aminoglycosides - Streptomycin	512	60	21													2	4	28	5		1	20		
Amphenicols - Chloramphenicol	32	60	19										8	33			17	2						
Amphenicols - Florfenicol	8	60	1									16	43					1						
Fluoroquinolones - Ciprofloxacin	4	60	2							17	35	6				2								
Penicillins - Ampicillin	4	60	0								51	9												
Tetracyclines - Tetracycline	4	60	34							18	8			1		2	5	26						
Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin	4	60	1								37	21	1					1						
Ionophores - Salinomycin	4	60	0							16	43	1												
Macrolides - Erythromycin	4	60	26								18	11	5	3					23					
Oxazolidines - Linezolid	4	60	1							3	7	49		1										
Streptogramins - Quinupristin/Dalfopristin	32	60	0							1		1	6	33	19									

Table Antimicrobial susceptibility testing of E. faecalis in Spices and herbs - at retail - Surveillance - Objective sampling - Official sampling - food sample - quantitative data [Dilution method]

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

E. faecalis	Spices and herbs - at retail - Surveillance																								
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	32	25	1	0	0	0	0	0	0	0	0	0	0	5	19	0	0	0	0	0	1	0	0	4	512
Aminoglycosides - Streptomycin	512	25	2	0	0	0	0	0	0	0	0	0	0	0	0	0	3	20	0	0	0	2	0	8	1024
Amphenicols - Chloramphenicol	32	25	0	0	0	0	0	0	0	0	0	0	16	8	1	0	0	0	0	0	0	0	0	1	128
Amphenicols - Florfenicol		25	25	0	0	0	0	0	0	0	0	17	7	0	1	0	0	0	0	0	0	0	0	1	64
Fluoroquinolones - Ciprofloxacin		25	25	0	0	0	0	0	0	0	14	11	0	0	0	0	0	0	0	0	0	0	0	0.5	64
Penicillins - Ampicillin	8	25	0	0	0	0	0	0	0	0	23	2	0	0	0	0	0	0	0	0	0	0	0	1	128
Tetracyclines - Tetracycline	4	25	6	0	0	0	0	0	0	16	3						5	1	0	0	0	0	0	0.5	64
Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin	4	25	0	0	0	0	0	0	0	0	16	9	0	0	0	0	0	0	0	0	0	0	0	0.5	64
Ionophores - Salinomycin	4																							0.5	64
Macrolides - Erythromycin	4	25	1	0	0	0	0	0	0	0	13	10	1	0	0	0	0	0	1	0	0	0	0	1	128
Oxazolidines - Linezolid	4																							0.25	32
Streptogramins - Quinupristin/Dalfopristin	8	25	6	0	0	0	0	0	0	0	0	1	1	17	6	0	0	0	0	0	0	0	0	0.25	32

Table Antimicrobial susceptibility testing of E. faecalis in Meat from bovine animals - at retail - Surveillance - Objective sampling - Official sampling - food sample - meat (bovine meat) - quantitative data [Dilution method]

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

E. faecalis	Meat from bovine animals - at retail - Surveillance (bovine meat)																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	199																								
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	32	199	2	0	0	0	0	0	0	0	0	0	25	100	71	1	0	0	1	0	1	0	0	4	512
Aminoglycosides - Streptomycin	512	199	11	0	0	0	0	0	0	0	0	0	0	0	0	6	78	101	3	0	0	11	0	8	1024
Amphenicols - Chloramphenicol	32	199	3	0	0	0	0	0	0	0	0	0	19	175	2	0	2	1	0	0	0	0	0	1	128
Amphenicols - Florfenicol		199	199	0	0	0	0	0	0	0	1	44	154	0	0	0	0	0	0	0	0	0	0	1	64
Fluoroquinolones - Ciprofloxacin		199	199	0	0	0	0	0	0	19	141	39	0	0	0	0	0	0	0	0	0	0	0	0.5	64
Penicillins - Ampicillin	8	199	0	0	0	0	0	0	0	0	146	53	0	0	0	0	0	0	0	0	0	0	0	1	128
Tetracyclines - Tetracycline	4	199	37	0	0	0	0	0	0	92	70	0	0	1	0	2	24	10	0	0	0	0	0	0.5	64
Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin	4	199	0	0	0	0	0	0	0	1	59	106	33	0	0	0	0	0	0	0	0	0	0	0.5	64
Ionophores - Salinomycin	4	199	0	0	0	0	0	0	0	15	112	67	5	0	0	0	0	0	0	0	0	0	0	0.5	64
Macrolides - Erythromycin	4	199	8	0	0	0	0	0	0	0	135	53	3	0	0	0	0	0	8	0	0	0	0	1	128
Oxazolidines - Linezolid	4	199	0	0	0	0	0	0	0	0	2	193	4	0	0	0	0	0	0	0	0	0	0	0.25	32
Streptogramins - Quinupristin/Dalfopristin	8	199	87	0	0	0	0	0	0	7	11	1	1	92	85	2	0	0	0	0	0	0	0	0.25	32

Table Antimicrobial susceptibility testing of E. faecium in Cattle (bovine animals) - dairy cows - at slaughterhouse - Monitoring - Objective sampling - Official sampling - animal sample - faeces - quantitative data [Dilution method]

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

E. faecium	Cattle (bovine animals) - dairy cows - at slaughterhouse - Monitoring																							
Isolates out of a monitoring program (yes/no)	yes																							
Number of isolates available in the laboratory	108																							
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	32	108	0										6	45	37	20								
Aminoglycosides - Streptomycin	128	108	2													6	72	28	1			1		
Amphenicols - Chloramphenicol	32	108	0									1	8	99										
Amphenicols - Florfenicol	8	108	0									4	104											
Fluoroquinolones - Ciprofloxacin	4	108	17							1	50	10	30	17										
Penicillins - Ampicillin	4	108	0								19	80	9											
Tetracyclines - Tetracycline	4	108	2							105	1					1		1						
Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin	4	108	0							57	47	3	1											
Ionophores - Salinomycin	4	108	0								47	61												
Macrolides - Erythromycin	4	108	10								44	39	15	8	1				1					
Oxazolidines - Linezolid	4	108	0							1		92	15											
Streptogramins - Quinupristin/Dalfopristin	1	108	63							39	6	19	44											

Table Antimicrobial susceptibility testing of E. faecalis in Cattle (bovine animals) - dairy cows - at slaughterhouse - Monitoring - Objective sampling - Official sampling - animal sample - faeces - quantitative data [Dilution method]

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

E. faecalis	Cattle (bovine animals) - dairy cows - at slaughterhouse - Monitoring																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	36																								
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	32	36	0											7	25	4									
Aminoglycosides - Streptomycin	512	36	0														3	30	3						
Amphenicols - Chloramphenicol	32	36	0										3	33											
Amphenicols - Florfenicol	8	36	0									17	19												
Fluoroquinolones - Ciprofloxacin	4	36	1							4	28	3				1									
Penicillins - Ampicillin	4	36	0								34	2													
Tetracyclines - Tetracycline	4	36	7							25	4					2	5								
Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin	4	36	0								17	19													
Ionophores - Salinomycin	4	36	0							5	31														
Macrolides - Erythromycin	4	36	3								12	14	7	3											
Oxazolidines - Linezolid	4	36	0								1	35													
Streptogramins - Quinupristin/Dalfopristin	32	36	0									2	1	25	8										

Table Antimicrobial susceptibility testing of E. faecalis in Meat from bovine animals - at retail - Surveillance - Objective sampling - Official sampling - food sample - meat (calf meat) - quantitative data [Dilution method]

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

E. faecalis	Meat from bovine animals - at retail - Surveillance (calf meat)																								
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	32	17	0	0	0	0	0	0	0	0	0	0	0	10	7	0	0	0	0	0	0	0	0	4	512
Aminoglycosides - Streptomycin	512	17	3	0	0	0	0	0	0	0	0	0	0	0	0	1	5	8	0	0	0	3	0	8	1024
Amphenicols - Chloramphenicol	32	17	2	0	0	0	0	0	0	0	0	0	0	15	0	0	2	0	0	0	0	0	0	1	128
Amphenicols - Florfenicol		17	17	0	0	0	0	0	0	0	0	1	14	2	0	0	0	0	0	0	0	0	0	1	64
Fluoroquinolones - Ciprofloxacin		17	17	0	0	0	0	0	0	1	10	6	0	0	0	0	0	0	0	0	0	0	0	0.5	64
Penicillins - Ampicillin	8	17	0	0	0	0	0	0	0	0	14	3	0	0	0	0	0	0	0	0	0	0	0	1	128
Tetracyclines - Tetracycline	4	17	6	0	0	0	0	0	0	8	3	0	0	0	0	1	1	4	0	0	0	0	0	0.5	64
Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin	4	17	0	0	0	0	0	0	0	0	6	6	5	0	0	0	0	0	0	0	0	0	0	0.5	64
Ionophores - Salinomycin	4	17	0	0	0	0	0	0	0	0	9	8	0	0	0	0	0	0	0	0	0	0	0	0.5	64
Macrolides - Erythromycin	4	17	4	0	0	0	0	0	0	0	11	2	0	0	1	0	0	0	3	0	0	0	0	1	128
Oxazolidines - Linezolid	4	17	0	0	0	0	0	0	0	0	0	16	1	0	0	0	0	0	0	0	0	0	0	0.25	32
Streptogramins - Quinupristin/Dalfopristin	8	17	8	0	0	0	0	0	0	1	0	0	1	7	8	0	0	0	0	0	0	0	0	0.25	32

Table Antimicrobial susceptibility testing of E. faecalis in Meat from sheep - at retail - Surveillance - Objective sampling - Official sampling - food sample - meat (lamb meat) - quantitative data [Dilution method]

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

E. faecalis	Meat from sheep - at retail - Surveillance (lamb meat)																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	13																								
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	32	13	0	0	0	0	0	0	0	0	0	0	1	8	4	0	0	0	0	0	0	0		4	512
Aminoglycosides - Streptomycin	512	13	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	7	0	0	0	3	0	8	1024
Amphenicols - Chloramphenicol	32	13	0	0	0	0	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	0	0	1	128
Amphenicols - Florfenicol		13	13	0	0	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	0	0	0	1	64
Fluoroquinolones - Ciprofloxacin		13	13	0	0	0	0	0	0	1	9	3	0	0	0	0	0	0	0	0	0	0	0	0.5	64
Penicillins - Ampicillin	8	13	0	0	0	0	0	0	0	0	8	5	0	0	0	0	0	0	0	0	0	0	0	1	128
Tetracyclines - Tetracycline	4	13	6	0	0	0	0	0	0	4	3	0	0	0	0	0	4	2	0	0	0	0	0	0.5	64
Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin	4	13	0	0	0	0	0	0	0	0	8	4	1	0	0	0	0	0	0	0	0	0	0	0.5	64
Ionophores - Salinomycin	4	13	0	0	0	0	0	0	0	0	5	7	1	0	0	0	0	0	0	0	0	0	0	0.5	64
Macrolides - Erythromycin	4	13	2	0	0	0	0	0	0	0	8	3	0	0	0	0	0	0	2	0	0	0	0	1	128
Oxazolidines - Linezolid	4	13	0	0	0	0	0	0	0	0	0	12	1	0	0	0	0	0	0	0	0	0	0	0.25	32
Streptogramins - Quinupristin/Dalfopristin	8	13	9	0	0	0	0	0	0	0	2	0	0	2	9	0	0	0	0	0	0	0	0	0.25	32

Table Antimicrobial susceptibility testing of E. faecalis in Meat from pig - at retail - Surveillance - Objective sampling - Official sampling - food sample - meat - quantitative data [Dilution method]

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

E. faecalis	Meat from pig - at retail - Surveillance																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	233																								
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	32	233	1	0	0	0	0	0	0	0	0	0	19	159	54	0	0	0	0	0	1	0	0	4	512
Aminoglycosides - Streptomycin	512	233	10	0	0	0	0	0	0	0	0	0	0	4	0	19	99	99	1	1	0	10	0	8	1024
Amphenicols - Chloramphenicol	32	233	4	0	0	0	0	0	0	0	0	1	12	214	2	0	1	3	0	0	0	0	0	1	128
Amphenicols - Florfenicol		233	233	0	0	0	0	0	0	0	0	54	179	0	0	0	0	0	0	0	0	0	0	1	64
Fluoroquinolones - Ciprofloxacin		233	233	0	0	0	0	0	0	31	171	29	0	0	0	1	1	0	0	0	0	0	0	0.5	64
Penicillins - Ampicillin	8	233	0	0	0	0	0	0	0	0	192	41	0	0	0	0	0	0	0	0	0	0	0	1	128
Tetracyclines - Tetracycline	4	233	44	0	0	0	0	0	0	116	72	1	0	1	0	5	27	11	0	0	0	0	0	0.5	64
Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin	4	233	0	0	0	0	0	0	0	0	69	91	73	0	0	0	0	0	0	0	0	0	0	0.5	64
Ionophores - Salinomycin	4	233	1	0	0	0	0	0	0	18	90	112	12	1	0	0	0	0	0	0	0	0	0	0.5	64
Macrolides - Erythromycin	4	233	13	0	0	0	0	0	0	0	180	39	1	0	0	0	1	0	12	0	0	0	0	1	128
Oxazolidines - Linezolid	4	233	0	0	0	0	0	0	0	0	1	225	7	0	0	0	0	0	0	0	0	0	0	0.25	32
Streptogramins - Quinupristin/Dalfopristin	8	233	78	0	0	0	0	0	0	6	15	0	5	129	78	0	0		0	0	0	0	0	0.25	32

Table Antimicrobial susceptibility testing of E. faecium in Turkeys - fattening flocks - at farm - Monitoring - animal sample - faeces (Faeces was collected from the ground at the farm. The animals were fattening/meat production flocks (what's de difference?)) - quantitative data [Dilution method]

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

E. faecium	Turkeys - fattening flocks - at farm - Monitoring (Faeces was collected from the ground at the farm. The animals were fattening/meat production flocks (what's de difference?))																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	88																								
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	32	88	1										2	41	41	3				1					
Aminoglycosides - Streptomycin	128	88	17													4	49	18	1			16			
Amphenicols - Chloramphenicol	32	88	0									2	7	41	27	11									
Amphenicols - Florfenicol	8	88	0								1	6	81												
Fluoroquinolones - Ciprofloxacin	4	88	12							1	7	12	56	12											
Penicillins - Ampicillin	4	88	39								4	18	27	9	1	1	12	13	3						
Tetracyclines - Tetracycline	4	88	79							9							5	74							
Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin	4	88	0							32	55	1													
Ionophores - Salinomycin	4	88	18								5	51	14	18											
Macrolides - Erythromycin	4	88	67								16	4	1	1		1		1	64						
Oxazolidines - Linezolid	4	88	0							1	14	70	3												
Streptogramins - Quinupristin/Dalfopristin	1	88	80								8	10	33	32	2	3									

Table Antimicrobial susceptibility testing of E. faecalis in Meat from broilers (Gallus gallus) - at retail - Surveillance - Objective sampling - Official sampling - food sample - meat (chicken meat) - quantitative data [Dilution method]

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

E. faecalis	Meat from broilers (Gallus gallus) - at retail - Surveillance (chicken meat)																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	110																								
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	32	110	3	0	0	0	0	0	0	0	0	0	1	57	49	0	0	0	0	0	3	0	0	4	512
Aminoglycosides - Streptomycin	512	110	55	0	0	0	0	0	0	0	0	0	0	0	0	0	15	40	0	0	1	54	0	8	1024
Amphenicols - Chloramphenicol	32	110	5	0	0	0	0	0	0	0	0	0	1	94	10	0	3	2	0	0	0	0	0	1	128
Amphenicols - Florfenicol		110	110	0	0	0	0	0	0	0	0	7	103	0	0	0	0	0	0	0	0	0	0	1	64
Fluoroquinolones - Ciprofloxacin		110	110	0	0	0	0	0	0	8	79	19	2	0	0	0	2	0	0	0	0	0	0	0.5	64
Penicillins - Ampicillin	8	110	1	0	0	0	0	0	0	0	90	19	0	0	0	1	0	0	0	0	0	0	0	1	128
Tetracyclines - Tetracycline	4	110	82	0	0	0	0	0	0	16	12	0	0	0	1	26	27	28	0	0	0	0	0	0.5	64
Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin	4	110	0	0	0	0	0	0	0	0	32	55	23	0	0	0	0	0	0	0	0	0	0	0.5	64
Ionophores - Salinomycin	4	110	26	0	0	0	0	0	0	2	29	20	33	26	0	0	0	0	0	0	0	0	0	0.5	64
Macrolides - Erythromycin	4	111	69	0	0	0	0	0	0	0	36	5	1	1	0	0	0	0	68	0	0	0	0	1	128
Oxazolidines - Linezolid	4	110	0	0	0	0	0	0	0	0	11	97	2	0	0	0	0	0	0	0	0	0	0	0.25	32
Streptogramins - Quinupristin/Dalfopristin	8	110	83	0	0	0	0	0	0	0	0	0	0	27	71	9	3	0	0	0	0	0	0	0.25	32

Table Antimicrobial susceptibility testing of E. faecalis in Turkeys - fattening flocks - at farm - Monitoring - animal sample - faeces (Faeces was collected from the ground. The animals were fattening flocks or meat production flocks.) - quantitative data [Dilution method]

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

E. faecalis	Turkeys - fattening flocks - at farm - Monitoring (Faeces was collected from the ground. The animals were fattening flocks or meat production flocks.)																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	31																								
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	32	31	2											7	22						2				
Aminoglycosides - Streptomycin	512	31	9														4	17	1			9			
Amphenicols - Chloramphenicol	32	31	7										2	20	2		2	5							
Amphenicols - Florfenicol	8	31	0									11	20												
Fluoroquinolones - Ciprofloxacin	4	31	0							7	22	2													
Penicillins - Ampicillin	4	31	0								27	4													
Tetracyclines - Tetracycline	4	31	31														10	21							
Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin	4	31	0								15	15	1												
Ionophores - Salinomycin	4	31	2							5	9	6	9	2											
Macrolides - Erythromycin	4	31	24								3	3	1	1		1			22						
Oxazolidines - Linezolid	4	31	0								13	18													
Streptogramins - Quinupristin/Dalfopristin	32	31	2											9	18	2	2								

Table Antimicrobial susceptibility testing of E. faecalis in Meat from turkey - at retail - Surveillance - Objective sampling - Official sampling - food sample - meat - quantitative data [Dilution method]

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

E. faecalis	Meat from turkey - at retail - Surveillance																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	15																								
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	32	15	1	0	0	0	0	0	0	0	0	0	1	9	4	0	0	0	0	0	1	0	0	4	512
Aminoglycosides - Streptomycin	512	15	2	0	0	0	0	0	0	0	0	0	0	0	0	1	5	7	0	0	0	2	0	8	1024
Amphenicols - Chloramphenicol	32	15	0	0	0	0	0	0	0	0	0	0	1	12	2	0	0	0	0	0	0	0	0	1	128
Amphenicols - Florfenicol		15	15	0	0	0	0	0	0	0	0	2	13	0	0	0	0	0	0	0	0	0	0	1	64
Fluoroquinolones - Ciprofloxacin		15	15	0	0	0	0	0	0	3	9	2	0	0	0	1	0	0	0	0	0	0	0	0.5	64
Penicillins - Ampicillin	8	15	0	0	0	0	0	0	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	1	128
Tetracyclines - Tetracycline	4	15	14	0	0	0	0	0	0	1	0	0	0	0	0	5	1	8	0	0	0	0	0	0.5	64
Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin	4	15	0	0	0	0	0	0	0	0	6	6	3	0	0	0	0	0	0	0	0	0	0	0.5	64
Ionophores - Salinomycin	4	15	2	0	0	0	0	0	0	1	9	3	0	2	0	0	0	0	0	0	0	0	0	0.5	64
Macrolides - Erythromycin	4	15	9	0	0	0	0	0	0	0	6	0	0	0	1	2	0	0	6	0	0	0	0	1	128
Oxazolidines - Linezolid	4	15	0	0	0	0	0	0	0	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0.25	32
Streptogramins - Quinupristin/Dalfopristin	8	15	9	0	0	0	0	0	0	0	0	0	0	6	7	2	0	0	0	0	0	0	0	0.25	32

Table Antimicrobial susceptibility testing of E. faecium in Meat from turkey - at retail - Surveillance - Objective sampling - Official sampling - food sample - meat - quantitative data [Dilution method]

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

E. faecium	Meat from turkey - at retail - Surveillance																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	7																								
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	32	7	0	0	0	0	0	0	0	0	0	0	0	5	2	0	0	0	0	0	0	0	0	4	512
Aminoglycosides - Streptomycin	128	7	5	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	4	0	8	1024
Amphenicols - Chloramphenicol	32	7	0	0	0	0	0	0	0	0	0	0	0	4	1	2	0	0	0	0	0	0	0	1	128
Amphenicols - Florfenicol	8	7	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	1	64
Fluoroquinolones - Ciprofloxacin	4	8	3	0	0	0	0	0	0	1	0	1	3	3	0	0	0	0	0	0	0	0	0	0.5	64
Penicillins - Ampicillin	4	7	4	0	0	0	0	0	0	0	2	0	1	1	0	2	0	1	0	0	0	0	0	1	128
Tetracyclines - Tetracycline	4	7	6	0	0	0	0	0	0	1	0	0	0	1	0	0	0	5	0	0	0	0	0	0.5	64
Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin	4	7	0	0	0	0	0	0	0	2	5	0	0	0	0	0	0	0	0	0	0	0	0	0.5	64
Ionophores - Salinomycin	8	7	1	0	0	0	0	0	0	0	2	2	1	1	1	0	0	0	0	0	0	0	0	0.5	64
Macrolides - Erythromycin	4	7	4	0	0	0	0	0	0	0	1	2	0	1	0	0	0	0	3	0	0	0	0	1	128
Oxazolidines - Linezolid	4	7	0	0	0	0	0	0	0	0	0	4	3	0	0	0	0	0	0	0	0	0	0	0.25	32
Streptogramins - Quinupristin/Dalfopristin	1	7	7	0	0	0	0	0	0	0	0	1	3	3	0	0	0	0	0	0	0	0	0	0.25	32

Table Antimicrobial susceptibility testing of E. faecium in Meat from broilers (Gallus gallus) - at retail - Surveillance - Objective sampling - Official sampling - food sample - meat - quantitative data [Dilution method]

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

E. faecium	Meat from broilers (Gallus gallus) - at retail - Surveillance																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	24																								
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	32	24	0	0	0	0	0	0	0	0	0	0	3	15	6	0	0	0	0	0	0	0	0	4	512
Aminoglycosides - Streptomycin	128	24	6	0	0	0	0	0	0	0	0	0	0	0	1	2	14	1	0	0	2	4	0	8	1024
Amphenicols - Chloramphenicol	32	24	0	0	0	0	0	0	0	0	0	0	1	14	9	0	0	0	0	0	0	0	0	1	128
Amphenicols - Florfenicol	8	24	0	0	0	0	0	0	0	0	0	2	21	1	0	0	0	0	0	0	0	0	0	1	64
Fluoroquinolones - Ciprofloxacin	4	24	11	0	0	0	0	0	0	2	2	2	7	11	0	0	0	0	0	0	0	0	0	0.5	64
Penicillins - Ampicillin	4	24	2	0	0	0	0	0	0	0	17	5	0	1	0	0	0	0	1	0	0	0	0	1	128
Tetracyclines - Tetracycline	4	24	11	0	0	0	0	0	0	12	0	1	0	0	0	1	1	9	0	0	0	0	0	0.5	64
Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin	4	24	0	0	0	0	0	0	0	6	7	1	10	0	0	0	0	0	0	0	0	0	0	0.5	64
Ionophores - Salinomycin	8	24	5	0	0	0	0	0	0	0	1	2	5	11	5	0	0	0	0	0	0	0	0	0.5	64
Macrolides - Erythromycin	4	24	16	0	0	0	0	0	0	0	2	5	1	1	1	0	1	0	13	0	0	0	0	1	128
Oxazolidines - Linezolid	4	24	0	0	0	0	0	0	0	0	1	17	6	0	0	0	0	0	0	0	0	0	0	0.25	32
Streptogramins - Quinupristin/Dalfopristin	1	24	18	0	0	0	0	0	0	1	5	1	8	7	2	0	0	0	0	0	0	0	0	0.25	32

Table Antimicrobial susceptibility testing of E. faecium in Meat from pig - at retail - Surveillance - Objective sampling - Official sampling - food sample - meat - quantitative data [Dilution method]

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

E. faecium	Meat from pig - at retail - Surveillance																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	106																								
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	32	106	0	0	0	0	0	0	0	0	0	0	27	66	12	1	0	0	0	0	0	0	0	4	512
Aminoglycosides - Streptomycin	128	106	2	0	0	0	0	0	0	0	0	0	0	0	4	34	64	2	0	0	1	1	0	8	1024
Amphenicols - Chloramphenicol	32	106	0	0	0	0	0	0	0	0	0	0	14	91	1	0	0	0	0	0	0	0	0	1	128
Amphenicols - Florfenicol	8	106	0	0	0	0	0	0	0	0	1	19	83	3	0	0	0	0	0	0	0	0	0	1	64
Fluoroquinolones - Ciprofloxacin	4	106	2	0	0	0	0	0	0	24	40	32	8	2	0	0	0	0	0	0	0	0	0	0.5	64
Penicillins - Ampicillin	4	106	1	0	0	0	0	0	0	0	80	21	4	1	0	0	0	0	0	0	0	0	0	1	128
Tetracyclines - Tetracycline	4	106	9	0	0	0	0	0	0	94	3	0	0	0	0	0	7	2	0	0	0	0	0	0.5	64
Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin	4	106	0	0	0	0	0	0	0	53	45	5	3	0	0	0	0	0	0	0	0	0	0	0.5	64
Ionophores - Salinomycin	8	106	0	0	0	0	0	0	0	4	40	46	16	0	0	0	0	0	0	0	0	0	0	0.5	64
Macrolides - Erythromycin	4	106	17	0	0	0	0	0	0	0	45	24	20	15	1	0	0	0	1	0	0	0	0	1	128
Oxazolidines - Linezolid	4	106	0	0	0	0	0	0	0	0	0	73	33	0	0	0	0	0	0	0	0	0	0	0.25	32
Streptogramins - Quinupristin/Dalfopristin	1	106	80	0	0	0	0	0	0	7	19	13	66	1	0	0	0		0	0	0	0	0	0.25	32

Table Antimicrobial susceptibility testing of E. faecium in Meat from sheep - at retail - Surveillance - Objective sampling - Official sampling - food sample - meat (meat lamb) - quantitative data [Dilution method]

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

E. faecium	Meat from sheep - at retail - Surveillance (meat lamb)																								
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	32	5	0	0	0	0	0	0	0	0	0	0	1	4	0	0	0	0	0	0	0	0	0	4	512
Aminoglycosides - Streptomycin	128	5	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	0	0	0	0	0	0	8	1024
Amphenicols - Chloramphenicol	32	5	0	0	0	0	0	0	0	0	0	0	1	4	0	0	0	0	0	0	0	0	0	1	128
Amphenicols - Florfenicol	8	5	0	0	0	0	0	0	0	0	0	1	4	0	0	0	0	0	0	0	0	0	0	1	64
Fluoroquinolones - Ciprofloxacin	4	5	0	0	0	0	0	0	0	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0.5	64
Penicillins - Ampicillin	4	5	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	1	128
Tetracyclines - Tetracycline	4	5	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	64
Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin	4	5	0	0	0	0	0	0	0	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0.5	64
Ionophores - Salinomycin	8	5	0	0	0	0	0	0	0	0	2	2	1	0	0	0	0	0	0	0	0	0	0	0.5	64
Macrolides - Erythromycin	4	5	1	0	0	0	0	0	0	0	2	0	2	1	0	0	0	0	0	0	0	0	0	1	128
Oxazolidines - Linezolid	4	5	0	0	0	0	0	0	0	0	0	4	1	0	0	0	0	0	0	0	0	0	0	0.25	32
Streptogramins - Quinupristin/Dalfopristin	1	5	3	0	0	0	0	0	0	0	2	0	3	0	0	0	0	0	0	0	0	0	0	0.25	32

Table Antimicrobial susceptibility testing of E. faecium in Meat from bovine animals - at retail - Surveillance - Objective sampling - Official sampling - food sample - meat (meat bovine calf) - quantitative data [Dilution method]

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

E. faecium	Meat from bovine animals - at retail - Surveillance (meat bovine calf)																								
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	32	21	1	0	0	0	0	0	0	0	0	0	5	13	2	0	0	0	1	0	0	0	0	4	512
Aminoglycosides - Streptomycin	128	21	3	0	0	0	0	0	0	0	0	0	0	0	0	6	12	0	0	0	0	3	0	8	1024
Amphenicols - Chloramphenicol	32	21	1	0	0	0	0	0	0	0	0	0	1	17	2	0	1	0	0	0	0	0	0	1	128
Amphenicols - Florfenicol	8	21	1	0	0	0	0	0	0	0	0	2	18	0	0	0	0	1	0	0	0	0	0	1	64
Fluoroquinolones - Ciprofloxacin	4	21	0	0	0	0	0	0	0	3	9	4	5	0	0	0	0	0	0	0	0	0	0	0.5	64
Penicillins - Ampicillin	4	21	0	0	0	0	0	0	0	0	15	5	1	0	0	0	0	0	0	0	0	0	0	1	128
Tetracyclines - Tetracycline	4	21	7	0	0	0	0	0	0	13	1	0	0	0	0	0	2	5	0	0	0	0	0	0.5	64
Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin	4	21	0	0	0	0	0	0	0	14	7	0	0	0	0	0	0	0	0	0	0	0	0	0.5	64
Ionophores - Salinomycin	8	21	0	0	0	0	0	0	0	0	6	12	3	0	0	0	0	0	0	0	0	0	0	0.5	64
Macrolides - Erythromycin	4	21	11	0	0	0	0	0	0	0	6	2	2	6	0	0	0	1	4	0	0	0	0	1	128
Oxazolidines - Linezolid	4	21	1	0	0	0	0	0	0	0	0	11	9	1	0	0	0	0	0	0	0	0	0	0.25	32
Streptogramins - Quinupristin/Dalfopristin	1	21	13	0	0	0	0	0	0	3	5	3	9	1	0	0	0	0	0	0	0	0	0	0.25	32

Table Antimicrobial susceptibility testing of E. faecium in Meat from bovine animals - at retail - Surveillance - Objective sampling - Official sampling - food sample - meat (meat bovine) - quantitative data [Dilution method]

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

E. faecium	Meat from bovine animals - at retail - Surveillance (meat bovine)																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	125																								
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	32	125	0	0	0	0	0	0	0	0	0	0	37	67	20	1	0	0	0	0	0	0	0	4	512
Aminoglycosides - Streptomycin	128	125	7	0	0	0	0	0	0	0	0	0	0	0	2	32	82	2	0	0	1	6	0	8	1024
Amphenicols - Chloramphenicol	32	125	0	0	0	0	0	0	0	0	0	0	16	106	3	0	0	0	0	0	0	0	0	1	128
Amphenicols - Florfenicol	8	125	0	0	0	0	0	0	0	0	0	23	100	2	0	0	0	0	0	0	0	0	0	1	64
Fluoroquinolones - Ciprofloxacin	4	125	5	0	0	0	0	0	0	19	40	41	20	5	0	0	0	0	0	0	0	0	0	0.5	64
Penicillins - Ampicillin	4	125	2	0	0	0	0	0	0	0	91	28	4	1	0	1	0	0	0	0	0	0	0	1	128
Tetracyclines - Tetracycline	4	125	12	0	0	0	0	0	0	105	8	0	0	0	0	0	4	8	0	0	0	0	0	0.5	64
Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin	4	125	0	0	0	0	0	0	0	65	50	5	5	0	0	0	0	0	0	0	0	0	0	0.5	64
Ionophores - Salinomycin	8	125	0	0	0	0	0	0	0	5	52	56	12	0	0	0	0	0	0	0	0	0	0	0.5	64
Macrolides - Erythromycin	4	125	22	0	0	0	0	0	0	0	47	35	21	13	2	0	0	0	7	0	0	0	0	1	128
Oxazolidines - Linezolid	4	125	0	0	0	0	0	0	0	0	0	78	47	0	0	0	0	0	0	0	0	0	0	0.25	32
Streptogramins - Quinupristin/Dalfopristin	1	125	77	0	0	0	0	0	0	15	33	13	61	1	2	0	0	0	0	0	0	0	0	0.25	32

Table Antimicrobial susceptibility testing of E. faecium in Spices and herbs - at retail - Surveillance - Objective sampling - Official sampling - food sample (herbs) - quantitative data [Dilution method]

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

E. faecium	Spices and herbs - at retail - Surveillance (herbs)																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	11																								
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	32	11	0	0	0	0	0	0	0	0	0	0	2	6	3	0	0	0	0	0	0	0	0	4	512
Aminoglycosides - Streptomycin	128	82	0	0	0	0	0	0	0	0	0	0	0	0	0	2	80		0	0	0	0	0	8	1024
Amphenicols - Chloramphenicol	32	11	0	0	0	0	0	0	0	0	0	0	4	7	0	0	0	0	0	0	0	0	0	1	128
Amphenicols - Florfenicol	8	11	0	0	0	0	0	0	0	0	0	1	10	0	0	0	0	0	0	0	0	0	0	1	64
Fluoroquinolones - Ciprofloxacin	4	11	0	0	0	0	0	0	0	5	1	4	1	0	0	0	0	0	0	0	0	0	0	0.5	64
Penicillins - Ampicillin	4	11	0	0	0	0	0	0	0	0	9	2	0	0	0	0	0	0	0	0	0	0	0	1	128
Tetracyclines - Tetracycline	4	11	3	0	0	0	0	0	0	7	1	0	0	0	0	0	2	1	0	0	0	0	0	0.5	64
Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin	4	11	0	0	0	0	0	0	0	10	1	0	0	0	0	0	0	0	0	0	0	0	0	0.5	64
Ionophores - Salinomycin	8	11	0	0	0	0	0	0	0	0	3	8	0	0	0	0	0	0	0	0	0	0	0	0.5	64
Macrolides - Erythromycin	4	11	2	0	0	0	0	0	0	0	5	2	2	2	0	0	0	0	0	0	0	0	0	1	128
Oxazolidines - Linezolid	4	11	0	0	0	0	0	0	0	0	0	8	3	0	0	0	0	0	0	0	0	0	0	0.25	32
Streptogramins - Quinupristin/Dalfopristin	1	11	11	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0.25	32

Table Antimicrobial susceptibility testing of E. faecium in Fruits - at retail - Surveillance - Objective sampling - Official sampling - food sample - quantitative data [Dilution method]

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

E. faecium	Fruits - at retail - Surveillance																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	32																								
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	32	32	0	0	0	0	0	0	0	0	0	0	12	16	4	0	0	0	0	0	0	0	0	4	512
Aminoglycosides - Streptomycin	128	32	1	0	0	0	0	0	0	0	0	0	0	0	0	11	18	2	0	0	1	0	0	8	1024
Amphenicols - Chloramphenicol	32	32	0	0	0	0	0	0	0	0	0	0	11	20	1	0	0	0	0	0	0	0	0	1	128
Amphenicols - Florfenicol	8	32	0	0	0	0	0	0	0	0	0	6	26	0	0	0	0	0	0	0	0	0	0	1	64
Fluoroquinolones - Ciprofloxacin	4	32	1	0	0	0	0	0	0	3	7	13	8	1	0	0	0	0	0	0	0	0	0	0.5	64
Penicillins - Ampicillin	4	32	0	0	0	0	0	0	0	0	27	5	0	0	0	0	0	0	0	0	0	0	0	1	128
Tetracyclines - Tetracycline	4	32	1	0	0	0	0	0	0	29	2	0	0	0	0	0	1	0	0	0	0	0	0	0.5	64
Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin	4	32	0	0	0	0	0	0	0	20	11	1	0	0	0	0	0	0	0	0	0	0	0	0.5	64
Ionophores - Salinomycin	8	30	0	0	0	0	0	0	0	0	17	12	1	0	0	0	0	0	0	0	0	0	0	0.5	64
Macrolides - Erythromycin	4	32	5	0	0	0	0	0	0	0	18	5	4	3	2	0	0	0	0	0	0	0	0	1	128
Oxazolidines - Linezolid	4	32	0	0	0	0	0	0	0	0	0	18	14	0	0	0	0	0	0	0	0	0	0	0.25	32
Streptogramins - Quinupristin/Dalfopristin	1	32	22	0	0	0	0	0	0	2	8	4	18	0	0	0	0	0	0	0	0	0	0	0.25	32

Table Antimicrobial susceptibility testing of E. faecium in Vegetables - at retail - Surveillance - Objective sampling - Official sampling - food sample - quantitative data [Dilution method]

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

E. faecium	Vegetables - at retail - Surveillance																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	34																								
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	32	34	0	0	0	0	0	0	0	0	0	0	3	22	9	0	0	0	0	0	0	0	0	4	512
Aminoglycosides - Streptomycin	128	34	1	0	0	0	0	0	0	0	0	0	0	0	0	6	27	0	0	0	0	1		1	1024
Amphenicols - Chloramphenicol	32	34	0	0	0	0	0	0	0	0	0	0	6	27	0	1	0	0	0	0	0	0	0	1	128
Amphenicols - Florfenicol	8	34	0	0	0	0	0	0	0	0	0	2	32	0	0	0	0	0	0	0	0	0	0	1	64
Fluoroquinolones - Ciprofloxacin	4	34	0	0	0	0	0	0	0	12	8	6	8	0	0	0	0	0	0	0	0	0	0	0.5	64
Penicillins - Ampicillin	4	34	0	0	0	0	0	0	0	0	24	9	1	0	0	0	0	0	0	0	0	0	0	1	128
Tetracyclines - Tetracycline	4	34	4	0	0	0	0	0	0	28	2	0	0	0	0	1	2	1	0	0	0	0	0	0.5	64
Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin	4	34	0	0	0	0	0	0	0	18	10	2	4	0	0	0	0	0	0	0	0	0	0	0.5	64
Ionophores - Salinomycin	8	34	0	0	0	0	0	0	0	1	10	23	0	0	0	0	0	0	0	0	0	0	0	0.5	64
Macrolides - Erythromycin	4	33	11	0	0	0	0	0	0	0	9	5	8	11	0	0	0	0	0	0	0	0	0	1	128
Oxazolidines - Linezolid	4	34	0	0	0	0	0	0	0	0	0	17	17	0	0	0	0	0	0	0	0	0	0	0.25	32
Streptogramins - Quinupristin/Dalfopristin	1	34	25	0	0	0	0	0	0	2	7	2	23	0	0	0	0	0	0	0	0	0	0	0.25	32

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

Test Method Used	Standard methods used for testing
Broth dilution	NCCLS/CLSI

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Amphenicols	Chloramphenicol		32	
	Florfenicol		8	
Penicillins	Ampicillin		8	
Tetracyclines	Tetracycline		4	

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

Test Method Used	Standard methods used for testing
Broth dilution	NCCLS/CLSI

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Amphenicols	Chloramphenicol		32	
	Florfenicol		8	
Penicillins	Ampicillin		8	
Tetracyclines	Tetracycline		4	

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

Test Method Used	Standard methods used for testing
Broth dilution	NCCLS/CLSI

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Amphenicols	Chloramphenicol		32	
	Florfenicol		8	
Penicillins	Ampicillin		8	
Tetracyclines	Tetracycline		4	

Table Cut-off values for antibiotic resistance of E. faecalis in Animals

Test Method Used
Broth dilution

Standard methods used for testing
NCCLS/CLSI

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Aminoglycosides	Gentamicin	EFSA	32	
	Streptomycin	EFSA	512	
Amphenicols	Chloramphenicol	EFSA	32	
	Florfenicol		8	
Glycopeptides (Cyclic peptides, Polypeptides)	Vancomycin	EFSA	4	
Macrolides	Erythromycin	EFSA	4	
Oxazolidines	Linezolid	EFSA	4	
Penicillins	Ampicillin	EFSA	4	
Streptogramins	Quinupristin/Dalfopristin	EFSA	32	
Tetracyclines	Tetracycline	NON-EFSA	4	
Fluoroquinolones	Ciprofloxacin		4	
Ionophores	Salinomycin		4	

Table Cut-off values for antibiotic resistance of E. faecalis in Animals

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
Broth dilution	NCCLS/CLSI

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Aminoglycosides	Gentamicin	EFSA	32	
	Streptomycin	EFSA	512	
Amphenicols	Chloramphenicol	EFSA	32	
Glycopeptides (Cyclic peptides, Polypeptides)	Vancomycin	EFSA	4	
	Bacitracin		32	
Macrolides	Erythromycin	EFSA	4	
Oxazolidines	Linezolid	EFSA	4	
Penicillins	Ampicillin	NON-EFSA	8	
Streptogramins	Quinupristin/Dalfopristin	NON-EFSA	8	
Tetracyclines	Tetracycline	NON-EFSA	4	
Orthosomycins	Avilamycin		8	
Ionophores	Salinomycin		4	

Table Cut-off values for antibiotic resistance of E. faecalis in Food

Table Cut-off values for antibiotic resistance of E. faecium in Animals

Test Method Used
Broth dilution

Standard methods used for testing
NCCLS/CLSI

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Aminoglycosides	Gentamicin	EFSA	32	
	Streptomycin	EFSA	128	
Amphenicols	Chloramphenicol	EFSA	32	
	Florfenicol		8	
Glycopeptides (Cyclic peptides, Polypeptides)	Vancomycin	EFSA	4	
Macrolides	Erythromycin	EFSA	4	
Oxazolidines	Linezolid	EFSA	4	
Penicillins	Ampicillin	EFSA	4	
Streptogramins	Quinupristin/Dalfopristin	EFSA	1	
Tetracyclines	Tetracycline	NON-EFSA	4	
Fluoroquinolones	Ciprofloxacin		4	
Ionophores	Salinomycin		4	

Table Cut-off values for antibiotic resistance of E. faecium in Animals

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
Broth dilution	NCCLS/CLSI

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Aminoglycosides	Gentamicin	EFSA	32	
	Streptomycin	EFSA	128	
Amphenicols	Chloramphenicol	EFSA	32	
	Florfenicol		8	
Glycopeptides (Cyclic peptides, Polypeptides)	Vancomycin	EFSA	4	
	Bacitracin		32	
Macrolides	Erythromycin	EFSA	4	
Oxazolidines	Linezolid	EFSA	4	
Penicillins	Ampicillin	EFSA	4	
Streptogramins	Quinupristin/Dalfopristin	EFSA	1	
Tetracyclines	Tetracycline	NON-EFSA	4	
Orthosomycins	Avilamycin		16	
Fluoroquinolones	Ciprofloxacin		4	

Table Cut-off values for antibiotic resistance of E. faecium in Food

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Ionophores	Salinomycin		8	

4. INFORMATION ON SPECIFIC MICROBIOLOGICAL AGENTS

4.1 ENTEROBACTER SAKAZAKII

4.1.1 General evaluation of the national situation

4.2 HISTAMINE

4.2.1 General evaluation of the national situation

4.3 STAPHYLOCOCCAL ENTEROTOXINS

4.3.1 General evaluation of the national situation

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

Foodborne outbreaks have to be reported to the regional public health services which send it to the national centre (RIVM). These outbreaks are mostly reported by physicians or laboratories. The regional public health service(s) investigate an outbreak where possible and feasible. Besides this mandatory system, everyone can contact the Food and Safety Authority in case of a foodborne outbreak. The FSA registers all these complaints and will -where needed and feasible- investigate the incriminated food products and corresponding food chain. In a lot of the outbreaks, the regional public health service(s) and the FSA will keep each other informed.

Description of the types of outbreaks covered by the reporting:

Outbreaks in which food is incriminated, but not necessarily proven as source

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	1	4	1	0	1	2
Salmonella - S. Enteritidis	3	11	2	0	2	5
Salmonella - Other serovars	7	18	2	0	2	9
Campylobacter	15	68	0	0	0	15
Listeria - Listeria monocytogenes	0	unknown	unknown	unknown	0	0
Listeria - Other Listeria	0	unknown	unknown	unknown	0	0
Yersinia	0	unknown	unknown	unknown	0	0
Escherichia coli, pathogenic - Verotoxigenic E. coli (VTEC)	0	unknown	unknown	unknown	2	2
Bacillus - B. cereus	5	71	0	0	5	10
Bacillus - Other Bacillus	0	unknown	unknown	unknown	0	0
Staphylococcal enterotoxins	1	2	0	0	0	1
Clostridium - Cl. botulinum	0	unknown	unknown	unknown	0	0
Clostridium - Cl. perfringens	0	unknown	unknown	unknown	2	2

	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	0	unknown	unknown	unknown	0	0
Other Bacterial agents - Brucella	0	unknown	unknown	unknown	0	0
Other Bacterial agents - Shigella	0	unknown	unknown	unknown	0	0
Other Bacterial agents - Other Bacterial agents	0	unknown	unknown	unknown	0	0
Parasites - Trichinella	0	unknown	unknown	unknown	0	0
Parasites - Giardia	0	unknown	unknown	unknown	0	0
Parasites - Cryptosporidium	0	unknown	unknown	unknown	0	0
Parasites - Anisakis	0	unknown	unknown	unknown	0	0
Parasites - Other Parasites	0	unknown	unknown	unknown	0	0
Viruses - Norovirus	1	28	0	0	2	3
Viruses - Hepatitis viruses	0	unknown	unknown	unknown	0	0
Viruses - Other Viruses	0	unknown	unknown	unknown	0	0
Other agents - Histamine	0	unknown	unknown	unknown	0	0
Other agents - Marine biotoxins	0	unknown	unknown	unknown	0	0
Other agents - Other Agents	0	unknown	unknown	unknown	0	0

	Weak evidence or no vehicle outbreaks					
	Number of outbreaks	Human cases	Hospitalized	Deaths	Strong evidence Number of Outbreaks	Total number of outbreaks
Unknown agent	164	665	9	0	0	164

Table Foodborne Outbreaks: detailed data for Bacillus

Please use CTRL for multiple selection fields

B. cereus

	Value
FBO Code	
Number of outbreaks	1
Number of human cases	2
Number of hospitalisations	unknown
Number of deaths	unknown
Food vehicle	Bakery products
More food vehicle information	spring roll skin
Nature of evidence	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	Take-away or fast-food outlet
Place of origin of problem	Take-away or fast-food outlet
Origin of food vehicle	Unknown
Contributory factors	Unknown
Mixed Outbreaks (Other Agent)	
Additional information	

B. cereus

	Value
FBO Code	
Number of outbreaks	1
Number of human cases	3
Number of hospitalisations	unknown
Number of deaths	unknown
Food vehicle	Bakery products
More food vehicle information	Cake
Nature of evidence	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	Retail sale outlet
Origin of food vehicle	Unknown
Contributory factors	Unknown
Mixed Outbreaks (Other Agent)	
Additional information	

B. cereus

	Value
FBO Code	
Number of outbreaks	1
Number of human cases	2
Number of hospitalisations	unknown
Number of deaths	unknown
Food vehicle	Other foods
More food vehicle information	garlic sauce
Nature of evidence	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	Take-away or fast-food outlet
Place of origin of problem	Take-away or fast-food outlet
Origin of food vehicle	Unknown
Contributory factors	Unknown
Mixed Outbreaks (Other Agent)	Listeria monocytogenes in chicken shoarma
Additional information	incubation period was 15 hours

B. cereus

	Value
FBO Code	
Number of outbreaks	1
Number of human cases	2
Number of hospitalisations	unknown
Number of deaths	unknown
Food vehicle	Crustaceans, shellfish, molluscs and products thereof
More food vehicle information	Wongole
Nature of evidence	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	Take-away or fast-food outlet
Place of origin of problem	Take-away or fast-food outlet
Origin of food vehicle	Unknown
Contributory factors	Unknown
Mixed Outbreaks (Other Agent)	Staphylococcus aureus in same sample
Additional information	

B. cereus

	Value
FBO Code	
Number of outbreaks	1
Number of human cases	2
Number of hospitalisations	unknown
Number of deaths	unknown
Food vehicle	Broiler meat (Gallus gallus) and products thereof
More food vehicle information	marinated chicken, garlic sauce also tested positive
Nature of evidence	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	Take-away or fast-food outlet
Place of origin of problem	Take-away or fast-food outlet
Origin of food vehicle	Unknown
Contributory factors	Unknown
Mixed Outbreaks (Other Agent)	
Additional information	

Table Foodborne Outbreaks: detailed data for Clostridium

Please use CTRL for multiple selection fields

C. perfringens

	Value
FBO Code	
Number of outbreaks	1
Number of human cases	3
Number of hospitalisations	unknown
Number of deaths	unknown
Food vehicle	Mixed food
More food vehicle information	curry potatoe dish
Nature of evidence	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	Take-away or fast-food outlet
Place of origin of problem	Take-away or fast-food outlet
Origin of food vehicle	Unknown
Contributory factors	Unknown
Mixed Outbreaks (Other Agent)	Bacillus cereus in rice
Additional information	

C. perfringens

	Value
FBO Code	
Number of outbreaks	1
Number of human cases	3
Number of hospitalisations	unknown
Number of deaths	unknown
Food vehicle	Mixed food
More food vehicle information	curry dish with chicken, lamb and potatoes
Nature of evidence	Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent
Outbreak type	Unknown
Setting	Restaurant, Cafe, Pub, Bar, Hotel
Place of origin of problem	Restaurant/Café/Pub/Bar/Hotel/Catering service
Origin of food vehicle	Unknown
Contributory factors	Unknown
Mixed Outbreaks (Other Agent)	
Additional information	

Table Foodborne Outbreaks: detailed data for Escherichia coli, pathogenic

Please use CTRL for multiple selection fields

Verotoxigenic E. coli (VTEC) - VTEC O104:H4 - EAggEC positive vtx2 positive

	Value
FBO Code	
Number of outbreaks	1
Number of human cases	11
Number of hospitalisations	8
Number of deaths	0
Food vehicle	Vegetables and juices and other products thereof
More food vehicle information	fenugreek
Nature of evidence	Analytical epidemiological evidence
Outbreak type	General
Setting	Disseminated cases
Place of origin of problem	Travel abroad
Origin of food vehicle	Unknown
Contributory factors	Unknown
Mixed Outbreaks (Other Agent)	
Additional information	Dutch cases within the large O104 outbreak

Verotoxigenic E. coli (VTEC) - VTEC O157

	Value
FBO Code	
Number of outbreaks	1
Number of human cases	3
Number of hospitalisations	unknown
Number of deaths	unknown
Food vehicle	Bovine meat and products thereof
More food vehicle information	filet americain
Nature of evidence	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	Slaughterhouse
Origin of food vehicle	Unknown
Contributory factors	Unprocessed contaminated ingredient
Mixed Outbreaks (Other Agent)	
Additional information	

Table Foodborne Outbreaks: detailed data for Salmonella

Please use CTRL for multiple selection fields

S. Enteritidis - PT 8

	Value
FBO Code	
Number of outbreaks	1
Number of human cases	10
Number of hospitalisations	1
Number of deaths	0
Food vehicle	Pig meat and products thereof
More food vehicle information	saté
Nature of evidence	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	Unknown
Contributory factors	Unknown
Mixed Outbreaks (Other Agent)	
Additional information	

S. Typhimurium

	Value
FBO Code	
Number of outbreaks	1
Number of human cases	36
Number of hospitalisations	1
Number of deaths	0
Food vehicle	Buffet meals
More food vehicle information	9 different chinese dishes
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	Unknown
Contributory factors	Unknown
Mixed Outbreaks (Other Agent)	
Additional information	chinese party, visitors brought food with them

S. Enteritidis

	Value
FBO Code	
Number of outbreaks	1
Number of human cases	6
Number of hospitalisations	unknown
Number of deaths	unknown
Food vehicle	Bovine meat and products thereof
More food vehicle information	filet americain
Nature of evidence	Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent
Outbreak type	General
Setting	Canteen or workplace catering
Place of origin of problem	Slaughterhouse
Origin of food vehicle	Unknown
Contributory factors	Unprocessed contaminated ingredient
Mixed Outbreaks (Other Agent)	
Additional information	

S. Newport

	Value
FBO Code	
Number of outbreaks	1
Number of human cases	20
Number of hospitalisations	9
Number of deaths	0
Food vehicle	Vegetables and juices and other products thereof
More food vehicle information	taugé
Nature of evidence	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	Farm (primary production)
Origin of food vehicle	Domestic market
Contributory factors	Unknown
Mixed Outbreaks (Other Agent)	
Additional information	also cases in Germany

S. group D

	Value
FBO Code	
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	chicken legs
Nature of evidence	Descriptive epidemiological evidence
Outbreak type	Household / domestic kitchen
Setting	Hospital/medical care facility
Place of origin of problem	Retail sale outlet
Origin of food vehicle	Unknown
Contributory factors	Unknown
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	
Number of outbreaks	1
Number of human cases	3
Number of hospitalisations	unknown
Number of deaths	unknown
Food vehicle	Crustaceans, shellfish, molluscs and products thereof
More food vehicle information	oysters
Nature of evidence	Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent
Outbreak type	General
Setting	Restaurant, Cafe, Pub, Bar, Hotel
Place of origin of problem	Farm (primary production)
Origin of food vehicle	Unknown
Contributory factors	Unprocessed contaminated ingredient
Mixed Outbreaks (Other Agent)	
Additional information	

Calicivirus - norovirus (Norwalk-like virus)

	Value
FBO Code	
Number of outbreaks	1
Number of human cases	4
Number of hospitalisations	unknown
Number of deaths	unknown
Food vehicle	Crustaceans, shellfish, molluscs and products thereof
More food vehicle information	oysters
Nature of evidence	Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent
Outbreak type	General
Setting	Restaurant, Cafe, Pub, Bar, Hotel
Place of origin of problem	Farm (primary production)
Origin of food vehicle	Unknown
Contributory factors	Unprocessed contaminated ingredient
Mixed Outbreaks (Other Agent)	
Additional information	