

Netherlands

TRENDS AND SOURCES OF ZOONOSES AND ZOOTIC AGENTS IN FOODSTUFFS, ANIMALS AND FEEDINGSTUFFS

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

IN 2020

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 2020.

The information covers the occurrence of these diseases and agents in animals, foodstuffs and in some cases also in feedingstuffs. In addition the report includes data on antimicrobial resistance in some zoonotic agents and indicator 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 Union 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 European Union 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 European Union Summary Reports on zoonoses and antimicrobial resistance that are published each year by EFSA.

The national report contains two parts: tables summarising data reported in the Data Collection Framework and the related text forms. The text forms were sent by email as pdf files and they are incorporated at the end of the report.

* 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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ANIMAL POPULATION TABLES

Table Susceptible animal population

Animal species	Category of animals	Population		
		holding	animal	slaughter animal (heads)
Cattle (bovine animals)	Cattle (bovine animals)	31,839	3,837,990	
	Cattle (bovine animals) - calves (under 1 year) - for slaughter			1,514,588
	Cattle (bovine animals) - dairy cows and heifers			511,412
Deer	Deer - farmed			1,217
Ducks	Ducks - unspecified	50	819,191	4,564,309
Gallus gallus (fowl)	Gallus gallus (fowl)			600,952,635
	Gallus gallus (fowl) - breeding flocks, unspecified	296	9,468,624	
	Gallus gallus (fowl) - broilers - unspecified	637	49,228,507	
	Gallus gallus (fowl) - laying hens	856	43,165,986	
Pigs	Pigs - unspecified	11,311	11,950,240	15,884,483
Small ruminants	Goats	13,812	605,843	201,831
	Sheep	29,101	1,010,372	
	Sheep - animals over 1 year			154,326
	Sheep - animals under 1 year (lambs)			442,729
Solipeds, domestic	Solipeds, domestic - horses			1,668
Turkeys	Turkeys - unspecified	31	585,134	

DISEASE STATUS TABLES

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

Region	Zoonotic agent	Number of animals serologically tested under investigations of suspect cases	Number of herds under investigations of suspect cases	Number of seropositive animals under investigations of suspect cases	Number of animals positive to BST under investigations of suspect cases	Number of animals positive in microbiological testing under investigations of suspect cases	Number of herds with status officially free	Number of infected herds	Total number of animals	Number of herds tested under surveillance	Number of animals tested under surveillance	Total number of herds	Number of infected herds tested under surveillance	Number of herds tested under surveillance by bulk milk	Number of animals or pools tested under surveillance by bulk milk	Number of infected herds tested under surveillance by bulk milk	Number of notified abortions whatever cause under investigations of suspect cases	Number of isolations of Brucella abortus under investigations of suspect cases	Number of abortions due to Brucella infection under investigations of suspect cases	Number of animals tested in microbiological and/or molecular-biology testing under investigations of suspect cases
NETHERLANDS	Brucella	10,544	51	6	0	0	31,839	0	3,837,990	0	0	31,839	0	0	0	0	10,544	0	0	6

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

Region	Zoonotic agent	Number of animals serologically tested under investigations of suspect cases	Number of suspended herds under investigations of suspect cases	Number of seropositive animals under investigations of suspect cases	Number of animals positive in microbiological testing under investigations of suspect cases	Number of herds with status officially free	Number of infected herds	Total number of animals	Number of herds tested under surveillance	Number of animals tested under surveillance	Total number of herds	Number of infected herds tested under surveillance	Number of animals tested in microbiological and/or molecular-biology testing under investigations of suspect cases
NETHERLANDS	Brucella	22	0	0	0	42,913	0	1,616,215	1,540	18,628	42,913	0	1

DISEASE STATUS TABLES

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

Region	Zoonotic agent	Number of herds with status officially free	Number of infected herds	Total number of animals	Number of animals with suspicious lesions of tuberculosis examined and submitted to histopathological and bacteriological and/or molecular-biology examinations	Number of animals detected positive in bacteriological and/or molecular-biology examination	Total number of herds
NETHERLANDS	Mycobacterium bovis	31,839	0	3,837,990	6	0	31,839

PREVALENCE TABLES

Table Brucella:BRUCELLA in animal

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling Details	Method	Sampling unit	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Dogs - Veterinary clinics - Belarus - animal sample - blood - Clinical investigations - Official sampling - Suspect sampling	N_A	Not Available	animal	7	1	Brucella canis	1
	Dogs - Veterinary clinics - Romania - animal sample - blood - Clinical investigations - Official sampling - Suspect sampling	N_A	Not Available	animal	10	5	Brucella canis	5
	Dogs - Veterinary clinics - Russia - animal sample - blood - Clinical investigations - Official sampling - Suspect sampling	N_A	Not Available	animal	1	1	Brucella canis	1
	Dogs - Veterinary clinics - Serbia - animal sample - blood - Clinical investigations - Official sampling - Suspect sampling	N_A	Not Available	animal	2	1	Brucella canis	1
	Dogs - Veterinary clinics - Unknown - animal sample - blood - Clinical investigations - Official sampling - Suspect sampling	N_A	Not Available	animal	3	1	Brucella canis	1
	Goats - Farm - Not Available - Not Available - Monitoring - Not applicable - Selective sampling	N_A	Not Available	animal	1718	0	Brucella	0
	Pigs - fattening pigs - Farm - Not Available - Not Available - Clinical investigations - Official sampling - Objective sampling	N_A	Not Available	animal	5974	0	Brucella	0
	Sheep - Farm - Not Available - Not Available - Monitoring - Not applicable - Selective sampling	N_A	Not Available	animal	17051	0	Brucella	0

Table Campylobacter:CAMPYLOBACTER in animal

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling Details	Method	Sampling unit	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Bears - zoo animal - Zoo - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling	N_A	Not Available	animal	11	2	Campylobacter, unspecified sp.	2
	Birds - wild - Veterinary clinics - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling	N_A	Not Available	animal	23	4	Campylobacter, unspecified sp.	4
	Birds - zoo animal - Zoo - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling	N_A	Not Available	animal	14	11	Campylobacter, unspecified sp.	11
	Camels - zoo animals - Zoo - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling	N_A	Not Available	animal	1	1	Campylobacter, unspecified sp.	1
	Cats - Veterinary clinics - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling	N_A	Not Available	animal	25	8	Campylobacter, unspecified sp.	8
	Cattle (bovine animals) - Artificial insemination station - Not Available - Not Available - Monitoring - Not applicable - Selective sampling	Preputial/Vaginal lavage	Not Available	animal	1680	0	Campylobacter	0
	Cattle (bovine animals) - Farm - Not Available - Not Available - Monitoring - Not applicable - Objective sampling	Pathology	Not Available	animal	2326	0	Campylobacter	0
	Deer - zoo animals - Zoo - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling	N_A	Not Available	animal	2	1	Campylobacter, unspecified sp.	1
	Dogs - Veterinary clinics - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling	N_A	Not Available	animal	75	42	Campylobacter, unspecified sp.	42
	Elephants - zoo animals - Zoo - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling	N_A	Not Available	animal	3	1	Campylobacter, unspecified sp.	1
	Foxes - Zoo - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling	N_A	Not Available	animal	3	1	Campylobacter, unspecified sp.	1
	Giraffes - zoo animal - Zoo - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling	N_A	Not Available	animal	3	1	Campylobacter, unspecified sp.	1
	Goats - Farm - Netherlands - Not Available - Clinical investigations - HACCP and own check - Not specified	Pathology	Not Available	animal	358	2	Campylobacter, unspecified sp.	2
	Kangaroos - zoo animal - Zoo - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling	N_A	Not Available	animal	3	1	Campylobacter, unspecified sp.	1
	Land game mammals - Zoo - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling	N_A	Not Available	animal	13	6	Campylobacter, unspecified sp.	6
	Lion - zoo animals - Zoo - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling	N_A	Not Available	animal	12	6	Campylobacter, unspecified sp.	6
	Monkeys - zoo animal - Veterinary clinics - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling	N_A	Not Available	animal	84	17	Campylobacter, unspecified sp.	17
	Other animals - exotic pet animals - Veterinary clinics - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling	N_A	Not Available	animal	12	1	Campylobacter, unspecified sp.	1
	Pigs - breeding animals - unspecified - piglets - Farm - Not Available - Not Available - Clinical investigations - HACCP and own check - Objective sampling	N_A	Not Available	animal	1867	0	Campylobacter	0
	Pigs - fattening pigs - Farm - Not Available - animal sample - faeces - Surveillance - Official sampling - Objective sampling	N_A	ISO 10272-1:2017 Campylobacter	herd/flock	57	45	Campylobacter, unspecified sp.	45
	Rodents - zoo animal - Zoo - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling	N_A	Not Available	animal	3	1	Campylobacter, unspecified sp.	1
	Sheep - Farm - Netherlands - Not Available - Clinical investigations - HACCP and own check - Not specified	Pathology	Not Available	animal	376	11	Campylobacter, unspecified sp.	11
	Solipeds, domestic - horses - Veterinary clinics - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling	N_A	Not Available	animal	228	1	Campylobacter, unspecified sp.	1

Table Campylobacter:CAMPYLOBACTER in food

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling unit	Sample weight	Sample weight unit	Sampling Details	Method	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Meat from broilers (Gallus gallus) - carcase - chilled - Slaughterhouse - Not Available - food sample - meat - Surveillance - based on Regulation 2073 - Official, based on Regulation 2019/627 - Objective sampling	single (food/fee d)	25	Gram	n=3	ISO/TS 10272-2:2006 Campylobacter	284	73	Campylobacter, unspecified sp.	73
	Meat from broilers (Gallus gallus) - fresh - chilled - Processing plant - Not Available - food sample - meat - Monitoring - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	n=5	ISO 10272-2:2017 Campylobacter	24	3	Campylobacter, unspecified sp.	3
	Meat from broilers (Gallus gallus) - fresh - chilled - Processing plant - Not Available - food sample - meat - Monitoring - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	n=5	ISO 10272-1:2017 Campylobacter	25	13	Campylobacter, unspecified sp.	13
	Meat from broilers (Gallus gallus) - fresh - chilled - Retail - Not Available - food sample - meat - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	ISO 10272-2:2017 Campylobacter	237	3	Campylobacter, unspecified sp.	3
	Meat from broilers (Gallus gallus) - fresh - chilled - Retail - Not Available - food sample - meat - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	ISO 10272-1:2017 Campylobacter	232	93	Campylobacter, unspecified sp.	93
	Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - Processing plant - Not Available - food sample - meat - Monitoring - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	n=5	ISO 10272-1:2017 Campylobacter	21	17	Campylobacter, unspecified sp.	17
	Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - Retail - Not Available - food sample - meat - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	ISO 10272-1:2017 Campylobacter	232	70	Campylobacter, unspecified sp.	70
	Meat from sheep - fresh - Retail - Not Available - food sample - meat - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	ISO 10272-1:2017 Campylobacter	46	0	Campylobacter	0
	Meat from turkey - fresh - chilled - Retail - Not Available - food sample - meat - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	ISO 10272-2:2017 Campylobacter	14	4	Campylobacter, unspecified sp.	4
	Meat from turkey - fresh - chilled - Retail - Not Available - food sample - meat - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	ISO 10272-1:2017 Campylobacter	14	4	Campylobacter, unspecified sp.	4
	Meat from turkey - meat preparation - intended to be eaten cooked - Retail - Not Available - food sample - meat - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	ISO 10272-1:2017 Campylobacter	6	1	Campylobacter, unspecified sp.	1
	Milk, cows' - raw milk - intended for direct human consumption - Farm - Netherlands - food sample - Surveillance - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	N_A	ISO 10272-1:2006 Campylobacter	101	0	Campylobacter	0
	Milk, goats' - raw milk - intended for direct human consumption - Farm - Netherlands - food sample - Surveillance - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	N_A	ISO 10272-1:2006 Campylobacter	1	0	Campylobacter	0
	Mushrooms - Retail - Not Available - food sample - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	ISO 10272-1:2017 Campylobacter	79	1	Campylobacter, unspecified sp.	1
	Ready-to-eat salads - Retail - Not Available - food sample - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	ISO 10272-1:2017 Campylobacter	239	0	Campylobacter	0
	Vegetables - pre-cut - non-ready-to-eat - Retail - Not Available - food sample - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	ISO 10272-1:2017 Campylobacter	250	1	Campylobacter, unspecified sp.	1
	Vegetables - pre-cut - ready-to-eat - Retail - Not Available - food sample - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	ISO 10272-1:2017 Campylobacter	979	1	Campylobacter, unspecified sp.	1

Table COXIELLA in animal

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling unit	Sampling Details	Method	Total units tested	Total units positive	N of clinical affected herds	Zoonoses	N of units positive
Not Available	Cattle (bovine animals) - Veterinary clinics - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling	animal	Pathology	Not Available	338	3		Coxiella burnetii	3
	Goats - Farm - Netherlands - Not Available - Clinical investigations - HACCP and own check - Not specified	animal	Pathology	Not Available	358	0		Coxiella	0
	Goats - Farm - Not Available - Not Available - Monitoring - active - Official sampling - Objective sampling	animal	N_A	Not Available	409	0		Coxiella	0
	Sheep - Farm - Netherlands - Not Available - Clinical investigations - HACCP and own check - Not specified	animal	Pathology	Not Available	376	0		Coxiella	0
	Sheep - Farm - Not Available - Not Available - Monitoring - active - Official sampling - Objective sampling	animal	N_A	Not Available	38	0		Coxiella	0

Table Cronobacter:CRONOBACTER in food

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling unit	Sample weight	Sample weight unit	Sampling Details	Method	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Infant formula - dried - intended for infants below 6 months - Processing plant - Netherlands - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/feed)	10	Gram	30x 10g	ISO 22964:2017 Cronobacter	29	0	Cronobacter	0
		batch (food/feed)	10	Gram	objective sampling by COKZ for export certification	ISO 22964:2017 Cronobacter	25	0	Cronobacter	0
			25	Gram	N.A	ISO 22964:2017 Cronobacter	81	1	Cronobacter	1

Table Escherichia coli:ESCHERICHIA COLI in animal

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling Details	Method	Sampling unit	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Pigs - fattening pigs - Farm - Not Available - animal sample - faeces - Surveillance - Official sampling - Objective sampling	N/A	Other methods based on PCR detection of stx genes	herd/flock	62	36	STEC O100	14
							STEC O117	1
							STEC O159	1
							STEC O36	1
							STEC O8	16
							STEC, unspecified	3

Table Escherichia coli:ESCHERICHIA COLI in food

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling unit	Sample weight	Sample weight unit	Sampling Details	Method	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - Farm - Not Available - food sample - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4)	101	4	STEC O183	1
									STEC O3	1
									STEC O8	1
									STEC, unspecified	1
	Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - Processing plant - Netherlands - food sample - Surveillance - Official sampling - Objective sampling	batch (food/feed)	25	Gram	N_A	ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4)	46	2	STEC, unspecified	2
	Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - Processing plant - Not Available - food sample - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4)	47	2	STEC O15	2
	Crustaceans - shrimps - raw - frozen - Border Control Posts - Not Available - food sample - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4)	105	0	Shiga toxin-producing Escherichia coli (STEC)	0
	Fish - raw - frozen - Border Control Posts - Not Available - food sample - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4)	196	0	Shiga toxin-producing Escherichia coli (STEC)	0
	Foodstuffs intended for special nutritional uses - ready-to-eat - Wholesale - Not Available - food sample - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4)	175	0	Shiga toxin-producing Escherichia coli (STEC)	0
	Live bivalve molluscs - mussels - Processing plant - Not Available - food sample - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4)	58	0	Shiga toxin-producing Escherichia coli (STEC)	0
	Live bivalve molluscs - oysters - Processing plant - Not Available - food sample - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4)	63	0	Shiga toxin-producing Escherichia coli (STEC)	0
	Live bivalve molluscs - unspecified - Processing plant - Not Available - food sample - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4)	31	0	Shiga toxin-producing Escherichia coli (STEC)	0
	Meat from bovine animals - fresh - Border Control Posts - Not Available - food sample - meat - Monitoring - Official sampling - Objective sampling	batch (food/feed)	25	Gram	n=5	ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4)	19	2	STEC O5	1
									STEC O91	1
	Meat from bovine animals - fresh - Retail - Not Available - food sample - meat - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4)	495	16	STEC O113	2
									STEC O126	1
									STEC O146	2
									STEC O149	1
									STEC O15	1
									STEC O157	1

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling unit	Sample weight	Sample weight unit	Sampling Details	Method	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Meat from bovine animals - fresh - Retail - Not Available - food sample - meat - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4)	495	16	STEC O174	1
									STEC O38	2
									STEC O76	2
									STEC O8	1
									STEC, unspecified	2
	Meat from bovine animals - meat preparation - intended to be eaten cooked - Retail - Not Available - food sample - meat - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4)	151	17	STEC O100	3
									STEC O130	2
									STEC O157	1
									STEC O174	1
									STEC O2	1
									STEC O26	5
									STEC O8	1
									STEC O91	1
									STEC, unspecified	2
									STEC O113	1
	Meat from bovine animals - meat preparation - intended to be eaten raw - Retail - Not Available - food sample - meat - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4)	304	9	STEC O116	1
									STEC O117	1
									STEC O150	1
									STEC O153	1
									STEC O22	1
									STEC O8	1
									STEC O88	1
	Meat from deer (venison) - fresh - frozen - Border Control Posts - Not Available - food sample - meat - Monitoring - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	n=5	ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4)	2	2	STEC O130	1
									STEC O22	1
	Meat from other animal species or not specified - fresh - frozen - Border Control Posts - Not Available - food sample - meat - Monitoring - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	n=5	ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4)	6	0	Shiga toxin-producing Escherichia coli (STEC)	0
	Meat from pig - meat preparation - intended to be eaten cooked - Retail - Not Available - food sample - meat - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4)	152	2	STEC O113	1
									STEC O8	1
	Meat from sheep - fresh - Retail - Not Available - food sample - meat - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4)	247	44	STEC O100	1
									STEC O113	1
									STEC O123	1
									STEC O128	2
									STEC O146	13
									STEC O15	2
									STEC O150	1
									STEC O153	3
									STEC O174	1
									STEC O178	1
									STEC O38	7
									STEC O5	1
									STEC O6	4
									STEC O76	3
									STEC O91	1
									STEC, unspecified	2
	Milk, cows' - raw milk - intended for direct human consumption - Farm - Netherlands - food sample - Surveillance - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	N_A	ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4)	101	6	STEC, unspecified	6

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling unit	Sample weight	Sample weight unit	Sampling Details	Method	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Milk, goats' - raw milk - intended for direct human consumption - Farm - Netherlands - food sample - Surveillance - Official sampling - Objective sampling	batch (food/feed)	25	Gram	N_A	ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4)	1	1	STEC, unspecified	1
	Ready-to-eat salads - Retail - Not Available - food sample - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4)	245	0	Shiga toxin-producing Escherichia coli (STEC)	0
	Spices and herbs - fresh - Border Control Posts - Not Available - food sample - Monitoring - Official sampling - Objective sampling	batch (food/feed)	25	Gram	n=5	ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4)	60	1	STEC O8	1
	Vegetables - leaves - Retail - Not Available - food sample - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4)	180	0	Shiga toxin-producing Escherichia coli (STEC)	0
	Vegetables - pre-cut - non-ready-to-eat - Retail - Not Available - food sample - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4)	258	0	Shiga toxin-producing Escherichia coli (STEC)	0
	Vegetables - pre-cut - ready-to-eat - Retail - Not Available - food sample - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4)	993	2	STEC O130	1
									STEC O38	1

Table FLAVIVIRUS in animal

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling unit	Vaccination status	Sampling Details	Method	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Birds - wild - Natural habitat - Not Available - animal sample - Surveillance - Not applicable - Not specified	animal	Not Available	Wild birds were randomly captured using mist nets and other trapping methods and sampled as part of a wider study of the presence of zoonotic viruses in birds in the Netherlands. For more details please see the article on Eurosurveillance DOI: 10.2807/1560-7917.ES.2020.25.40.2001704	Not Available	2783	1	West Nile virus	1

Table Listeria: LISTERIA in animal

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling Details	Method	Sampling unit	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Cattle (bovine animals) - dairy cows - Veterinary clinics - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling	Milk	Not Available	animal	7446	1	Listeria spp., unspecified	1
	Cattle (bovine animals) - Veterinary clinics - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling	Pathology	Not Available	animal	2326	11	Listeria spp., unspecified	11
	Goats - Farm - Netherlands - Not Available - Clinical investigations - HACCP and own check - Not specified	Pathology	Not Available	animal	358	15	Listeria spp., unspecified	15
	Pigs - breeding animals - unspecified - piglets - Farm - Not Available - Not Available - Clinical investigations - HACCP and own check - Suspect sampling	N_A	Not Available	animal	1867	0	Listeria	0
	Sheep - Farm - Netherlands - Not Available - Clinical investigations - HACCP and own check - Not specified	Pathology	Not Available	animal	376	18	Listeria spp., unspecified	18

Table Listeria: LISTERIA in food

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling unit	Sample weight	Sample weight unit	Sampling Details	Total units tested	Total units positive	Method	Zoonoses	N of units tested	N of units positive
Not Available	Cheeses made from cows' milk - fresh - made from pasteurised milk - Farm - Netherlands - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	N_A	91	0	detection	Listeria monocytogenes	91	0
	Cheeses made from cows' milk - fresh - made from pasteurised milk - Processing plant - Netherlands - food sample - Surveillance - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	objective sampling by COKZ for export certification	17	0	detection	Listeria monocytogenes	17	0
	Cheeses made from cows' milk - fresh - made from raw or low heat-treated milk - Farm - Netherlands - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	N_A	6	0	detection	Listeria monocytogenes	6	0
	Cheeses made from cows' milk - hard - made from pasteurised milk - Farm - Netherlands - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	10	Gram	N_A	118	3	<=100	Listeria monocytogenes	3	3
								>100	Listeria monocytogenes	3	0
	Cheeses made from cows' milk - hard - made from pasteurised milk - Farm - Netherlands - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	N_A	118	3	detection	Listeria monocytogenes	118	3
	Cheeses made from cows' milk - hard - made from pasteurised milk - Processing plant - Netherlands - food sample - Surveillance - Official sampling - Objective sampling	batch (food/fee d)	10	Gram	objective sampling by COKZ for export certification	1301	3	<=100	Listeria monocytogenes	3	3
								>100	Listeria monocytogenes	3	0
	Cheeses made from cows' milk - hard - made from pasteurised milk - Processing plant - Netherlands - food sample - Surveillance - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	N_A	476	0	detection	Listeria monocytogenes	476	0
								objective sampling by COKZ for export certification	Listeria monocytogenes	1,301	3
	Cheeses made from cows' milk - hard - made from raw or low heat-treated milk - Farm - Netherlands - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	10	Gram	N_A	410	5	<=100	Listeria monocytogenes	5	5
								>100	Listeria monocytogenes	5	0
	Cheeses made from cows' milk - hard - made from raw or low heat-treated milk - Farm - Netherlands - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	N_A	410	5	detection	Listeria monocytogenes	410	5
	Cheeses made from cows' milk - hard - made from raw or low heat-treated milk - Processing plant - Netherlands - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	10	Gram	5x25	82	1	<=100	Listeria monocytogenes	1	1
								>100	Listeria monocytogenes	1	0
	Cheeses made from cows' milk - hard - made from raw or low heat-treated milk - Processing plant - Netherlands - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	5x25	82	1	detection	Listeria monocytogenes	82	1
	Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - Farm - Netherlands - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	N_A	18	0	detection	Listeria monocytogenes	18	0
	Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - Farm - Netherlands - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	N_A	37	0	detection	Listeria monocytogenes	37	0
	Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - Farm - Netherlands - food sample - Surveillance - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	objective sampling by COKZ for export certification	21	0	detection	Listeria monocytogenes	21	0
	Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - Processing plant - Netherlands - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	5x25	24	0	detection	Listeria monocytogenes	24	0
	Cheeses, made from unspecified milk or other animal milk - spreadable - Processing plant - Netherlands - food sample - Surveillance - Official sampling - Objective sampling	batch (food/fee d)	10	Gram	objective sampling by COKZ for export certification	133	2	<=100	Listeria monocytogenes	2	2
								>100	Listeria monocytogenes	2	0
	Cheeses, made from unspecified milk or other animal milk - spreadable - Processing plant - Netherlands - food sample - Surveillance - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	objective sampling by COKZ for export certification	133	2	detection	Listeria monocytogenes	133	2
	Crustaceans - lobsters - cooked - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	Enumiratie Methode	2	0	<=100	Listeria monocytogenes	2	0
								>100	Listeria monocytogenes	2	0
	Crustaceans - lobsters - cooked - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	Detectie Methode	2	2	detection	Listeria monocytogenes	2	2
	Crustaceans - shrimps - cooked - Processing plant - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	N_A	29	0	<=100	Listeria monocytogenes	29	0
								>100	Listeria monocytogenes	29	0
	Crustaceans - shrimps - cooked - Processing plant - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	N_A	29	0	detection	Listeria monocytogenes	29	0
	Crustaceans - shrimps - cooked - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	Enumiratie Methode	97	1	<=100	Listeria monocytogenes	97	0
								>100	Listeria monocytogenes	97	1
	Crustaceans - shrimps - cooked - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	Detectie methode	97	3	detection	Listeria monocytogenes	97	3

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling unit	Sample weight	Sample weight unit	Sampling Details	Total units tested	Total units positive	Method	Zoonoses	N of units tested	N of units positive
Not Available	Dairy products (excluding cheeses) - butter - made from pasteurised milk - Farm - Netherlands - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	1	Gram	N_A	90	0	detection	Listeria monocytogenes	90	0
	Dairy products (excluding cheeses) - butter - made from raw or low heat-treated milk - Farm - Netherlands - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	1	Gram	N_A	10	0	detection	Listeria monocytogenes	10	0
	Dairy products (excluding cheeses) - butter - Processing plant - Netherlands - food sample - Surveillance - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	objective sampling by COKZ for export certification	43	0	detection	Listeria monocytogenes	43	0
	Dairy products (excluding cheeses) - cheese analogue - Processing plant - Netherlands - food sample - Surveillance - Official sampling - Objective sampling	batch (food/fee d)	10	Gram	objective sampling by COKZ for export certification	138	1	<=100	Listeria monocytogenes	1	1
								>100	Listeria monocytogenes	1	0
	Dairy products (excluding cheeses) - cheese analogue - Processing plant - Netherlands - food sample - Surveillance - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	objective sampling by COKZ for export certification	138	1	detection	Listeria monocytogenes	138	1
	Dairy products (excluding cheeses) - chocolate milk - Processing plant - Netherlands - food sample - Surveillance - Official sampling - Objective sampling	batch (food/fee d)	25	Millilitre	objective sampling by COKZ for export certification	7	0	detection	Listeria monocytogenes	7	0
	Dairy products (excluding cheeses) - cream - Processing plant - Netherlands - food sample - Surveillance - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	objective sampling by COKZ for export certification	21	0	detection	Listeria monocytogenes	21	0
	Dairy products (excluding cheeses) - dairy products, not specified - made from pasteurised milk - Farm - Netherlands - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	N_A	109	0	detection	Listeria monocytogenes	109	0
				Millilitre	N_A	31	0	detection	Listeria monocytogenes	31	0
	Dairy products (excluding cheeses) - dairy products, not specified - made from pasteurised milk - Processing plant - Netherlands - food sample - Surveillance - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	objective sampling by COKZ for export certification	20	0	detection	Listeria monocytogenes	20	0
				Millilitre	objective sampling by COKZ for export certification	61	0	detection	Listeria monocytogenes	61	0
	Dairy products (excluding cheeses) - fermented dairy products - Farm - Netherlands - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	N_A	191	1	detection	Listeria monocytogenes	191	1
				Millilitre	N_A	124	0	detection	Listeria monocytogenes	124	0
	Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - Farm - Netherlands - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	N_A	198	1	detection	Listeria monocytogenes	198	1
	Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - Processing plant - Netherlands - food sample - Surveillance - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	objective sampling by COKZ for export certification	19	0	detection	Listeria monocytogenes	19	0
	Fish - Fishery products from fish species associated with a high amount of histidine - which have undergone enzyme maturation treatment in brine - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	Enumeratie Methode	103	0	<=100	Listeria monocytogenes	103	0
								>100	Listeria monocytogenes	103	0
	Fish - Fishery products from fish species associated with a high amount of histidine - which have undergone enzyme maturation treatment in brine - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	Detectie Methode	103	10	detection	Listeria monocytogenes	103	10
	Fish - smoked - Processing plant - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	N_A	64	2	detection	Listeria monocytogenes	64	2
	Fish - smoked - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	Enumeratie Methode	662	6	<=100	Listeria monocytogenes	662	0
								>100	Listeria monocytogenes	662	6
	Fish - smoked - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	Detectie methde	662	53	detection	Listeria monocytogenes	662	53
	Infant formula - dried - intended for infants below 6 months - Processing plant - Netherlands - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	30x 25g	24	0	detection	Listeria monocytogenes	24	0
	Infant formula - dried - intended for infants below 6 months - Processing plant - Netherlands - food sample - Surveillance - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	N_A	44	0	detection	Listeria monocytogenes	44	0
	Infant formula - dried - Processing plant - Netherlands - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	30x 25g	17	0	detection	Listeria monocytogenes	17	0
	Infant formula - dried - Processing plant - Netherlands - food sample - Surveillance - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	N_A	21	0	detection	Listeria monocytogenes	21	0
	Live bivalve molluscs - oysters - Processing plant - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	Enumeratie Methode	52	0	<=100	Listeria monocytogenes	52	0
								>100	Listeria monocytogenes	52	0
	Live bivalve molluscs - oysters - Processing plant - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	Detectie Methode	52	0	detection	Listeria monocytogenes	52	0
	Meat from bovine animals - fresh - Border Control Posts - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	n=5	10	3	detection	Listeria monocytogenes	10	3

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling unit	Sample weight	Sample weight unit	Sampling Details	Total units tested	Total units positive	Method	Zoonoses	N of units tested	N of units positive
Not Available	Meat from bovine animals - fresh - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	495	39	detection	Listeria monocytogenes	495	39
	Meat from bovine animals - meat preparation - intended to be eaten raw - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	Enumiratie Methode	298	0	<=100	Listeria monocytogenes	298	0
								>100	Listeria monocytogenes	298	0
	Meat from bovine animals - meat preparation - intended to be eaten raw - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	Detectie methde	304	44	detection	Listeria monocytogenes	304	44
	Meat from broilers (Gallus gallus) - fresh - chilled - Processing plant - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	Enumiratie Methode n = 5	25	0	<=100	Listeria monocytogenes	25	0
								>100	Listeria monocytogenes	25	0
	Meat from broilers (Gallus gallus) - fresh - chilled - Processing plant - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	Detectie methde n = 5	25	7	detection	Listeria monocytogenes	25	7
	Meat from broilers (Gallus gallus) - fresh - chilled - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	Enumiratie Methode	287	2	<=100	Listeria monocytogenes	287	2
								>100	Listeria monocytogenes	287	0
	Meat from broilers (Gallus gallus) - fresh - chilled - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	Detectie methde	287	78	detection	Listeria monocytogenes	287	78
	Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - Border Control Posts - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	n=5	39	14	detection	Listeria monocytogenes	39	14
	Meat from deer (venison) - fresh - frozen - Border Control Posts - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	n=5	1	0	detection	Listeria monocytogenes	1	0
	Meat from farmed game - ratites - fresh - frozen - Border Control Posts - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	n=5	2	0	detection	Listeria monocytogenes	2	0
	Meat from goat - fresh - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	2	1	detection	Listeria monocytogenes	2	1
	Meat from other animal species or not specified - fresh - frozen - Border Control Posts - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	n=5	2	1	detection	Listeria monocytogenes	2	1
	Meat from pig - fresh - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	86	18	detection	Listeria monocytogenes	86	18
	Meat from poultry, unspecified - meat preparation - intended to be eaten cooked - chilled - Border Control Posts - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	n=5	16	0	detection	Listeria monocytogenes	16	0
	Meat from sheep - fresh - Border Control Posts - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	n=5	9	3	detection	Listeria monocytogenes	9	3
	Meat from sheep - fresh - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	245	18	detection	Listeria monocytogenes	245	18
	Meat from turkey - fresh - chilled - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	Enumiratie Methode	21	0	<=100	Listeria monocytogenes	21	0
								>100	Listeria monocytogenes	21	0
	Meat from turkey - fresh - chilled - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	Detectie methde	21	3	detection	Listeria monocytogenes	21	3
	Milk from other animal species or unspecified - raw milk - intended for direct human consumption - Farm - Netherlands - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Millilitre	milk from camels	4	0	detection	Listeria monocytogenes	4	0
					milk from donkeys	2	0	detection	Listeria monocytogenes	2	0
					milk from horses	20	0	detection	Listeria monocytogenes	20	0
	Milk, cows' - pasteurised milk - Farm - Netherlands - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Millilitre	N_A	114	0	detection	Listeria monocytogenes	114	0
	Milk, cows' - raw milk - intended for direct human consumption - Farm - Netherlands - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Millilitre	N_A	4	0	detection	Listeria monocytogenes	4	0
	Milk, cows' - raw milk - intended for direct human consumption - Farm - Netherlands - food sample - Surveillance - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	N_A	101	0	detection	Listeria monocytogenes	101	0
	Milk, cows' - raw milk - intended for direct human consumption - Farm - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	Enumiratie Methode	101	0	<=100	Listeria monocytogenes	101	0
								>100	Listeria monocytogenes	101	0
	Milk, cows' - raw milk - intended for direct human consumption - Farm - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	Detectie Methode	101	0	detection	Listeria monocytogenes	101	0

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling unit	Sample weight	Sample weight unit	Sampling Details	Total units tested	Total units positive	Method	Zoonoses	N of units tested	N of units positive
Not Available	Milk, goats' - pasteurised milk - Farm - Netherlands - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Millilitre	N_A	2	0	detection	Listeria monocytogenes	2	0
	Milk, goats' - raw milk - intended for direct human consumption - Farm - Netherlands - food sample - Surveillance - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	N_A	1	0	detection	Listeria monocytogenes	1	0
	Milk, sheep's - pasteurised milk - Farm - Netherlands - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Millilitre	N_A	1	0	detection	Listeria monocytogenes	1	0
	Milk, sheep's - raw milk - Farm - Netherlands - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Millilitre	N_A	2	1	detection	Listeria monocytogenes	2	1
	Molluscan shellfish - cooked - Processing plant - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	N_A	17	0	<=100	Listeria monocytogenes	17	0
								>100	Listeria monocytogenes	17	0
	Molluscan shellfish - cooked - Processing plant - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	N_A	17	0	detection	Listeria monocytogenes	17	0
	Molluscan shellfish - cooked - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	3	0	<=100	Listeria monocytogenes	3	0
								>100	Listeria monocytogenes	3	0
	Molluscan shellfish - cooked - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	3	0	detection	Listeria monocytogenes	3	0
	Mushrooms - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	Enumeratie Methode	81	0	<=100	Listeria monocytogenes	81	0
								>100	Listeria monocytogenes	81	0
	Mushrooms - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	Detectie Methode	81	0	detection	Listeria monocytogenes	81	0
	Ready-to-eat salads - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	245	0	<=100	Listeria monocytogenes	245	0
								>100	Listeria monocytogenes	245	0
	Vegetables - leaves - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	179	1	detection	Listeria monocytogenes	179	1
	Vegetables - pre-cut - non-ready-to-eat - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	258	0	<=100	Listeria monocytogenes	258	0
								>100	Listeria monocytogenes	258	0
	Vegetables - pre-cut - ready-to-eat - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	991	2	<=100	Listeria monocytogenes	991	1
								>100	Listeria monocytogenes	991	1

Table Lyssavirus:LYSSAVIRUS in animal

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling Details	Method	Sampling unit	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Bats - wild - Natural habitat - Not Available - Not Available - Clinical investigations - Official sampling - Suspect sampling	N_A	Not Available	animal	38	5	European bat lyssavirus 1	5
	Cats - Veterinary clinics - Not Available - Not Available - Clinical investigations - Official sampling - Suspect sampling	N_A	Not Available	animal	3	0	Lyssavirus	0
	Dogs - Veterinary clinics - Not Available - Not Available - Clinical investigations - Official sampling - Suspect sampling	N_A	Not Available	animal	5	0	Lyssavirus	0
	Foxes - wild - Natural habitat - Not Available - Not Available - Clinical investigations - Official sampling - Suspect sampling	N_A	Not Available	animal	1	0	Lyssavirus	0

Table Mycobacterium:MYCOBACTERIUM in animal

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling Details	Method	Sampling unit	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Pigs - breeding animals - unspecified - piglets - Farm - Not Available - Not Available - Clinical investigations - HACCP and own check - Not specified	N/A	Not Available	animal	1867	0	Mycobacterium	0

Table Salmonella:SALMONELLA in animal

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling unit	N of flocks under control programme	Target verification	Sampling Details	Method	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Bears - zoo animal - Zoo - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling	animal		N_A	N_A	Not Available	13	4	Salmonella group B	4
	Birds - pet animals - Veterinary clinics - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling	animal		N_A	N_A	Not Available	6	6	Salmonella group B	6
	Cats - Veterinary clinics - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling	animal		N_A	N_A	Not Available	195	1	Salmonella group B	1
	Cattle (bovine animals) - Farm - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling	animal		N_A	Pathology	Not Available	2326	162	Salmonella Dublin	60
									Salmonella spp., unspecified	58
									Salmonella Typhimurium	44
	Cattle (bovine animals) - Farm - Not Available - Not Available - Control and eradication programmes - Not applicable - Selective sampling	animal		N_A	Faeces	Not Available	8035	435	Salmonella Dublin	51
									Salmonella spp., unspecified	279
									Salmonella Typhimurium	105
	Dogs - Veterinary clinics - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling	animal		N_A	N_A	Not Available	519	12	Salmonella group B	4
									Salmonella group C	2
									Salmonella group D	4
									Salmonella group G	2
	Fish - Veterinary clinics - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling	animal		N_A	N_A	Not Available	49	4	Salmonella	2
									Salmonella group B	2
	Gallus gallus (fowl) - breeding flocks, unspecified - adult - Farm - Not Available - environmental sample - boot swabs - Control and eradication programmes - Official and industry sampling - Census	herd/flock	Y	N_A	Not Available	1689	34	Salmonella Bareilly	1	
								Salmonella Enteritidis	13	
								Salmonella Hadar	2	
								Salmonella Infantis	5	
								Salmonella Java	3	
								Salmonella Mbandaka	1	
								Salmonella Senftenberg	1	
								Salmonella spp., unspecified	4	
								Salmonella Typhimurium	4	
								Salmonella Agona	17	
								Salmonella Anatum	2	
								Salmonella Bovismorbificans	6	
								Salmonella Braenderup	1	
								Salmonella Brandenburg	1	
								Salmonella Derby	1	
								Salmonella Enteritidis	10	
								Salmonella group B	4	
								Salmonella group C	10	
								Salmonella group G	1	
								Salmonella Hadar	1	
								Salmonella Heidelberg	1	
								Salmonella Indiana	12	
								Salmonella Infantis	318	
								Salmonella Java	279	
	Salmonella Livingstone	31								
	Salmonella Mbandaka	22								
	Salmonella Minnesota	8								
	Salmonella Newport	2								
	Salmonella Ohio	32								
	Salmonella Panama	4								
	Salmonella Saintpaul	1								
	Salmonella spp., unspecified	46								
Salmonella Tennessee	2									
Salmonella Typhimurium	9									
Salmonella Typhimurium, monophasic	1									
Salmonella Virchow	23									
Salmonella Yoruba	1									
Gallus gallus (fowl) - laying hens - adult - Farm - Not Available - environmental sample - boot swabs - Control and eradication programmes - Official and industry sampling - Census	herd/flock	Y	N_A	Not Available	2365	67	Salmonella Anatum	4		
							Salmonella Bovismorbificans	1		

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling unit	N of flocks under control programme	Target verification	Sampling Details	Method	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Gallus gallus (fowl) - laying hens - adult - Farm - Not Available - environmental sample - boot swabs - Control and eradication programmes - Official and industry sampling - Census	herd/flock		Y	N_A	Not Available	2365	67	Salmonella Braenderup	3
									Salmonella Brandenburg	1
									Salmonella Enteritidis	30
									Salmonella group B	1
									Salmonella group C	1
									Salmonella group G	1
									Salmonella Havana	1
									Salmonella Infantis	5
									Salmonella Java	1
									Salmonella Livingstone	4
									Salmonella Mbandaka	1
									Salmonella spp., unspecified	11
									Salmonella Thompson	2
Goats - Farm - Netherlands - Not Available - Clinical investigations - HACCP and own check - Not specified		animal		N_A	Pathology	Not Available	358	0	Salmonella	0
Hedgehogs - zoo animal - Zoo - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling		animal		N_A	N_A	Not Available	48	5	Salmonella group D	5
Lion - zoo animals - Zoo - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling		animal		N_A	N_A	Not Available	2	1	Salmonella group G	1
Monkeys - zoo animal - Zoo - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling		animal		N_A	N_A	Not Available	33	2	Salmonella group C	2
Parrots - Veterinary clinics - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling		animal		N_A	N_A	Not Available	1	1	Salmonella group B	1
Pigeons - Veterinary clinics - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling		animal		N_A	N_A	Not Available	15	3	Salmonella group B	3
Pigs - fattening pigs - Farm - Not Available - animal sample - faeces - Monitoring - Official sampling - Objective sampling		herd/flock		N_A	N_A	ISO 6579:2002/Am d 1:2007	62	4	Salmonella Brandenburg	1
									Salmonella Infantis	1
									Salmonella Typhimurium, monophasic	2
Pigs - fattening pigs - Farm - Not Available - animal sample - faeces - Surveillance - Official sampling - Objective sampling		herd/flock		N_A	N_A	ISO 6579:2002/Am d 1:2007	66	4	Salmonella Brandenburg	1
									Salmonella Infantis	1
									Salmonella Typhimurium, monophasic	2
Pigs - fattening pigs - Farm - Not Available - Not Available - Monitoring - active - Industry sampling - Not specified		animal		N_A	N_A	Not Available	1867	36	Salmonella spp., unspecified	36
Raccoons - Zoo - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling		animal		N_A	N_A	Not Available	49	1	Salmonella group B	1
Reptiles - farmed - Veterinary clinics - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling		animal		N_A	N_A	Not Available	19	5	Salmonella	5
Sheep - Farm - Netherlands - Not Available - Clinical investigations - HACCP and own check - Not specified		animal		N_A	Pathology	Not Available	376	1	Salmonella Typhimurium	1
Solipeds, domestic - horses - Farm - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling		animal		N_A	N_A	Not Available	284	13	Salmonella group B	9
									Salmonella group C	4
Turkeys - fattening flocks - before slaughter - Farm - Not Available - environmental sample - boot swabs - Control and eradication programmes - Official and industry sampling - Census		herd/flock		Y	N_A	Not Available	560	5	Salmonella Brandenburg	1
									Salmonella Java	1
									Salmonella Saintpaul	3

Table Salmonella:SALMONELLA in food

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling unit	Sample weight	Sample weight unit	Sampling Details	Method	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Cheeses made from cows' milk - fresh - made from pasteurised milk - Processing plant - Netherlands - food sample - Surveillance - Official sampling - Objective sampling	batch (food/feed)	25	Gram	objective sampling by COKZ for export certification	Detection method of microorganisms	16	0	Salmonella	0
	Cheeses made from cows' milk - fresh - made from raw or low heat-treated milk - Farm - Netherlands - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/feed)	25	Gram	N_A	Detection method of microorganisms	6	0	Salmonella	0
	Cheeses made from cows' milk - hard - made from pasteurised milk - Processing plant - Netherlands - food sample - Surveillance - Official sampling - Objective sampling	batch (food/feed)	25	Gram	N_A	Detection method of microorganisms	129	0	Salmonella	0
					objective sampling by COKZ for export certification	Detection method of microorganisms	652	0	Salmonella	0
	Cheeses made from cows' milk - hard - made from raw or low heat-treated milk - Farm - Netherlands - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/feed)	25	Gram	N_A	Detection method of microorganisms	410	2	Salmonella enterica subsp. enterica rough	2
	Cheeses made from cows' milk - hard - made from raw or low heat-treated milk - Processing plant - Netherlands - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/feed)	25	Gram	5x25	Detection method of microorganisms	82	0	Salmonella	0
	Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - Farm - Netherlands - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/feed)	25	Gram	N_A	Detection method of microorganisms	37	0	Salmonella	0
	Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - Farm - Netherlands - food sample - Surveillance - Official sampling - Objective sampling	batch (food/feed)	25	Gram	objective sampling by COKZ for export certification	Detection method of microorganisms	21	0	Salmonella	0
	Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - Processing plant - Netherlands - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/feed)	25	Gram	5x25	Detection method of microorganisms	24	0	Salmonella	0
	Cheeses, made from unspecified milk or other animal milk - spreadable - Processing plant - Netherlands - food sample - Surveillance - Official sampling - Objective sampling	batch (food/feed)	25	Gram	objective sampling by COKZ for export certification	Detection method of microorganisms	133	0	Salmonella	0
	Crustaceans - lobsters - cooked - Processing plant - Not Available - food sample - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002/Am d 1:2007	6	0	Salmonella	0
	Crustaceans - shrimps - Border Control Posts - Not Available - food sample - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002/Am d 1:2007	104	3	Salmonella Javiana	1
									Salmonella Virchow	1
									Salmonella Weltevreden	1
	Crustaceans - shrimps - cooked - Processing plant - Not Available - food sample - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002/Am d 1:2007	1	0	Salmonella	0
	Crustaceans - shrimps - Processing plant - Not Available - food sample - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002/Am d 1:2007	11	0	Salmonella	0
	Dairy products (excluding cheeses) - butter - made from raw or low heat-treated milk - Farm - Netherlands - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/feed)	25	Gram	N_A	Detection method of microorganisms	10	0	Salmonella	0
	Dairy products (excluding cheeses) - butter - Processing plant - Netherlands - food sample - Surveillance - Official sampling - Objective sampling	batch (food/feed)	25	Gram	objective sampling by COKZ for export certification	Detection method of microorganisms	51	0	Salmonella	0
	Dairy products (excluding cheeses) - cheese analogue - Processing plant - Netherlands - food sample - Surveillance - Official sampling - Objective sampling	batch (food/feed)	25	Gram	objective sampling by COKZ for export certification	Detection method of microorganisms	55	0	Salmonella	0
	Dairy products (excluding cheeses) - chocolate milk - Processing plant - Netherlands - food sample - Surveillance - Official sampling - Objective sampling	batch (food/feed)	25	Gram	objective sampling by COKZ for export certification	Detection method of microorganisms	5	0	Salmonella	0

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling unit	Sample weight	Sample weight unit	Sampling Details	Method	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Dairy products (excluding cheeses) - chocolate milk - Processing plant - Netherlands - food sample - Surveillance - Official sampling - Objective sampling	batch (food/fee d)	25	Millilitre	objective sampling by COKZ for export certification	Detection method of microorganisms	7	0	Salmonella	0
	Dairy products (excluding cheeses) - cream - Processing plant - Netherlands - food sample - Surveillance - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	objective sampling by COKZ for export certification	Detection method of microorganisms	21	0	Salmonella	0
	Dairy products (excluding cheeses) - dairy products, not specified - made from pasteurised milk - Processing plant - Netherlands - food sample - Surveillance - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	objective sampling by COKZ for export certification	Detection method of microorganisms	20	0	Salmonella	0
				Millilitre	objective sampling by COKZ for export certification	Detection method of microorganisms	62	0	Salmonella	0
	Dairy products (excluding cheeses) - fermented dairy products - Farm - Netherlands - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	N_A	Detection method of microorganisms	13	0	Salmonella	0
				Millilitre	N_A	Detection method of microorganisms	6	0	Salmonella	0
	Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - Farm - Netherlands - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	N_A	Detection method of microorganisms	198	0	Salmonella	0
	Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - Processing plant - Netherlands - food sample - Surveillance - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	objective sampling by COKZ for export certification	Detection method of microorganisms	19	0	Salmonella	0
	Dairy products (excluding cheeses) - milk powder and whey powder - Processing plant - Netherlands - food sample - Surveillance - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	objective sampling by COKZ for export certification	Detection method of microorganisms	503	0	Salmonella	0
				30	Gram	objective sampling by COKZ for export certification	320	0	Salmonella	0
	Fish (food) - Border Control Posts - Not Available - food sample - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	ISO 6579:2002/Am d 1:2007	195	1	Salmonella Minnesota	1
	Foodstuffs intended for special nutritional uses - dietary foods for special medical purposes - Processing plant - Netherlands - food sample - Surveillance - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	objective sampling by COKZ for export certification	Detection method of microorganisms	27	0	Salmonella	0
	Foodstuffs intended for special nutritional uses - dried dietary foods for special medical purposes intended for infants below 6 months - Processing plant - Netherlands - food sample - Surveillance - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	objective sampling by COKZ for export certification	Detection method of microorganisms	39	0	Salmonella	0
	Foodstuffs intended for special nutritional uses - ready-to-eat - Wholesale - Not Available - food sample - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	ISO 6579:2002/Am d 1:2007	175	1	Salmonella Benfica	1
	Infant formula - dried - intended for infants below 6 months - Processing plant - Netherlands - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	10x 25g	Detection method of microorganisms	29	0	Salmonella	0
					N_A	Detection method of microorganisms	81	0	Salmonella	0
	Infant formula - dried - intended for infants below 6 months - Processing plant - Netherlands - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	10x 25g	Detection method of microorganisms	24	0	Salmonella	0
					N_A	Detection method of microorganisms	46	0	Salmonella	0

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling unit	Sample weight	Sample weight unit	Sampling Details	Method	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Infant formula - dried - Processing plant - Netherlands - food sample - Surveillance - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	objective sampling by COKZ for export certification	Detection method of microorganisms	7	0	Salmonella	0
	Live bivalve molluscs - mussels - Processing plant - Not Available - food sample - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	ISO 6579:2002/Am d 1:2007	58	0	Salmonella	0
	Live bivalve molluscs - mussels - Retail - Not Available - food sample - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	ISO 6579:2002/Am d 1:2007	67	1	Salmonella Typhimurium	1
	Live bivalve molluscs - oysters - Processing plant - Not Available - food sample - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	ISO 6579:2002/Am d 1:2007	64	0	Salmonella	0
	Live bivalve molluscs - unspecified - Processing plant - Not Available - food sample - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	ISO 6579:2002/Am d 1:2007	28	0	Salmonella	0
	Meat from bovine animals - carcase - Slaughterhouse - Not Available - food sample - carcase swabs - Surveillance - based on Regulation 2073 - Official, based on Regulation 2019/627 - Objective sampling	single (food/fee d)	400	Square centimetre	N_A	ISO 6579:2002/Am d 1:2007	101	2	Salmonella Dublin	1
									Salmonella Indiana	1
		slaughte r animal batch	400	Square centimetre	N_A	ISO 6579:2002/Am d 1:2007	64	7	Salmonella Dublin	3
									Salmonella Montevideo	1
									Salmonella spp., unspecified	3
	Meat from bovine animals - carcase - Slaughterhouse - Not Available - food sample - carcase swabs - Surveillance - Industry sampling - Objective sampling	slaughte r animal batch	100	Square centimetre	N_A	Not Available	2464	6	Salmonella spp., unspecified	6
	Meat from bovine animals - fresh - Border Control Posts - Not Available - food sample - meat - Monitoring - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	n=5	ISO 6579:2002/Am d 1:2007	10	0	Salmonella	0
	Meat from bovine animals - fresh - Retail - Not Available - food sample - meat - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	ISO 6579:2002/Am d 1:2007	495	0	Salmonella	0
	Meat from bovine animals - meat preparation - intended to be eaten cooked - Retail - Not Available - food sample - meat - Monitoring - Official sampling - Objective sampling	single (food/fee d)	10	Gram	N_A	ISO 6579:2002/Am d 1:2007	151	4	Salmonella Dublin	3
									Salmonella Enteritidis	1
	Meat from bovine animals - meat preparation - intended to be eaten raw - Retail - Not Available - food sample - meat - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	ISO 6579:2002/Am d 1:2007	304	0	Salmonella	0
	Meat from broilers (Gallus gallus) - carcase - chilled - Slaughterhouse - Not Available - food sample - neck skin - Surveillance - based on Regulation 2073 - Official, based on Regulation 2019/627 - Objective sampling	slaughte r animal batch	25	Gram	N_A	ISO 6579:2002/Am d 1:2007	285	41	Salmonella Indiana	6
									Salmonella Infantis	21
									Salmonella Minnesota	1
									Salmonella Paratyphi	13
	Meat from broilers (Gallus gallus) - carcase - Slaughterhouse - Not Available - food sample - carcase swabs - Surveillance - Industry sampling - Objective sampling	slaughte r animal batch	100	Square centimetre	N_A	Not Available	2866	221	Salmonella Agona	3
									Salmonella Anatum	1
									Salmonella Corvallis	1
									Salmonella Enteritidis	1
									Salmonella group B	1
									Salmonella group C1	1
									Salmonella Indiana	19
									Salmonella Infantis	103
									Salmonella Java	82
									Salmonella spp., unspecified	1
									Salmonella Virchow	8
	Meat from broilers (Gallus gallus) - carcase - spent hens - Slaughterhouse - Not Available - food sample - carcase swabs - Surveillance - Industry sampling - Objective sampling	slaughte r animal batch	100	Square centimetre	N_A	Not Available	230	32	Salmonella Enteritidis	17
									Salmonella Mbandaka	10
									Salmonella spp., unspecified	5
	Meat from broilers (Gallus gallus) - fresh - chilled - Processing plant - Not Available - food sample - meat - Monitoring - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	n=5	ISO 6579:2002/Am d 1:2007	25	6	Salmonella Infantis	4
									Salmonella Paratyphi	1
									Salmonella spp., unspecified	1
	Meat from broilers (Gallus gallus) - fresh - chilled - Retail - Not Available - food sample - meat - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	ISO 6579:2002/Am d 1:2007	286	11	Salmonella Infantis	8
									Salmonella Paratyphi	1
									Salmonella Virchow	2
	Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - Border Control Posts - Not Available - food sample - Monitoring - Official sampling - Objective sampling	single (food/fee d)	25	Gram	n=5	ISO 6579:2002/Am d 1:2007	38	1	Salmonella Agona	1

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling unit	Sample weight	Sample weight unit	Sampling Details	Method	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - Processing plant - Not Available - food sample - meat - Monitoring - Official sampling - Objective sampling	batch (food/feed)	25	Gram	n=5	ISO 6579:2002/Am d 1:2007	22	5	Salmonella Infantis	2
									Salmonella Paratyphi	3
	Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - Retail - Not Available - food sample - meat - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002/Am d 1:2007	298	13	Salmonella Infantis	11
									Salmonella Paratyphi	1
									Salmonella Virchow	1
	Meat from broilers (Gallus gallus) - meat products - non-ready-to-eat - Border Control Posts - Not Available - food sample - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	n=5	ISO 6579:2002/Am d 1:2007	17	0	Salmonella	0
	Meat from farmed game - ratites - fresh - frozen - Border Control Posts - Not Available - food sample - meat - Monitoring - Official sampling - Objective sampling	batch (food/feed)	25	Gram	n=5	ISO 6579:2002/Am d 1:2007	2	1	Salmonella enterica, subspecies diarizonae	1
	Meat from goat - carcass - Slaughterhouse - Not Available - food sample - carcass swabs - Surveillance - based on Regulation 2073 - Official, based on Regulation 2019/627 - Objective sampling	slaughter animal batch	400	Square centimetre	N_A	ISO 6579:2002/Am d 1:2007	24	1	Salmonella enterica, subspecies diarizonae	1
	Meat from goat - fresh - Retail - Not Available - food sample - meat - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002/Am d 1:2007	2	0	Salmonella	0
	Meat from horse - carcass - Slaughterhouse - Not Available - food sample - carcass swabs - Surveillance - Industry sampling - Objective sampling	slaughter animal batch	100	Square centimetre	N_A	Not Available	20	0	Salmonella	0
	Meat from other animal species or not specified - carcass - Slaughterhouse - Not Available - food sample - carcass swabs - Surveillance - Industry sampling - Objective sampling	slaughter animal batch	100	Square centimetre	N_A	Not Available	65	0	Salmonella	0
	Meat from other animal species or not specified - fresh - frozen - Border Control Posts - Not Available - food sample - meat - Monitoring - Official sampling - Objective sampling	batch (food/feed)	25	Gram	n=5	ISO 6579:2002/Am d 1:2007	2	2	Salmonella Newport	1
									Salmonella Potsdam	1
	Meat from other poultry species - carcass - Slaughterhouse - Not Available - food sample - carcass swabs - Surveillance - Industry sampling - Objective sampling	slaughter animal batch	100	Square centimetre	N_A	Not Available	265	0	Salmonella	0
	Meat from pig - carcass - Slaughterhouse - Not Available - food sample - carcass swabs - Surveillance - based on Regulation 2073 - Industry sampling - Objective sampling	single (food/feed)	100	Square centimetre	N_A	Not Available	5400	139	Salmonella spp., unspecified	139
	Meat from pig - carcass - Slaughterhouse - Not Available - food sample - carcass swabs - Surveillance - based on Regulation 2073 - Official, based on Regulation 2019/627 - Objective sampling	slaughter animal batch	400	Square centimetre	N_A	ISO 6579:2002/Am d 1:2007	234	12	Salmonella Bovismorbificans	1
									Salmonella Brandenburg	2
									Salmonella Derby	3
									Salmonella spp., unspecified	3
									Salmonella Typhimurium, monophasic	3
	Meat from pig - carcass - Slaughterhouse - Not Available - Not Available - Surveillance - based on Regulation 2073 - Industry sampling - Not specified	slaughter animal batch	100	Square centimetre	N_A	ISO 6579-1:2017 Salmonella	38774	15509	Salmonella spp., unspecified	15,509
	Meat from pig - fresh - Retail - Netherlands - food sample - meat - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002/Am d 1:2007	286	3	Salmonella Derby	1
									Salmonella Typhimurium, monophasic	2
	Meat from pig - meat preparation - intended to be eaten cooked - Retail - Not Available - food sample - meat - Monitoring - Official sampling - Objective sampling	single (food/feed)	10	Gram	N_A	ISO 6579:2002/Am d 1:2007	152	2	Salmonella Typhimurium, monophasic	2
	Meat from sheep - carcass - Slaughterhouse - Not Available - food sample - carcass swabs - Surveillance - based on Regulation 2073 - Official, based on Regulation 2019/627 - Objective sampling	slaughter animal batch	400	Square centimetre	N_A	ISO 6579:2002/Am d 1:2007	86	7	Salmonella Dublin	1
									Salmonella enterica, subspecies diarizonae	5
									Salmonella spp., unspecified	1
	Meat from sheep - fresh - Border Control Posts - Not Available - food sample - meat - Monitoring - Official sampling - Objective sampling	batch (food/feed)	25	Gram	n=5	ISO 6579:2002/Am d 1:2007	9	0	Salmonella	0
	Meat from sheep - fresh - Retail - Netherlands - food sample - meat - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002/Am d 1:2007	245	2	Salmonella enterica, subspecies diarizonae	1
									Salmonella Infantis	1
	Meat from turkey - fresh - chilled - Retail - Not Available - food sample - meat - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002/Am d 1:2007	21	0	Salmonella	0
	Meat from turkey - meat preparation - intended to be eaten cooked - Retail - Not Available - food sample - meat - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002/Am d 1:2007	6	0	Salmonella	0

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling unit	Sample weight	Sample weight unit	Sampling Details	Method	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Milk from other animal species or unspecified - raw milk - intended for direct human consumption - Farm - Netherlands - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/feed)	25	Millilitre	milk from camels	Detection method of microorganisms	4	0	Salmonella	0
					milk from donkeys	Detection method of microorganisms	2	0	Salmonella	0
					milk from horses	Detection method of microorganisms	20	0	Salmonella	0
	Milk, cows' - raw milk - intended for direct human consumption - Farm - Netherlands - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/feed)	25	Millilitre	N_A	Detection method of microorganisms	4	0	Salmonella	0
	Milk, cows' - raw milk - intended for direct human consumption - Farm - Netherlands - food sample - Surveillance - Official sampling - Objective sampling	batch (food/feed)	25	Gram	N_A	Detection method of microorganisms	101	0	Salmonella	0
	Milk, cows' - raw milk - intended for direct human consumption - Retail - Not Available - food sample - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002/Am d 1:2007	101	0	Salmonella	0
	Milk, goats' - raw milk - intended for direct human consumption - Farm - Netherlands - food sample - Surveillance - Official sampling - Objective sampling	batch (food/feed)	25	Gram	N_A	Detection method of microorganisms	1	0	Salmonella	0
	Milk, sheep's - raw milk - Farm - Netherlands - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/feed)	25	Millilitre	N_A	Detection method of microorganisms	2	0	Salmonella	0
	Molluscan shellfish - cooked - Processing plant - Not Available - food sample - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002/Am d 1:2007	17	0	Salmonella	0
	Mushrooms - Retail - Not Available - food sample - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002/Am d 1:2007	81	0	Salmonella	0
	Spices and herbs - dried - Border Control Posts - Not Available - food sample - Monitoring - Official sampling - Objective sampling	batch (food/feed)	25	Gram	n=5	ISO 6579:2002/Am d 1:2007	52	2	Salmonella Mountpleasant	1
									Salmonella Orion	1
	Spices and herbs - dried - Wholesale - Not Available - food sample - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	n=5	ISO 6579:2002/Am d 1:2007	37	2	Salmonella Chester	1
									Salmonella Enteritidis	1
	Spices and herbs - fresh - Wholesale - Not Available - food sample - Monitoring - Official sampling - Objective sampling	batch (food/feed)	25	Gram	n=5	ISO 6579:2002/Am d 1:2007	60	2	Salmonella Bredeney	1
									Salmonella Typhimurium	1
	Vegetables - leaves - Retail - Not Available - food sample - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002/Am d 1:2007	180	0	Salmonella	0
	Vegetables - leaves - Wholesale - Not Available - food sample - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002/Am d 1:2007	19	0	Salmonella	0
	Vegetables - pre-cut - non-ready-to-eat - Retail - Not Available - food sample - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002/Am d 1:2007	258	0	Salmonella	0
	Vegetables - pre-cut - ready-to-eat - Retail - Not Available - food sample - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002/Am d 1:2007	1220	1	Salmonella enterica, subspecies diarizonae	1
	Water - Processing plant - Not Available - Not Available - Monitoring - HACCP and own check - Objective sampling	batch (food/feed)	25	Gram	N_A	Not Available	2	0	Salmonella	0

Table Salmonella:SALMONELLA in feed

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling unit	Sample weight	Sample weight unit	Sampling Details	Method	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Compound feedingstuffs for cattle - process control - Processing plant - Not Available - Not Available - Monitoring - HACCP and own check - Objective sampling	batch (food/feed)	25	Gram	N.A	Not Available	1931	7	Salmonella	4
									Salmonella Agona	1
									Salmonella Cerro	1
									Salmonella Mbandaka	1
	Compound feedingstuffs for horses - process control - Processing plant - Not Available - Not Available - Monitoring - HACCP and own check - Objective sampling	batch (food/feed)	25	Gram	N.A	Not Available	77	0	Salmonella	0
	Compound feedingstuffs for pigs - process control - Processing plant - Not Available - Not Available - Monitoring - HACCP and own check - Objective sampling	batch (food/feed)	25	Gram	N.A	Not Available	1793	2	Salmonella	2
	Compound feedingstuffs for poultry (non specified) - process control - Processing plant - Not Available - Not Available - Monitoring - HACCP and own check - Objective sampling	batch (food/feed)	25	Gram	N.A	Not Available	306	4	Salmonella Rissen	4
	Compound feedingstuffs for poultry, breeders - process control - Processing plant - Not Available - Not Available - Monitoring - HACCP and own check - Objective sampling	batch (food/feed)	25	Gram	N.A	Not Available	598	0	Salmonella	0
	Compound feedingstuffs for poultry, broilers - process control - Processing plant - Not Available - Not Available - Monitoring - HACCP and own check - Objective sampling	batch (food/feed)	25	Gram	N.A	Not Available	1639	1	Salmonella	1
	Compound feedingstuffs for poultry, laying hens - process control - Processing plant - Not Available - Not Available - Monitoring - HACCP and own check - Objective sampling	batch (food/feed)	25	Gram	N.A	Not Available	3627	17	Salmonella	3
									Salmonella 4,[5],12:i:-	1
									Salmonella Cubana	1
									Salmonella group B	1
									Salmonella Mbandaka	1
									Salmonella Rissen	7
									Salmonella Typhimurium	3
	Compound feedingstuffs for rabbits - process control - Processing plant - Not Available - Not Available - Monitoring - HACCP and own check - Objective sampling	batch (food/feed)	25	Gram	N.A	Not Available	13	0	Salmonella	0
	Compound feedingstuffs for sheep - process control - Processing plant - Not Available - Not Available - Monitoring - HACCP and own check - Objective sampling	batch (food/feed)	25	Gram	N.A	Not Available	43	2	Salmonella	2
	Compound feedingstuffs for turkeys - process control - Processing plant - Not Available - Not Available - Monitoring - HACCP and own check - Objective sampling	batch (food/feed)	25	Gram	N.A	Not Available	24	0	Salmonella	0
	Compound feedingstuffs, not specified - process control - Processing plant - Not Available - Not Available - Monitoring - HACCP and own check - Objective sampling	batch (food/feed)	25	Gram	N.A	Not Available	222	0	Salmonella	0
	Feed material of cereal grain origin - barley derived - Processing plant - Not Available - Not Available - Monitoring - HACCP and own check - Objective sampling	batch (food/feed)	25	Gram	N.A	Not Available	40	0	Salmonella	0
	Feed material of cereal grain origin - maize derived - Processing plant - Not Available - Not Available - Monitoring - HACCP and own check - Objective sampling	batch (food/feed)	25	Gram	N.A	Not Available	401	6	Salmonella	2
									Salmonella Cubana	1
									Salmonella group B	1
									Salmonella Mbandaka	1
									Salmonella Rissen	1
	Feed material of cereal grain origin - oat derived - Processing plant - Not Available - Not Available - Monitoring - HACCP and own check - Objective sampling	batch (food/feed)	25	Gram	N.A	Not Available	16	0	Salmonella	0
	Feed material of cereal grain origin - other cereal grain derived - by-products of brewing and distilling - Processing plant - Not Available - Not Available - Monitoring - HACCP and own check - Objective sampling	batch (food/feed)	25	Gram	N.A	Not Available	65	0	Salmonella	0
	Feed material of cereal grain origin - other cereal grain derived - Processing plant - Not Available - Not Available - Monitoring - HACCP and own check - Objective sampling	batch (food/feed)	25	Gram	N.A	Not Available	3	0	Salmonella	0
	Feed material of cereal grain origin - Processing plant - Not Available - Not Available - Monitoring - HACCP and own check - Objective sampling	batch (food/feed)	25	Gram	N.A	Not Available	4	0	Salmonella	0
	Feed material of cereal grain origin - rice derived - Processing plant - Not Available - Not Available - Monitoring - HACCP and own check - Objective sampling	batch (food/feed)	25	Gram	N.A	Not Available	6	0	Salmonella	0

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling unit	Sample weight	Sample weight unit	Sampling Details	Method	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Feed material of cereal grain origin - wheat derived - Processing plant - Not Available - Not Available - Monitoring - HACCP and own check - Objective sampling	batch (food/feed)	25	Gram	N.A	Not Available	206	2	Salmonella Bovismorbificans	2
	Feed material of land animal origin - blood products - Processing plant - Not Available - Not Available - Monitoring - HACCP and own check - Objective sampling	batch (food/feed)	25	Gram	N.A	Not Available	1	0	Salmonella	0
	Feed material of land animal origin - dairy products - Processing plant - Not Available - Not Available - Monitoring - HACCP and own check - Objective sampling	batch (food/feed)	25	Gram	N.A	Not Available	9	0	Salmonella	0
	Feed material of land animal origin - dairy products - whey powder - Processing plant - Not Available - Not Available - Monitoring - HACCP and own check - Objective sampling	batch (food/feed)	25	Gram	N.A	Not Available	56	0	Salmonella	0
	Feed material of land animal origin - egg powder - Processing plant - Not Available - Not Available - Monitoring - HACCP and own check - Objective sampling	batch (food/feed)	25	Gram	N.A	Not Available	2	0	Salmonella	0
	Feed material of land animal origin - protein meal - Processing plant - Not Available - Not Available - Monitoring - HACCP and own check - Objective sampling	batch (food/feed)	25	Gram	N.A	Not Available	52	0	Salmonella	0
	Feed material of marine animal origin - other fish products - Processing plant - Not Available - Not Available - Monitoring - HACCP and own check - Objective sampling	batch (food/feed)	25	Gram	N.A	Not Available	8	0	Salmonella	0
	Feed material of oil seed or fruit origin - linseed derived - Processing plant - Not Available - Not Available - Monitoring - HACCP and own check - Objective sampling	batch (food/feed)	25	Gram	N.A	Not Available	4	0	Salmonella	0
	Feed material of oil seed or fruit origin - other oil seeds derived - Processing plant - Not Available - Not Available - Monitoring - HACCP and own check - Objective sampling	batch (food/feed)	25	Gram	N.A	Not Available	2	0	Salmonella	0
	Feed material of oil seed or fruit origin - palm kernel derived - Processing plant - Not Available - Not Available - Monitoring - HACCP and own check - Objective sampling	batch (food/feed)	25	Gram	N.A	Not Available	12	0	Salmonella	0
	Feed material of oil seed or fruit origin - rape seed derived - Processing plant - Not Available - Not Available - Monitoring - HACCP and own check - Objective sampling	batch (food/feed)	25	Gram	N.A	Not Available	509	19	Salmonella	3
									Salmonella Agona	1
									Salmonella Mbandaka	13
									Salmonella Rissen	2
	Feed material of oil seed or fruit origin - soya (bean) derived - Processing plant - Not Available - Not Available - Monitoring - HACCP and own check - Objective sampling	batch (food/feed)	25	Gram	N.A	Not Available	932	10	Salmonella	2
									Salmonella Fresno	1
									Salmonella group E	1
									Salmonella Mbandaka	1
									Salmonella Montevideo	1
									Salmonella Senftenberg	1
									Salmonella Tennessee	1
									Salmonella Typhimurium	2
	Feed material of oil seed or fruit origin - sunflower seed derived - Processing plant - Not Available - Not Available - Monitoring - HACCP and own check - Objective sampling	batch (food/feed)	25	Gram	N.A	Not Available	318	0	Salmonella	0
	Other feed material - legume seeds and similar products - Processing plant - Not Available - Not Available - Monitoring - HACCP and own check - Objective sampling	batch (food/feed)	25	Gram	N.A	Not Available	12	0	Salmonella	0
	Other feed material - plants - Processing plant - Not Available - Not Available - Monitoring - HACCP and own check - Objective sampling	batch (food/feed)	25	Gram	N.A	Not Available	11	0	Salmonella	0
	Other feed material - Processing plant - Not Available - Not Available - Monitoring - HACCP and own check - Objective sampling	batch (food/feed)	25	Gram	N.A	Not Available	56	0	Salmonella	0
	Other feed material - sugarcane and byproducts - Processing plant - Not Available - Not Available - Monitoring - HACCP and own check - Objective sampling	batch (food/feed)	25	Gram	N.A	Not Available	2	0	Salmonella	0
	Pet food - Processing plant - Not Available - Not Available - Monitoring - HACCP and own check - Objective sampling	batch (food/feed)	25	Gram	N.A	Not Available	11	0	Salmonella	0
	Premixtures - process control - Processing plant - Not Available - Not Available - Monitoring - HACCP and own check - Objective sampling	batch (food/feed)	25	Gram	N.A	Not Available	60	0	Salmonella	0

Table Staphylococcus:STAPHYLOCOCCUS AUREUS METICILLIN RESISTANT (MRSA) in animal

Area of sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling unit	Sample weight	Sample weight unit	Sampling Details	Method	Total Units Tested Attribute	Total Units Positive Attribute	Zoonoses	CC	Spa type ML	Units positive
Not Available	Birds - pet animals - Veterinary clinics - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling	animal		Not Available	N_A	MRSA 1-step isolation method-excluding the selective enrichment step (similar but not identical to the EURL-AR protocol 2018)	1	1	Methicillin resistant Staphylococcus aureus (MRSA)			1
	Cats - Veterinary clinics - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling	animal		Not Available	N_A	MRSA 1-step isolation method-excluding the selective enrichment step (similar but not identical to the EURL-AR protocol 2018)	1569	12	Methicillin resistant Staphylococcus aureus (MRSA)			12
	Dogs - Veterinary clinics - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling	animal		Not Available	N_A	MRSA 1-step isolation method-excluding the selective enrichment step (similar but not identical to the EURL-AR protocol 2018)	1363	6	Methicillin resistant Staphylococcus aureus (MRSA)			6
	Pigs - fattening pigs - Farm - Not Available - environmental sample - dust - Surveillance - Official sampling - Objective sampling	herd/flock	25	Gram	dust from pig stables	MRSA 1-step isolation method-excluding the selective enrichment step (similar but not identical to the EURL-AR protocol 2018)	62	49	Methicillin resistant Staphylococcus aureus (MRSA)			49
	Solipeds, domestic - horses - Farm - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling	animal		Not Available	N_A	MRSA 1-step isolation method-excluding the selective enrichment step (similar but not identical to the EURL-AR protocol 2018)	772	42	Methicillin resistant Staphylococcus aureus (MRSA)			42

Table Staphylococcus:STAPHYLOCOCCUS AUREUS METICILLIN RESISTANT (MRSA) in food

Area of sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling unit	Sample weight	Sample weight unit	Sampling Details	Method	Total Units Tested Attribute	Total Units Positive Attribute	Zoonoses	CC	Spa type ML	Units positive
Not Available	Meat from bovine animals - fresh - Retail - Not Available - food sample - meat - Monitoring - Official sampling - Objective sampling	single (food/fe ed)	25	Gram	N_A	MRSA 1-step isolation method-excluding the selective enrichment step (similar but not identical to the EURL-AR protocol 2018)	52	2	Methicillin resistant Staphylococcus aureus (MRSA)			2
	Meat from broilers (Gallus gallus) - fresh - chilled - Retail - Not Available - food sample - meat - Monitoring - Official sampling - Objective sampling	single (food/fe ed)	25	Gram	N_A	MRSA 1-step isolation method-excluding the selective enrichment step (similar but not identical to the EURL-AR protocol 2018)	234	36	Methicillin resistant Staphylococcus aureus (MRSA)			36
	Meat from deer (venison) - fresh - frozen - Border Control Posts - Not Available - food sample - meat - Monitoring - Official sampling - Objective sampling	batch (food/fe ed)	25	Gram	n=5	MRSA 1-step isolation method-excluding the selective enrichment step (similar but not identical to the EURL-AR protocol 2018)	1	0	Methicillin resistant Staphylococcus aureus (MRSA)			0
	Meat from other animal species or not specified - Border Control Posts - Not Available - food sample - meat - Monitoring - Official sampling - Objective sampling	batch (food/fe ed)	25	Gram	n=5	MRSA 1-step isolation method-excluding the selective enrichment step (similar but not identical to the EURL-AR protocol 2018)	3	0	Methicillin resistant Staphylococcus aureus (MRSA)			0
	Meat from pig - fresh - Retail - Not Available - food sample - meat - Monitoring - Official sampling - Objective sampling	single (food/fe ed)	25	Gram	N_A	MRSA 1-step isolation method-excluding the selective enrichment step (similar but not identical to the EURL-AR protocol 2018)	57	2	Methicillin resistant Staphylococcus aureus (MRSA)			2

Area of sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling unit	Sample weight	Sample weight unit	Sampling Details	Method	Total Units Tested	Total Units Positive	Zoonoses	CC	Spa type ML	Units positive
							Attribute	Attribute				
Not Available	Meat from turkey - fresh - chilled - Retail - Not Available - food sample - meat - Monitoring - Official sampling - Objective sampling	single (food/fe ed)	25	Gram	N_A	MRSA 1- step isolation method- excluding the selective enrichmen t step (similar but not identical to the EURL-AR protocol 2018)	14	5	Methicillin resistant Staphylococcus aureus (MRSA)			5

Table Toxoplasma:TOXOPLASMA in animal

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling Details	Method	Sampling unit	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Cats - Veterinary clinics - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling	N_A	Not Available	animal	122	25	Toxoplasma spp., unspecified	25
	Dogs - Veterinary clinics - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling	N_A	Not Available	animal	276	69	Toxoplasma spp., unspecified	69
	Goats - Farm - Netherlands - Not Available - Clinical investigations - HACCP and own check - Not specified	Pathology	Not Available	animal	358	0	Toxoplasma	0
	Sheep - Farm - Netherlands - Not Available - Clinical investigations - HACCP and own check - Not specified	Pathology	Not Available	animal	376	9	Toxoplasma spp., unspecified	9

Table Trichinella:TRICHINELLA in animal

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling Details	Method	Sampling unit	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Pigs - fattening pigs - raised under controlled housing conditions - Slaughterhouse - Not Available - animal sample - organ/tissue - Surveillance - Official sampling - Objective sampling	N_A	Not Available	animal	15970 021	0	Trichinella	0
	Solipeds, domestic - Slaughterhouse - Not Available - animal sample - organ/tissue - Surveillance - Official sampling - Objective sampling	N_A	Not Available	animal	1790	0	Trichinella	0
	Wild boars - wild - Slaughterhouse - Not Available - animal sample - organ/tissue - Surveillance - Official sampling - Objective sampling	N_A	Not Available	animal	4921	0	Trichinella	0

Table Vibrio:VIBRIO in food

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling unit	Sample weight	Sample weight unit	Sampling Details	Method	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Crustaceans - shrimps - cooked - Border Control Posts - Unknown - food sample - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N/A	Detection method of microorganism s	98	34	Vibrio cholerae	5
									Vibrio parahaemolyticus	29
	Fish (food) - Border Control Posts - Unknown - food sample - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N/A	Detection method of microorganism s	186	1	Vibrio cholerae	1
	Vegetables - leaves - Retail - Unknown - food sample - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N/A	Detection method of microorganism s	169	0	Vibrio	0
	Vegetables - leaves - Wholesale - Unknown - food sample - Monitoring - Official sampling - Objective sampling	batch (food/feed)	25	Gram	N/A	Detection method of microorganism s	19	0	Vibrio	0

Table Yersinia:YERSINIA in animal

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling Details	Method	Sampling unit	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Cats - Veterinary clinics - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling	N_A	Not Available	animal	15	1	Yersinia pseudotuberculosis	1
	Cattle (bovine animals) - Veterinary clinics - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling	Milk	Not Available	animal	7446	1	Yersinia, unspecified sp.	1
		Pathology	Not Available	animal	2326	3	Yersinia pseudotuberculosis	3
	Fish - Veterinary clinics - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling	N_A	Not Available	animal	49	2	Yersinia pseudotuberculosis	2
	Goats - Farm - Netherlands - Not Available - Clinical investigations - HACCP and own check - Not specified	Pathology	Not Available	animal	358	6	Yersinia, unspecified sp.	6
	Hares - Veterinary clinics - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling	N_A	Not Available	animal	15	9	Yersinia pseudotuberculosis	9
	Monkeys - zoo animal - Veterinary clinics - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling	N_A	Not Available	animal	3	3	Yersinia pseudotuberculosis	3
	Other animals - exotic pet animals - Veterinary clinics - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling	N_A	Not Available	animal	7	5	Yersinia pseudotuberculosis	5
	Pigs - breeding animals - unspecified - piglets - Farm - Not Available - Not Available - Clinical investigations - HACCP and own check - Suspect sampling	N_A	Not Available	animal	1867	0	Yersinia	0
	Raccoons - Veterinary clinics - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling	N_A	Not Available	animal	46	1	Yersinia enterocolitica	1
	Sheep - Farm - Netherlands - Not Available - Clinical investigations - HACCP and own check - Not specified	Pathology	Not Available	animal	376	1	Yersinia, unspecified sp.	1
	Squirrels - Veterinary clinics - Not Available - Not Available - Clinical investigations - Not applicable - Suspect sampling	N_A	Not Available	animal	4	2	Yersinia pseudotuberculosis	2

FOODBORNE OUTBREAKS TABLES

Foodborne Outbreaks: summarized data

when numbers referring to cases, hospitalized people and deaths are reported as unknown, they will be not included in the sum calculation

Causative agent	Food vehicle	Outbreak strenght							
		Strong				Weak			
		N outbreaks	N human cases	N hospitalized	N deaths	N outbreaks	N human cases	N hospitalized	N deaths
Bacillus cereus	Fish and fish products	1	3	0	0				
Campylobacter jejuni	Unknown					3	9	0	0
Campylobacter, unspecified sp.	Unknown					5	17	0	0
Listeria monocytogenes	Cheese	1	6	6	0				
	Fish and fish products	2	19	18	5				
Marine biotoxins	Fish and fish products	1	5	0	0				
Norovirus	Unknown					3	85	0	0
Salmonella Enteritidis	Mixed food	1	56	0	0				
	Unknown					2	9	4	0
Salmonella spp., unspecified	Unknown					1	3	0	0
Salmonella Typhimurium	Unknown					1	19	0	0
Shigella spp., unspecified	Unknown					1	4	0	0
Unknown	Unknown					537	1,673	0	0

Strong Foodborne Outbreaks: detailed data

Causative agent	H	AG	VT	Other Causative Agent	FBO nat. code	Outbreak type	Food vehicle	More food vehicle info	Nature of evidence	Setting	Place of origin of problem	Origin of food vehicle	Contributory factors	Comment	N outbreaks	N human cases	N hosp.	N deaths
Bacillus cereus	unk	Not Available	Not Available	Not Available	3370152	Household	Fish and fish products	tuna	Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent	Mobile retailer or market/street vendor	Mobile retailer or market/street vendor	Netherlands	Unknown	N_A	1	3	0	0
Listeria monocytogenes	unk	Not Available	Not Available	Not Available	29	General	Fish and fish products	trout fillet	Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans	Multiple places of exposure in one country	Retail	Netherlands	Other contributory factor	N_A	1	11	10	4
					30	General	Fish and fish products	eel	Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans	Multiple places of exposure in one country	Retail	Netherlands	Other contributory factor	N_A	1	8	8	1
					31	General	Cheese	soft cheese	Detection of causative agent in food chain or its environment - Detection of indistinguishable causative agent in humans	Multiple places of exposure in more than one country	Processing plant	Netherlands	Other contributory factor	also cases in Belgium (3), France (5), and Germany (10)	1	6	6	0
Marine biotoxins	unk	Not Available	Not Available	Not Available	3490062	General	Fish and fish products	red snapper	Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent	Household	Transport;Retail	India	Storage time/temperature abuse;Inadequate chilling	neurotoxins found were indicative for ciguatoxin	1	5	0	0

Causative agent	H	AG	VT	Other Causative Agent	FBO nat. code	Outbreak type	Food vehicle	More food vehicle info	Nature of evidence	Setting	Place of origin of problem	Origin of food vehicle	Contributory factors	Comment	N outbreaks	N human cases	N hosp.	N deaths
Salmonella Enteritidis	unk	Not Available	Not Available	Not Available	3557906	General	Mixed food	Turkish pizza	Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans;Analytical epidemiological evidence	Multiple places of exposure in one country	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Netherlands	Unknown	N_A	1	56	0	0

Weak Foodborne Outbreaks: detailed data

Causative agent	H	AG	VT	Other Causative Agent	FBO nat. code	Outbreak type	Food vehicle	More food vehicle info	Nature of evidence	Setting	Place of origin of problem	Origin of food vehicle	Contributory factors	Comment	N outbreaks	N human cases	N hosp.	N deaths
Campylobacter jejuni	unk	Not Available	Not Available	Not Available	N_A	Unknown	Unknown	N_A	Unknown	Not Available	Not Available	Not Available	Not Available	N_A	3	9	unk	0
Campylobacter, unspecified sp.	unk	Not Available	Not Available	Not Available	N_A	Unknown	Unknown	N_A	Unknown	Not Available	Not Available	Not Available	Not Available	N_A	5	17	unk	0
Norovirus	unk	Not Available	Not Available	Not Available	N_A	Unknown	Unknown	N_A	Unknown	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Unknown	Not Available	Unknown	N_A	3	85	unk	0
Salmonella Enteritidis	unk	Not Available	Not Available	Not Available	N_A	Household	Unknown	N_A	Unknown	Not Available	Not Available	Not Available	Not Available	N_A	2	9	4	0
Salmonella spp., unspecified	unk	Not Available	Not Available	Not Available	N_A	Household	Unknown	N_A	Unknown	Household	Household	Not Available	Unknown	N_A	1	3	0	0
Salmonella Typhimurium	unk	Not Available	Not Available	Not Available	N_A	General	Unknown	N_A	Unknown	Multiple places of exposure in one country	Unknown	Not Available	Unknown	N_A	1	19	unk	unk
Shigella spp., unspecified	unk	Not Available	Not Available	Not Available	N_A	Unknown	Unknown	N_A	Unknown	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Unknown	Not Available	Unknown	N_A	1	4	unk	unk
Unknown	unk	Not Available	Not Available	Not Available	N_A	Unknown	Unknown	N_A	Unknown	Not Available	Not Available	Not Available	Not Available	N_A	537	1,673	unk	unk

ANTIMICROBIAL RESISTANCE TABLES FOR CAMPYLOBACTER

Table Antimicrobial susceptibility testing of *Campylobacter coli* in Pigs - fattening pigs

Sampling Stage: Farm		Sampling Type: animal sample - faeces		Sampling Context: Surveillance			
Sampler: Official sampling		Sampling Strategy: Objective sampling		Programme Code: OTHER AMR MON			
Analytical Method:							
Country of Origin: Netherlands							
Sampling details:							
MIC	AM substance	Ciprofloxacin	Erythromycin	Gentamicin	Nalidixic acid	Streptomycin	Tetracycline
	ECOFF	0.5	8	2	16	4	2
	Lowest limit	0.12	1	0.12	1	0.25	0.5
	Highest limit	16	128	16	64	16	64
	N of tested isolates	45	45	45	45	45	45
	N of resistant isolates	5	0	1	5	32	38
	<=0.125	38		5			
	0.25	2		31			
	<=0.5						7
	0.5			8		4	
<=1		38					
1					8		
2		6		24	1		
4	2	1		15		1	
8	3			1	9		
16					21	1	
>16			1		2		
32						7	
64					3	12	
>64					2	17	

Table Antimicrobial susceptibility testing of Campylobacter coli in Meat from broilers (Gallus gallus) - fresh - chilled

Sampling Stage: Processing plant

Sampler: Official sampling

Analytical Method:

Country of Origin: Netherlands

Sampling details:

Sampling Type: food sample - meat

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER AMR MON

MIC	AM substance	Ciprofloxacin	Erythromycin	Gentamicin	Nalidixic acid	Streptomycin	Tetracycline
	ECOFF	0.5	8	2	16	4	2
	Lowest limit	0.12	1	0.12	1	0.25	0.5
	Highest limit	16	128	16	64	16	64
	N of tested isolates	1	1	1	1	1	1
	N of resistant isolates	1	0	0	1	0	1
0.25				1			
0.5						1	
<=1			1				
4		1					
16							1
64					1		

Table Antimicrobial susceptibility testing of Campylobacter coli in Meat from broilers (Gallus gallus) - fresh - chilled

Sampling Stage: Retail

Sampler: Official sampling

Analytical Method:

Country of Origin: European Union

Sampling details:

Sampling Type: food sample - meat

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER AMR MON

AM substance	Ciprofloxacin	Erythromycin	Gentamicin	Nalidixic acid	Streptomycin	Tetracycline
ECOFF	0.5	8	2	16	4	2
Lowest limit	0.12	1	0.12	1	0.25	0.5
Highest limit	16	128	16	64	16	64
N of tested isolates	15	15	15	15	15	15
MIC						
N of resistant isolates	14	3	0	14	3	10
<=0.125	1		6			
0.25			9			
<=0.5						5
0.5					7	
<=1		11				
1					5	
2	2	1				
4	1					
8	6			1		
16	2					
>16	3				3	
64				5		
>64				9		10
128		1				
>128		2				

Table Antimicrobial susceptibility testing of Campylobacter coli in Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked

Sampling Stage: Processing plant

Sampler: Official sampling

Analytical Method:

Country of Origin: Netherlands

Sampling details:

Sampling Type: food sample - meat

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER AMR MON

	AM substance	Ciprofloxacin	Erythromycin	Gentamicin	Nalidixic acid	Streptomycin	Tetracycline
	ECOFF	0.5	8	2	16	4	2
	Lowest limit	0.12	1	0.12	1	0.25	0.5
	Highest limit	16	128	16	64	16	64
	N of tested isolates	4	4	4	4	4	4
MIC	N of resistant isolates	4	0	0	4	2	2
0.25				4			
<=0.5							2
0.5						1	
<=1			4				
1						1	
4		1					
8		1					
16		1					
>16		1				2	
64					2		
>64					2		2

Table Antimicrobial susceptibility testing of Campylobacter coli in Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked

Sampling Stage: Retail

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: European Union

Sampling details:

AM substance	Ciprofloxacin	Erythromycin	Gentamicin	Nalidixic acid	Streptomycin	Tetracycline
	0.5	8	2	16	4	2
ECOFF	0.12	1	0.12	1	0.25	0.5
Lowest limit	16	128	16	64	16	64
Highest limit	13	13	13	13	13	13
N of tested isolates	8	0	0	8	1	4
N of resistant isolates						
MIC						
<=0.125	5		5			
<=0.25					3	
0.25			6			
<=0.5						9
0.5			2		6	
<=1		13		2		
1					3	
2	3			3		
4	3					
8	2					
>16					1	
64				5		1
>64				3		3

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

Sampling Stage: Slaughterhouse

Sampler: Official sampling

Analytical Method:

Country of Origin: Netherlands

Sampling details:

Sampling Type: animal sample - caecum

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: AMR MON

MIC	AM substance	Ciprofloxacin	Erythromycin	Gentamicin	Nalidixic acid	Streptomycin	Tetracycline
	ECOFF	0.5	8	2	16	4	2
	Lowest limit	0.12	1	0.12	1	0.25	0.5
	Highest limit	16	128	16	64	16	64
	N of tested isolates	60	60	60	60	60	60
	N of resistant isolates	55	1	0	55	6	37
<=0.125		3		9			
0.25		2		37			
<=0.5							20
0.5				14		13	
<=1			51				
1						34	3
2		4	6			7	
4		22	2		3		
8		16			2		
16		12					
>16		1				6	
64					3		8
>64					52		29
>128			1				

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

Sampling Stage: Slaughterhouse

Sampler: Official sampling

Analytical Method:

Country of Origin: Unknown

Sampling details:

Sampling Type: animal sample - caecum

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER AMR MON

MIC	AM substance	Ciprofloxacin	Erythromycin	Gentamicin	Nalidixic acid	Streptomycin	Tetracycline
	ECOFF	0.5	8	2	16	4	2
	Lowest limit	0.12	1	0.12	1	0.25	0.5
	Highest limit	16	128	16	64	16	64
	N of tested isolates	107	107	107	107	107	107
	N of resistant isolates	90	3	1	90	6	56
<=0.125		11		17			
0.25		5		59			
<=0.5							50
0.5		1		29		20	
<=1			84				
1				1		71	1
2		1	14		2	10	
4		28	4		4		
8		42	2	1	10		
16		16			1	1	
>16		3				5	
64			1		6		6
>64					84		50
>128			2				

Table Antimicrobial susceptibility testing of Campylobacter coli in Meat from broilers (Gallus gallus) - carcase - chilled

Sampling Stage: Slaughterhouse

Sampler: Official, based on Regulation 2019/627

Analytical Method:

Country of Origin: Netherlands

Sampling details:

Sampling Type: food sample - meat

Sampling Strategy: Objective sampling

Sampling Context: Surveillance - based on Regulation 2073

Programme Code: OTHER AMR MON

MIC	AM substance	Ciprofloxacin	Erythromycin	Gentamicin	Nalidixic acid	Streptomycin	Tetracycline
	ECOFF	0.5	8	2	16	4	2
	Lowest limit	0.12	1	0.12	1	0.25	0.5
	Highest limit	16	128	16	64	16	64
	N of tested isolates	13	13	13	13	13	13
	N of resistant isolates	11	0	0	11	1	8
	<=0.125	2		13			
	<=0.25					4	
	<=0.5						5
	0.5					7	
	<=1		13				
	1					1	
	2				1		
	4	2			1		
	8	7					
	16	1					
	>16	1				1	
	32						2
	64				2		1
	>64				9		5

Table Antimicrobial susceptibility testing of Campylobacter coli in Vegetables - pre-cut - ready-to-eat

Sampling Stage: Retail

Sampler: Official sampling

Analytical Method:

Country of Origin: Unknown

Sampling details:

Sampling Type: food sample

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER AMR MON

AM substance	Ciprofloxacin	Erythromycin	Gentamicin	Nalidixic acid	Streptomycin	Tetracycline	
	ECOFF	0.5	8	2	16	4	2
	Lowest limit	0.12	1	0.12	1	0.25	0.5
	Highest limit	16	128	16	64	16	64
	N of tested isolates	1	1	1	1	1	1
	N of resistant isolates	1	0	0	1	0	0
MIC							
<=0.125			1				
<=0.25					1		
<=0.5						1	
<=1		1					
8	1						
>64				1			

Table Antimicrobial susceptibility testing of Campylobacter jejuni in Mushrooms

Sampling Stage: Retail

Sampler: Official sampling

Analytical Method:

Country of Origin: Unknown

Sampling details:

Sampling Type: food sample

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER AMR MON

MIC	AM substance	Ciprofloxacin	Erythromycin	Gentamicin	Nalidixic acid	Streptomycin	Tetracycline
	ECOFF	0.5	4	2	16	4	1
	Lowest limit	0.12	1	0.12	1	0.25	0.5
	Highest limit	16	128	16	64	16	64
	N of tested isolates	1	1	1	1	1	1
	N of resistant isolates	1	0	0	1	0	1
0.25				1			
0.5						1	
<=1			1				
8		1					
64							1
>64					1		

Table Antimicrobial susceptibility testing of Campylobacter jejuni in Meat from turkey - fresh - chilled

Sampling Stage: Retail

Sampler: Official sampling

Analytical Method:

Country of Origin: European Union

Sampling details:

Sampling Type: food sample - meat

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER AMR MON

AM substance	Ciprofloxacin	Erythromycin	Gentamicin	Nalidixic acid	Streptomycin	Tetracycline
	0.5	4	2	16	4	1
ECOFF	0.12	1	0.12	1	0.25	0.5
Lowest limit	16	128	16	64	16	64
Highest limit	3	3	3	3	3	3
N of tested isolates	2	0	0	2	1	3
N of resistant isolates						
MIC						
<=0.125	1		3			
<=0.25					2	
<=1		3		1		
4	1					
8	1					
>16					1	
64				1		1
>64				1		2

Table Antimicrobial susceptibility testing of Campylobacter jejuni in Meat from broilers (Gallus gallus) - fresh - chilled

Sampling Stage: Processing plant

Sampler: Official sampling

Analytical Method:

Country of Origin: Netherlands

Sampling details:

Sampling Type: food sample - meat

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER AMR MON

AM substance	Ciprofloxacin	Erythromycin	Gentamicin	Nalidixic acid	Streptomycin	Tetracycline
	0.5	4	2	16	4	1
ECOFF	0.12	1	0.12	1	0.25	0.5
Lowest limit	16	128	16	64	16	64
Highest limit	5	5	5	5	5	5
N of tested isolates	4	0	0	4	1	3
N of resistant isolates						
MIC						
<=0.125	1		5			
<=0.25					1	
<=0.5						2
0.5					3	
<=1		5				
2				1		
4	2					
8	1					
>16	1				1	
>64				4		3

Table Antimicrobial susceptibility testing of Campylobacter jejuni in Meat from broilers (Gallus gallus) - fresh - chilled

Sampling Stage: Retail

Sampler: Official sampling

Analytical Method:

Country of Origin: European Union

Sampling details:

Sampling Type: food sample - meat

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER AMR MON

AM substance	Ciprofloxacin	Erythromycin	Gentamicin	Nalidixic acid	Streptomycin	Tetracycline
	ECOFF	4	2	16	4	1
	Lowest limit	0.12	1	0.12	1	0.25
	Highest limit	16	128	16	16	64
	N of tested isolates	44	44	44	44	44
MIC	N of resistant isolates	34	0	0	34	12
<=0.125	10		26			
<=0.25					10	
0.25			15			
<=0.5						17
0.5			3		18	
<=1		43		1		
1					3	
2	2	1		8		
4	10			1	1	
8	16					
16					1	1
>16	6				11	
32						3
64				4		4
>64				30		19

Table Antimicrobial susceptibility testing of Campylobacter jejuni in Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked

Sampling Stage: Processing plant

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Netherlands

Sampling details:

	AM substance	Ciprofloxacin	Erythromycin	Gentamicin	Nalidixic acid	Streptomycin	Tetracycline
	ECOFF	0.5	4	2	16	4	1
	Lowest limit	0.12	1	0.12	1	0.25	0.5
	Highest limit	16	128	16	64	16	64
	N of tested isolates	5	5	5	5	5	5
MIC	N of resistant isolates	3	0	0	3	1	3
	<=0.125	2		1			
	0.25			3			
	<=0.5						2
	0.5			1		3	
	<=1		5				
	1					1	
	2				2		
	4	1					
	8	2					
	>16					1	
	64				1		1
	>64				2		2

Table Antimicrobial susceptibility testing of Campylobacter jejuni in Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked

Sampling Stage: Retail

Sampler: Official sampling

Analytical Method:

Country of Origin: European Union

Sampling details:

Sampling Type: food sample - meat

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER AMR MON

AM substance	Ciprofloxacin	Erythromycin	Gentamicin	Nalidixic acid	Streptomycin	Tetracycline
	0.5	4	2	16	4	1
ECOFF	0.12	1	0.12	1	0.25	0.5
Lowest limit	16	128	16	64	16	64
Highest limit	26	26	26	26	26	26
N of tested isolates	20	0	0	19	7	16
N of resistant isolates						
MIC						
<=0.125	5		13			
<=0.25					3	
0.25	1		11			
<=0.5						10
0.5			2		15	
<=1		26		3		
1					1	
2				3		
4	6					
8	10			1		2
16	1					1
>16	3				7	
64				5		3
>64				14		10

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

Sampling Stage: Slaughterhouse

Sampler: Official sampling

Analytical Method:

Country of Origin: Netherlands

Sampling details:

Sampling Type: animal sample - caecum

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: AMR MON

MIC	AM substance	Ciprofloxacin	Erythromycin	Gentamicin	Nalidixic acid	Streptomycin	Tetracycline
	ECOFF	0.5	4	2	16	4	1
	Lowest limit	0.12	1	0.12	1	0.25	0.5
	Highest limit	16	128	16	64	16	64
	N of tested isolates	167	167	167	167	167	167
	N of resistant isolates	115	0	0	112	41	94
<=0.125		48		92			
<=0.25						24	
0.25		4		62			
<=0.5							71
0.5				13		54	
<=1			124		1		
1						47	2
2			39		17	1	2
4		3	4		30		
8		47			7	1	
16		35					3
>16		30				40	
32							2
64					6		14
>64					106		73

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

Sampling Stage: Slaughterhouse

Sampler: Official sampling

Analytical Method:

Country of Origin: Unknown

Sampling details:

Sampling Type: animal sample - caecum

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER AMR MON

MIC	AM substance	Ciprofloxacin	Erythromycin	Gentamicin	Nalidixic acid	Streptomycin	Tetracycline
	ECOFF	0.5	4	2	16	4	1
	Lowest limit	0.12	1	0.12	1	0.25	0.5
	Highest limit	16	128	16	64	16	64
	N of tested isolates	78	78	78	78	78	78
	N of resistant isolates	28	0	0	23	2	14
<=0.125		47		22			
<=0.25						4	
0.25		3		37			
<=0.5							62
0.5				18		20	
<=1			67				
1				1		48	2
2			11		23	3	
4		1			30	1	
8		15			1		
16		11			1		
>16		1				2	
32					1		1
64					2		3
>64					20		10

Table Antimicrobial susceptibility testing of Campylobacter jejuni in Meat from broilers (Gallus gallus) - carcase - chilled

Sampling Stage: Slaughterhouse

Sampler: Official, based on Regulation 2019/627

Analytical Method:

Country of Origin: Netherlands

Sampling details:

Sampling Type: food sample - meat

Sampling Strategy: Objective sampling

Sampling Context: Surveillance - based on Regulation 2073

Programme Code: OTHER AMR MON

MIC	AM substance	Ciprofloxacin	Erythromycin	Gentamicin	Nalidixic acid	Streptomycin	Tetracycline
	ECOFF	0.5	4	2	16	4	1
	Lowest limit	0.12	1	0.12	1	0.25	0.5
	Highest limit	16	128	16	64	16	64
	N of tested isolates	63	63	63	63	63	63
	N of resistant isolates	47	1	0	47	15	34
	<=0.125	16		59			
	<=0.25					20	
	0.25			3			
	<=0.5						28
	0.5			1		22	
	<=1		62		3		
	1					5	1
	2	3			10		
	4	10			3	1	
	8	23					3
	16	2					1
	>16	9				15	
	32						2
	64		1		9		6
	>64				38		22

Table Antimicrobial susceptibility testing of Campylobacter jejuni in Vegetables - pre-cut - ready-to-eat

Sampling Stage: Retail

Sampler: Official sampling

Analytical Method:

Country of Origin: Unknown

Sampling details:

Sampling Type: food sample

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER AMR MON

	AM substance	Ciprofloxacin	Erythromycin	Gentamicin	Nalidixic acid	Streptomycin	Tetracycline
		ECOFF	0.5	4	2	16	4
	Lowest limit	0.12	1	0.12	1	0.25	0.5
	Highest limit	16	128	16	64	16	64
MIC	N of tested isolates	1	1	1	1	1	1
	N of resistant isolates	1	0	0	1	0	0
<=0.125				1			
<=0.5							1
0.5						1	
<=1			1				
8		1					
>64					1		

ANTIMICROBIAL RESISTANCE TABLES FOR SALMONELLA

Table Antimicrobial susceptibility testing of Salmonella Agona in Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked

Sampling Stage: Border Control Posts

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Thailand

Sampling Details:

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	1	0	0	0	0	1	0	0	0	0	1	1	0	1
MIC														
<=0.03									1					
<=0.25			1											
<=0.5								1						
0.5						1							1	
<=1							1							
1				1										
<=8					1									
8		1												
16										1				
>32														1
>64	1											1		
>1024											1			

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

Sampling Stage: Farm

Sampler: Official sampling

Analytical Method:

Country of Origin: Netherlands

Sampling Details:

Sampling Type: environmental sample - boot swabs

Sampling Strategy: Objective sampling

Sampling Context: Monitoring - EFSA specifications

Programme Code: OTHER AMR MON

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
<=0.015						1								
<=0.03									1					
<=0.25			1										1	1
<=0.5				1				1						
<=1	1						1							
<=2												1		
<=4										1				
4		1												
<=8					1						1			

Table Antimicrobial susceptibility testing of Salmonella Benfica in Foodstuffs intended for special nutritional uses - ready-to-eat

Sampling Stage: Wholesale

Sampling Type: food sample

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Unknown

Sampling Details:

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
<=0.03									1					
0.064						1								
<=0.25			1											1
<=0.5				1				1						
0.5													1	
<=1	1													
<=2												1		
2							1							
<=4										1				
4		1												
<=8					1									
128											1			

Table Antimicrobial susceptibility testing of Salmonella Bovismorbificans in Meat from pig - carcase

Sampling Stage: Slaughterhouse

Sampling Type: food sample - meat

Sampling Context: Monitoring - EFSA specifications

Sampler: Official, based on Regulation 2019/627

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: European Union

Sampling Details:

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	0	0	0	0	0	0	1	0	0	0	0	0	0	0
MIC														
<=0.03									1					
0.03						1								
<=0.25													1	1
<=0.5				1				1						
0.5			1											
<=1	1													
<=2												1		
<=4										1				
4		1					1							
<=8					1									
16											1			

Table Antimicrobial susceptibility testing of Salmonella Brandenburg in Meat from pig - carcase

Sampling Stage: Slaughterhouse

Sampling Type: food sample - meat

Sampling Context: Monitoring - EFSA specifications

Sampler: Official, based on Regulation 2019/627

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: European Union

Sampling Details:

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	2	2	2	2	2	2	2	2	2	2	2	2	2	2
N of resistant isolates	1	1	0	0	1	1	0	0	0	0	1	1	0	1
MIC														
<=0.015						1								
<=0.03									1					
0.12									1					
<=0.25			2										1	1
<=0.5				2				2						
0.5						1								
<=1	1													
1													1	
<=2												1		
2							2							
<=4										1				
<=8					1									
8										1				
16		1												
32		1												
>32														1
>64	1											1		
128											1			
>128					1									
>1024											1			

Table Antimicrobial susceptibility testing of Salmonella Brandenburg in Pigs - fattening pigs

Sampling Stage: Farm

Sampling Type: animal sample - faeces

Sampling Context: Surveillance

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Netherlands

Sampling Details:

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
0.064						1								
0.12									1					
<=0.25			1										1	1
<=0.5				1				1						
<=2												1		
2	1						1							
<=4										1				
<=8					1									
16		1												
128											1			

Table Antimicrobial susceptibility testing of Salmonella Bredeney in Spices and herbs - fresh

Sampling Stage: Wholesale

Sampling Type: food sample

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Morocco

Sampling Details:

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
0.064						1								
0.12									1					
<=0.25			1										1	1
<=0.5				1				1						
<=2												1		
2	1						1							
<=4										1				
<=8					1									
8		1												
64											1			

Table Antimicrobial susceptibility testing of Salmonella Chester in Spices and herbs - dried

Sampling Stage: Wholesale

Sampling Type: food sample

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Belgium

Sampling Details:

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
<=0.03									1					
0.03						1								
<=0.25			1										1	1
<=0.5				1				1						
<=1	1													
<=2												1		
2							1							
<=4										1				
<=8					1						1			
8		1												

Table Antimicrobial susceptibility testing of Salmonella Corvallis in Gallus gallus (fowl) - parent breeding flocks, unspecified

Sampling Stage: Farm

Sampling Type: environmental sample - boot swabs

Sampling Context: Monitoring - EFSA specifications

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Netherlands

Sampling Details:

MIC	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim	
	ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2	
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25	
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32	
	N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	<=0.015	1														
	<=0.03	1														
	<=0.25	1													1	1
	<=0.5	1														
<=1	1	1														
<=2	1															
<=4	1															
4	1															
<=8	1															

Table Antimicrobial susceptibility testing of Salmonella Derby in Meat from pig - carcass

Sampling Stage: Slaughterhouse

Sampling Type: food sample - meat

Sampling Context: Monitoring - EFSA specifications

Sampler: Official, based on Regulation 2019/627

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: European Union

Sampling Details:

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	3	3	3	3	3	3	3	3	3	3	3	3	3	3
N of resistant isolates	0	0	0	0	0	0	1	0	0	0	0	0	0	0
MIC														
<=0.015						2								
<=0.03									3					
0.03						1								
<=0.25			3										1	3
<=0.5				3				3						
0.5													1	
<=1	3						2							
1													1	
<=2												3		
<=4										3				
4							1							
<=8					2									
8		2												
16		1			1						1			
32											2			

Table Antimicrobial susceptibility testing of Salmonella Derby in Meat from pig - fresh

Sampling Stage: Retail

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: European Union

Sampling Details:

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
<=0.03									1					
0.03						1								
<=0.25			1											1
<=0.5				1				1						
0.5													1	
<=1	1						1							
<=2												1		
<=4										1				
<=8					1									
8		1												
32											1			

Table Antimicrobial susceptibility testing of Salmonella Dublin in Meat from bovine animals - meat preparation - intended to be eaten cooked

Sampling Stage: Retail

Sampler: Official sampling

Analytical Method:

Country of Origin: European Union

Sampling Details:

Sampling Type: food sample - meat

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER AMR MON

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	3	3	3	3	3	3	3	3	3	3	3	3	3	3
N of resistant isolates	0	0	0	0	0	0	3	0	0	0	0	0	0	0
MIC														
<=0.015						2								
<=0.03									3					
0.03						1								
<=0.25			3										2	2
<=0.5				3				3						
0.5													1	1
<=1	3													
<=2												3		
<=4										3				
4		2												
<=8					3						1			
8		1					3							
32											2			

Table Antimicrobial susceptibility testing of Salmonella Dublin in Meat from sheep - carcase

Sampling Stage: Slaughterhouse

Sampling Type: food sample - meat

Sampling Context: Monitoring - EFSA specifications

Sampler: Official, based on Regulation 2019/627

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: European Union

Sampling Details:

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	0	0	0	0	0	0	1	0	0	0	0	0	0	0
MIC														
<=0.015						1								
<=0.03									1					
<=0.25			1										1	1
<=0.5				1				1						
<=1	1													
<=2												1		
<=4										1				
<=8					1									
8		1					1							
16											1			

Table Antimicrobial susceptibility testing of Salmonella Dublin in Meat from bovine animals - carcase

Sampling Stage: Slaughterhouse

Sampling Type: food sample - meat

Sampling Context: Monitoring - EFSA specifications

Sampler: Official, based on Regulation 2019/627

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: European Union

Sampling Details:

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	4	4	4	4	4	4	4	4	4	4	4	4	4	4
N of resistant isolates	0	0	0	0	0	0	4	0	0	0	0	0	0	0
MIC														
<=0.015						2								
<=0.03									1					
0.03						1								
0.064						1			1					
0.12									2					
<=0.25			4										3	3
<=0.5				4				3						
0.5													1	1
<=1	3													
1								1						
<=2												4		
<=4										4				
4		3												
<=8					4									
8	1	1					4							
16											4			

Table Antimicrobial susceptibility testing of Salmonella enterica, subspecies diarizonae in Meat from other animal species or not specified - fresh - frozen

Sampling Stage: Border Control Posts

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: South Africa

Sampling Details:

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
<=0.03									1					
0.03						1								
<=0.25			1										1	1
<=0.5				1										
<=1	1													
1								1						
<=2												1		
2							1							
<=4										1				
<=8					1									
8		1												
16											1			

Table Antimicrobial susceptibility testing of Salmonella enterica, subspecies diarizonae in Meat from sheep - fresh

Sampling Stage: Retail

Sampler: Official sampling

Analytical Method:

Country of Origin: European Union

Sampling Details:

Sampling Type: food sample - meat

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER AMR MON

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
<=0.015						1								
<=0.03									1					
<=0.25			1											1
<=0.5				1				1						
0.5													1	
<=1	1						1							
<=2												1		
<=4										1				
<=8					1									
8		1												
32											1			

Table Antimicrobial susceptibility testing of Salmonella enterica, subspecies diarizonae in Meat from goat - carcase

Sampling Stage: Slaughterhouse

Sampling Type: food sample - meat

Sampling Context: Monitoring - EFSA specifications

Sampler: Official, based on Regulation 2019/627

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: European Union

Sampling Details:

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
<=0.015						1								
<=0.03									1					
<=0.25			1										1	1
<=0.5				1				1						
<=1	1													
<=2												1		
2							1							
<=4										1				
<=8					1									
8		1												
16											1			

Table Antimicrobial susceptibility testing of Salmonella enterica, subspecies diarizonae in Meat from sheep - carcass

Sampling Stage: Slaughterhouse

Sampler: Official, based on Regulation 2019/627

Analytical Method:

Country of Origin: European Union

Sampling Details:

Sampling Type: food sample - meat

Sampling Strategy: Objective sampling

Sampling Context: Monitoring - EFSA specifications

Programme Code: OTHER AMR MON

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	5	5	5	5	5	5	5	5	5	5	5	5	5	5
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
<=0.015						1								
<=0.03									5					
0.03						1								
0.064						3								
<=0.25			5										2	2
<=0.5				5				5						
0.5													3	3
<=1	4						4							
<=2												5		
2	1						1							
<=4										5				
<=8					5									
8		5												
16											2			
32											3			

Table Antimicrobial susceptibility testing of Salmonella enterica, subspecies diarizonae in Vegetables - pre-cut - ready-to-eat

Sampling Stage: Retail

Sampling Type: food sample

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Unknown

Sampling Details:

MIC	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	N of resistant isolates	0	0	0	0	0	0	1	0	0	0	0	0	0	0
<=0.015	1														
<=0.03	1														
<=0.25	1														
<=0.5	1														
0.5	1														
<=2	1														
<=4	1														
<=8	1														
8	1														
>16	1														
32	1														

Table Antimicrobial susceptibility testing of Salmonella Enteritidis in Meat from bovine animals - meat preparation - intended to be eaten cooked

Sampling Stage: Retail

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: European Union

Sampling Details:

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	0	0	0	0	0	0	1	0	0	0	0	0	0	0
MIC														
<=0.015						1								
<=0.03									1					
<=0.25			1											1
<=0.5				1				1						
0.5													1	
<=1	1													
<=2												1		
<=4										1				
4		1					1							
<=8					1									
32											1			

Table Antimicrobial susceptibility testing of Salmonella Enteritidis in Spices and herbs - dried

Sampling Stage: Wholesale

Sampling Type: food sample

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Spain

Sampling Details:

MIC	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	N of resistant isolates	0	0	0	0	0	1	1	0	0	1	0	0	0	0
<=0.03										1					
<=0.25				1											1
0.25							1								
<=0.5					1				1						
<=1	1														
1														1	
<=2													1		
4			1												
<=8						1									
8								1							
32												1			
>128											1				

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

Sampling Stage: Farm

Sampling Type: environmental sample - boot swabs

Sampling Context: Monitoring - EFSA specifications

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: AMR MON

Analytical Method:

Country of Origin: Netherlands

Sampling Details:

MIC	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<=0.015	2													
	<=0.03	2													
	<=0.25	2												2	2
	<=0.5	2													
<=1	2														
<=2													2		
2								2							
<=4												2			
4			2												
<=8						2									

Table Antimicrobial susceptibility testing of Salmonella Indiana in Meat from broilers (Gallus gallus) - carcase - chilled

Sampling Stage: Slaughterhouse

Sampler: Official, based on Regulation 2019/627

Analytical Method:

Country of Origin: European Union

Sampling Details:

Sampling Type: food sample - meat

Sampling Strategy: Objective sampling

Sampling Context: Monitoring - EFSA specifications

Programme Code: OTHER AMR MON

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	6	6	6	6	6	6	6	6	6	6	6	6	6	6
N of resistant isolates	1	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
<=0.03									4					
0.03						3								
0.064						3			1					
0.12									1					
<=0.25			6										1	5
<=0.5				6				3						
0.5													4	1
<=1	5						1							
1								3					1	
<=2												6		
2							5							
<=4										6				
4		2												
<=8					6									
8		4												
16											2			
32											2			
64											2			
>64	1													

Table Antimicrobial susceptibility testing of Salmonella Indiana in Meat from bovine animals - carcase

Sampling Stage: Slaughterhouse

Sampling Type: food sample - meat

Sampling Context: Monitoring - EFSA specifications

Sampler: Official, based on Regulation 2019/627

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: European Union

Sampling Details:

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
<=0.03									1					
0.03						1								
<=0.25			1											1
<=0.5				1				1						
0.5													1	
<=1	1						1							
<=2												1		
<=4										1				
4		1												
<=8					1									
32											1			

Table Antimicrobial susceptibility testing of Salmonella Infantis in Meat from sheep - fresh

Sampling Stage: Retail

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: European Union

Sampling Details:

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	0	0	0	0	0	1	0	0	0	1	1	1	0	0
MIC														
<=0.03	1													
<=0.25	1													
<=0.5	1													
0.5	1													
<=1	1													
1	1													
2	1													
<=8	1													
8	1													
>64	1													
>128	1													
>1024	1													

Table Antimicrobial susceptibility testing of Salmonella Infantis in Pigs - fattening pigs

Sampling Stage: Farm

Sampling Type: animal sample - faeces

Sampling Context: Surveillance

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Netherlands

Sampling Details:

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
<=0.03									1					
0.064						1								
<=0.25			1										1	1
<=0.5				1				1						
<=1	1													
<=2												1		
2							1							
<=4										1				
<=8					1									
8		1												
128											1			

Table Antimicrobial susceptibility testing of Salmonella Infantis in Meat from broilers (Gallus gallus) - fresh - chilled

Sampling Stage: Processing plant

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Netherlands

Sampling Details:

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	4	4	4	4	4	4	4	4	4	4	4	4	4	4
N of resistant isolates	1	0	0	0	0	4	0	0	0	4	4	3	0	3
MIC														
<=0.03									4					
<=0.25			4										1	1
0.25						3								
<=0.5				4				4						
0.5						1								
<=1							2							
1													3	
<=2												1		
2	3						2							
<=8					3									
8		4												
16					1									
>32														3
>64	1											3		
>128										4				
>1024											4			

Table Antimicrobial susceptibility testing of Salmonella Infantis in Meat from broilers (Gallus gallus) - fresh - chilled

Sampling Stage: Retail

Sampler: Official sampling

Analytical Method:

Country of Origin: European Union

Sampling Details:

Sampling Type: food sample - meat

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER AMR MON

MIC	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim	
	ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2	
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25	
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32	
	N of tested isolates	8	8	8	8	8	8	8	8	8	8	8	8	8	8	
	N of resistant isolates	1	3	0	0	1	6	0	0	0	7	7	5	1	4	
	<=0.03	8														
0.03	1															
0.064	1															
<=0.25	8													1	1	
0.25	3															
<=0.5	6														8	
0.5	1														3	3
<=1	3	3														
1	2				2										3	
<=2	1												2			
2	4	5													1	
<=4	1										1					
4	1															
<=8	4															
8	4															
16	3															
32	1															
>32	4															
64	1												1	1		
>64	1	2	4													
128	2										2					
>128	5										5					

	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	8	8	8	8	8	8	8	8	8	8	8	8	8	8
MIC	N of resistant isolates	1	3	0	0	1	6	0	0	0	7	7	5	1	4
	>1024											7			

Table Antimicrobial susceptibility testing of Salmonella Infantis in Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked

Sampling Stage: Processing plant

Sampler: Official sampling

Analytical Method:

Country of Origin: European Union

Sampling Details:

Sampling Type: food sample - meat

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER AMR MON

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	3	3	3	3	3	3	3	3	3	3	3	3	3	3
N of resistant isolates	0	0	0	0	0	3	0	0	0	3	3	2	0	2
MIC														
<=0.03									3					
<=0.25			3											1
0.25						2								
<=0.5				3				3						
0.5						1							2	
<=1	1						2							
1													1	
<=2												1		
2	1						1							
4	1													
<=8					3									
8		1												
16		2												
>32														2
>64												2		
>128										3				
>1024											3			

Table Antimicrobial susceptibility testing of Salmonella Infantis in Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked

Sampling Stage: Retail

Sampler: Official sampling

Analytical Method:

Country of Origin: European Union

Sampling Details:

Sampling Type: food sample - meat

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER AMR MON pnl2

AM substance	Cefepime	Cefotaxim	Cefotaxime + Clavulanic acid	Cefoxitin	Ceftazidim	Ceftazidime + Clavulanic acid	Ertapenem	Imipenem	Meropenem	Temocillin
Cefotaxime synergy test	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
Ceftazidime synergy test	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
ECOFF	0.125	0.5	0.125	0.125	2	0.125	0.125	0.125	0.125	0.125
Lowest limit	0.064	0.25	0.064	0.5	0.25	0.12	0.015	0.12	0.03	0.5
Highest limit	32	64	64	64	128	128	2	16	16	64
N of tested isolates	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	1	0	0	1	0	0	0	0	0	0
MIC										
<=0.015							1			
<=0.03									1	
0.25	1		1			1		1		
0.5		1			1					
8										1
16				1						

Table Antimicrobial susceptibility testing of Salmonella Infantis in Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked

Sampling Stage: Retail

Sampler: Official sampling

Analytical Method:

Country of Origin: European Union

Sampling Details:

Sampling Type: food sample - meat

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER AMR MON

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	11	11	11	11	11	11	11	11	11	11	11	11	11	11
N of resistant isolates	1	1	0	0	0	10	0	0	0	11	11	11	0	4
MIC														
<=0.03									11					
0.064						1								
<=0.25			10											7
0.25						8								
<=0.5				11				10						
0.5			1			1							4	
<=1	2						5							
1						1		1					7	
2	8						6							
4		1												
<=8					8									
8		4												
16		5			3									
>32														4
64		1								1		1		
>64	1											10		
128										3				
>128										7				
>1024											11			

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

Sampling Stage: Farm

Sampler: Official sampling

Analytical Method:

Country of Origin: Netherlands

Sampling Details:

Sampling Type: environmental sample - boot swabs

Sampling Strategy: Objective sampling

Sampling Context: Monitoring - EFSA specifications

Programme Code: OTHER AMR MON

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	0	0	0	0	0	1	0	0	0	1	1	1	0	0
MIC														
<=0.03									1					
<=0.25			1											1
0.25						1								
<=0.5				1										
<=1							1							
1								1					1	
2	1													
<=8					1									
8		1												
>64												1		
128										1				
>1024											1			

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

Sampling Stage: Farm

Sampling Type: environmental sample - boot swabs

Sampling Context: Monitoring - EFSA specifications

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: AMR MON

Analytical Method:

Country of Origin: Netherlands

Sampling Details:

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
<=0.015						1								
<=0.03									1					
<=0.25			1										1	1
<=0.5				1				1						
<=1	1						1							
<=2												1		
<=4										1				
4		1												
<=8					1						1			

Table Antimicrobial susceptibility testing of Salmonella Infantis in Meat from broilers (Gallus gallus) - carcase - chilled

Sampling Stage: Slaughterhouse

Sampler: Official, based on Regulation 2019/627

Analytical Method:

Country of Origin: European Union

Sampling Details:

Sampling Type: food sample - meat

Sampling Strategy: Objective sampling

Sampling Context: Monitoring - EFSA specifications

Programme Code: OTHER AMR MON

MIC	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	21	21	21	21	21	21	21	21	21	21	21	21	21	21
	N of resistant isolates	7	0	0	0	0	20	0	0	0	20	20	19	7	10
<=0.03										20					
0.064							1								
0.12										1					
<=0.25				21										1	8
0.25							17								
<=0.5					20				21						
0.5							1							3	3
<=1		2						10							
1					1		2							10	
<=2													1		
2		11						11						7	
4		1											1		
<=8						17									
8			16								1				
16			5			4						1			
32		1													
>32															10
64		1													
>64		5											19		
128											5				
>128											15				
>1024												20			

Table Antimicrobial susceptibility testing of Salmonella Javiana in Crustaceans - shrimps - cooked

Sampling Stage: Border Control Posts

Sampling Type: food sample

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Vietnam

Sampling Details:

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	0	0	0	0	0	0	1	0	0	0	0	0	0	0
MIC														
<=0.015						1								
<=0.03									1					
<=0.25			1										1	1
<=0.5				1				1						
<=1	1													
<=2												1		
<=4										1				
4							1							
<=8					1									
8		1												
16											1			

Table Antimicrobial susceptibility testing of Salmonella Kentucky in Spices and herbs - fresh

Sampling Stage: Wholesale

Sampler: Official sampling

Analytical Method:

Country of Origin: Israel

Sampling Details:

Sampling Type: food sample

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER AMR MON

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	1	0	0	0	1	1	0	0	0	1	1	1	0	1
MIC														
<=0.03									1					
<=0.25			1											
<=0.5				1										
1								1					1	
2							1							
8		1												
>8						1								
>32														1
>64	1											1		
>128					1					1				
>1024											1			

Table Antimicrobial susceptibility testing of Salmonella Litchfield in Meat from other animal species or not specified - fresh - frozen

Sampling Stage: Border Control Posts

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Vietnam

Sampling Details:

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	1	0	0	0	1	1	0	0	0	1	1	1	0	1
MIC														
<=0.03									1					
<=0.25			1											
<=0.5				1				1						
0.5													1	
2						1	1							
16		1												
>32														1
>64	1											1		
>128					1					1				
>1024											1			

Table Antimicrobial susceptibility testing of Salmonella Mbandaka in Gallus gallus (fowl) - parent breeding flocks, unspecified

Sampling Stage: Farm

Sampling Type: environmental sample - boot swabs

Sampling Context: Monitoring - EFSA specifications

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Netherlands

Sampling Details:

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
<=0.015						1								
<=0.03									1					
<=0.25			1										1	1
<=0.5				1										
<=1	1						1							
<=2												1		
2								1						
<=4										1				
4		1												
<=8					1						1			

Table Antimicrobial susceptibility testing of Salmonella Minnesota in Fish - raw - frozen

Sampling Stage: Border Control Posts

Sampling Type: food sample

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Colombia

Sampling Details:

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
<=0.015						1								
<=0.03									1					
<=0.25			1											1
<=0.5				1				1						
0.5													1	
<=1	1													
<=2												1		
2							1							
<=4										1				
<=8					1									
8		1												
32											1			

Table Antimicrobial susceptibility testing of Salmonella Minnesota in Meat from broilers (Gallus gallus) - carcase - chilled

Sampling Stage: Slaughterhouse

Sampling Type: food sample - meat

Sampling Context: Monitoring - EFSA specifications

Sampler: Official, based on Regulation 2019/627

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: European Union

Sampling Details:

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
<=0.015						1								
<=0.03									1					
<=0.25			1											1
<=0.5				1				1						
0.5													1	
<=1	1													
<=2												1		
2							1							
<=4										1				
<=8					1									
8		1												
32											1			

Table Antimicrobial susceptibility testing of Salmonella Montevideo in Meat from bovine animals - carcass

Sampling Stage: Slaughterhouse

Sampling Type: food sample - meat

Sampling Context: Monitoring - EFSA specifications

Sampler: Official, based on Regulation 2019/627

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: European Union

Sampling Details:

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	0	0	0	0	0	0	1	0	0	0	0	0	0	0
MIC														
0.064						1								
0.12									1					
<=0.25			1										1	1
<=0.5				1				1						
<=1	1													
<=2												1		
<=4										1				
4							1							
<=8					1									
8		1												
16											1			

Table Antimicrobial susceptibility testing of Salmonella Mountpleasant in Spices and herbs - dried

Sampling Stage: Border Control Posts

Sampling Type: food sample

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Madagascar

Sampling Details:

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
<=0.03									1					
0.03						1								
<=0.25			1										1	1
<=0.5				1				1						
<=1	1													
<=2												1		
2							1							
<=4										1				
<=8					1									
8		1												
64											1			

Table Antimicrobial susceptibility testing of Salmonella Newport in Meat from other animal species or not specified - fresh - frozen

Sampling Stage: Border Control Posts

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Vietnam

Sampling Details:

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
<=0.03									1					
0.064						1								
<=0.25			1											1
<=0.5				1				1						
0.5													1	
<=2												1		
2	1						1							
<=4										1				
<=8					1									
8		1												
64											1			

Table Antimicrobial susceptibility testing of Salmonella Orion in Spices and herbs - dried

Sampling Stage: Border Control Posts

Sampling Type: food sample

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Tanzania

Sampling Details:

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
<=0.015						1								
<=0.03									1					
<=0.25			1											1
<=0.5				1				1						
0.5													1	
<=1	1						1							
<=2												1		
<=4										1				
4		1												
<=8					1									
16											1			

Table Antimicrobial susceptibility testing of Salmonella Paratyphi in Meat from broilers (Gallus gallus) - fresh - chilled

Sampling Stage: Processing plant

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Netherlands

Sampling Details:

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	1	0	0	0	0	0	0	0	0	0	1	0	0	1
MIC														
<=0.03									1					
0.064						1								
<=0.25			1											
<=0.5				1				1						
0.5													1	
2							1							
4												1		
8		1								1				
16					1									
>32														1
>64	1													
>1024											1			

Table Antimicrobial susceptibility testing of Salmonella Paratyphi in Meat from broilers (Gallus gallus) - fresh - chilled

Sampling Stage: Retail

Sampler: Official sampling

Analytical Method:

Country of Origin: European Union

Sampling Details:

Sampling Type: food sample - meat

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER AMR MON

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	0	0	0	0	0	1	0	0	0	1	0	0	0	1
MIC														
<=0.03									1					
<=0.25			1											
0.25						1								
<=0.5								1						
0.5													1	
1				1										
<=2												1		
2	1						1							
<=8					1									
8		1												
32											1			
>32														1
>128										1				

Table Antimicrobial susceptibility testing of Salmonella Paratyphi in Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked

Sampling Stage: Processing plant

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: European Union

Sampling Details:

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	3	3	3	3	3	3	3	3	3	3	3	3	3	3
N of resistant isolates	1	0	0	0	0	2	1	0	0	2	2	0	0	3
MIC														
<=0.03									2					
0.03						1								
0.064									1					
<=0.25			3										1	
<=0.5				3				3						
<=1	1						2							
1						2							2	
<=2												2		
<=4										1				
4	1	2					1					1		
<=8					3									
8		1												
32											1			
>32														3
>64	1													
>128										2				
>1024											2			

Table Antimicrobial susceptibility testing of Salmonella Paratyphi in Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked

Sampling Stage: Retail

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: European Union

Sampling Details:

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	1	0	0	0	0	0	0	0	0	0	0	0	0	1
MIC														
<=0.03									1					
0.03						1								
<=0.25			1											
<=0.5				1				1						
<=1							1							
1													1	
<=2												1		
<=8					1									
8		1								1				
16											1			
>32														1
>64	1													

Table Antimicrobial susceptibility testing of Salmonella Paratyphi in Meat from broilers (Gallus gallus) - carcase - chilled

Sampling Stage: Slaughterhouse

Sampler: Official, based on Regulation 2019/627

Analytical Method:

Country of Origin: European Union

Sampling Details:

Sampling Type: food sample - meat

Sampling Strategy: Objective sampling

Sampling Context: Monitoring - EFSA specifications

Programme Code: OTHER AMR MON pnl2

AM substance	Cefepime	Cefotaxim	Cefotaxime + Clavulanic acid	Cefoxitin	Ceftazidim	Ceftazidime + Clavulanic acid	Ertapenem	Imipenem	Meropenem	Temocillin
Cefotaxime synergy test	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
Ceftazidime synergy test	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
ECOFF	0.125	0.5	0.125	0.125	2	0.125	0.125	0.125	0.125	0.125
Lowest limit	0.064	0.25	0.064	0.5	0.25	0.12	0.015	0.12	0.03	0.5
Highest limit	32	64	64	64	128	128	2	16	16	64
N of tested isolates	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	1	0	0	0	0	0	0	0	0	0
MIC										
<=0.015							1			
<=0.03									1	
0.25	1		1					1		
0.5		1				1				
1					1					
8				1						
16										1

Table Antimicrobial susceptibility testing of Salmonella Paratyphi in Meat from broilers (Gallus gallus) - carcase - chilled

Sampling Stage: Slaughterhouse

Sampler: Official, based on Regulation 2019/627

Analytical Method:

Country of Origin: European Union

Sampling Details:

Sampling Type: food sample - meat

Sampling Strategy: Objective sampling

Sampling Context: Monitoring - EFSA specifications

Programme Code: OTHER AMR MON

MIC	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	13	13	13	13	13	13	13	13	13	13	13	13	13	13
	N of resistant isolates	5	0	1	1	0	6	0	0	0	6	9	0	0	13
<=0.015							1								
<=0.03										11					
0.03							5								
0.064							1			1					
0.12										1					
<=0.25				11										3	
0.25							1								
<=0.5					12				13						
0.5				1			3							7	
<=1	6							4							
1							2							3	
<=2													10		
2	1			1				9							
<=4											6				
4	1		8										3		
<=8						12									
8			4		1						1				
16			1			1						2			
32												2			
>32															13
>64	5														
>128											6				

	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	13	13	13	13	13	13	13	13	13	13	13	13	13	13
MIC	N of resistant isolates	5	0	1	1	0	6	0	0	0	6	9	0	0	13
	>1024											9			

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

Sampling Stage: Farm

Sampling Type: environmental sample - boot swabs

Sampling Context: Monitoring - EFSA specifications

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Netherlands

Sampling Details:

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	1	0	0	1
MIC														
<=0.015	1													
<=0.03	1													
<=0.25	1													
<=0.5	1													
<=1	1													
<=2	1													
<=4	1													
<=8	1													
>32	1													
>1024	1													

Table Antimicrobial susceptibility testing of Salmonella Potsdam in Meat from other animal species or not specified - fresh - frozen

Sampling Stage: Border Control Posts

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Vietnam

Sampling Details:

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	1	0	0	0	0	1	0	0	0	0	0	1	0	1
MIC														
<=0.03									1					
<=0.25			1											
<=0.5				1				1						
0.5						1							1	
2							1							
8		1								1				
16					1									
32											1			
>32														1
64												1		
>64	1													

Table Antimicrobial susceptibility testing of Salmonella spp., unspecified in Meat from pig - carcass

Sampling Stage: Slaughterhouse

Sampling Type: food sample - meat

Sampling Context: Monitoring - EFSA specifications

Sampler: Official, based on Regulation 2019/627

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: European Union

Sampling Details:

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
<=0.03									1					
0.03						1								
<=0.25			1										1	
<=0.5				1				1						
0.5														1
<=1	1						1							
<=2												1		
<=4										1				
<=8					1									
8		1												
32											1			

Table Antimicrobial susceptibility testing of Salmonella Typhimurium in Live bivalve molluscs - mussels

Sampling Stage: Retail

Sampling Type: food sample

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Netherlands

Sampling Details:

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
0.03						1								
0.064									1					
<=0.25			1										1	1
<=0.5				1				1						
<=1	1						1							
<=2												1		
<=4										1				
4		1												
<=8					1									
32											1			

Table Antimicrobial susceptibility testing of Salmonella Typhimurium in Spices and herbs - fresh

Sampling Stage: Wholesale

Sampling Type: food sample

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Israel

Sampling Details:

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
0.064						1								
0.12									1					
<=0.25			1											
<=0.5				1				1						
0.5													1	1
<=2												1		
2	1						1							
<=4										1				
<=8					1									
8		1												
64											1			

Table Antimicrobial susceptibility testing of Salmonella Typhimurium, monophasic in Meat from pig - carcase

Sampling Stage: Slaughterhouse

Sampler: Official, based on Regulation 2019/627

Analytical Method:

Country of Origin: European Union

Sampling Details:

Sampling Type: food sample - meat

Sampling Strategy: Objective sampling

Sampling Context: Monitoring - EFSA specifications

Programme Code: OTHER AMR MON

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	3	3	3	3	3	3	3	3	3	3	3	3	3	3
N of resistant isolates	3	0	0	0	0	0	0	0	0	0	3	2	0	0
MIC														
<=0.03									2					
0.03						2								
0.064						1								
0.12									1					
<=0.25			3										2	3
<=0.5				3				2						
0.5													1	
<=1							1							
1								1						
<=2												1		
2							2							
<=4										3				
4		1												
<=8					3									
8		2												
>64	3											2		
>1024											3			

Table Antimicrobial susceptibility testing of Salmonella Typhimurium, monophasic in Pigs - fattening pigs

Sampling Stage: Farm

Sampler: Official sampling

Analytical Method:

Country of Origin: Netherlands

Sampling Details:

Sampling Type: animal sample - faeces

Sampling Strategy: Objective sampling

Sampling Context: Surveillance

Programme Code: OTHER AMR MON

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	2	2	2	2	2	2	2	2	2	2	2	2	2	2
N of resistant isolates	0	1	0	0	0	0	0	0	0	0	0	1	0	0
MIC														
<=0.03									2					
0.064						2								
<=0.25			2										1	
<=0.5				2				2						
0.5														2
<=1	1													
1													1	
2							2							
<=4										1				
4	1											1		
<=8					1									
8		1								1				
16					1									
32		1												
64											1			
>64												1		
128											1			

Table Antimicrobial susceptibility testing of Salmonella Typhimurium, monophasic in Meat from pig - meat preparation - intended to be eaten cooked

Sampling Stage: Retail

Sampler: Official sampling

Analytical Method:

Country of Origin: European Union

Sampling Details:

Sampling Type: food sample - meat

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER AMR MON

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	2	2	2	2	2	2	2	2	2	2	2	2	2	2
N of resistant isolates	1	0	0	0	0	0	0	0	0	0	1	2	0	0
MIC														
<=0.03									1					
0.03						1								
0.064						1								
0.12									1					
<=0.25			2											2
<=0.5				2				1						
0.5													2	
<=1							1							
1								1						
2	1						1							
<=4										2				
<=8					2									
8		2												
>64	1											2		
128											1			
>1024											1			

Table Antimicrobial susceptibility testing of Salmonella Typhimurium, monophasic in Meat from bovine animals - carcase

Sampling Stage: Slaughterhouse

Sampling Type: food sample - meat

Sampling Context: Monitoring - EFSA specifications

Sampler: Official, based on Regulation 2019/627

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: European Union

Sampling Details:

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	1	0	0	0	0	0	0	0	0	0	1	0	0	0
MIC														
<=0.03									1					
0.03						1								
<=0.25			1										1	1
<=0.5				1				1						
<=1							1							
<=2												1		
<=4										1				
4		1												
<=8					1									
>64	1													
>1024											1			

Table Antimicrobial susceptibility testing of Salmonella Typhimurium, monophasic in Meat from pig - fresh

Sampling Stage: Retail

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: European Union

Sampling Details:

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	2	2	2	2	2	2	2	2	2	2	2	2	2	2
N of resistant isolates	2	0	0	0	0	0	0	0	0	0	2	2	0	0
MIC														
<=0.03									2					
0.03						2								
<=0.25			2											2
<=0.5				2				2						
0.5													1	
<=1							2							
1													1	
<=4										2				
<=8					2									
8		2												
>64	2											2		
>1024											2			

Table Antimicrobial susceptibility testing of Salmonella Virchow in Meat from broilers (Gallus gallus) - fresh - chilled

Sampling Stage: Retail

Sampler: Official sampling

Analytical Method:

Country of Origin: European Union

Sampling Details:

Sampling Type: food sample - meat

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER AMR MON

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	2	2	2	2	2	2	2	2	2	2	2	2	2	2
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
<=0.015						1								
<=0.03									2					
0.03						1								
<=0.25			2										1	2
<=0.5				2				1						
0.5													1	
<=1	2						1							
1								1						
<=2												2		
2							1							
<=4										2				
4		1												
<=8					2						1			
8		1												
32											1			

Table Antimicrobial susceptibility testing of Salmonella Virchow in Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked

Sampling Stage: Retail

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: European Union

Sampling Details:

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
<=0.03									1					
0.03						1								
<=0.25			1										1	
<=0.5				1				1						
0.5														1
<=1	1													
<=2												1		
2							1							
<=4										1				
<=8					1									
8		1												
32											1			

Table Antimicrobial susceptibility testing of Salmonella Virchow in Crustaceans - shrimps - cooked

Sampling Stage: Border Control Posts

Sampling Type: food sample

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Vietnam

Sampling Details:

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
<=0.03									1					
0.03						1								
<=0.25			1										1	
<=0.5				1										
0.5														1
<=1	1													
1								1						
<=2												1		
2							1							
<=4										1				
<=8					1									
8		1												
32											1			

Table Antimicrobial susceptibility testing of Salmonella Weltevreden in Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked

Sampling Stage: Processing plant

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: European Union

Sampling Details:

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
<=0.03									1					
0.03						1								
<=0.25			1										1	1
<=0.5				1				1						
<=1	1						1							
<=2												1		
<=4										1				
<=8					1									
8		1												
32											1			

Table Antimicrobial susceptibility testing of Salmonella Weltevreden in Crustaceans - shrimps - cooked

Sampling Stage: Border Control Posts

Sampling Type: food sample

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Vietnam

Sampling Details:

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.5	2	16	0.064	2	2	0.125	16	256	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
<=0.03									1					
0.03						1								
<=0.25			1										1	1
<=0.5				1				1						
<=1	1						1							
<=2												1		
<=4										1				
<=8					1									
8		1												
32											1			

ANTIMICROBIAL RESISTANCE TABLES FOR INDICATOR ESCHERICHIA COLI

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Meat from bovine animals - fresh

Sampling Stage: Retail

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON pnI2

Analytical Method:

Country of Origin: European Union

Sampling Details:

		AM substance											
		Cefepime	Cefotaxim	Cefotaxime + Clavulanic acid	Cefoxitin	Ceftazidim	Ceftazidime + Clavulanic acid	Ertapenem	Imipenem	Meropenem	Temocillin		
Ceftazidime synergy test	Cefotaxime synergy test	MIC	ECOFF	0.125	0.25	0.25	8	0.5	0.5	0.06	0.5	0.125	32
		Lowest limit	0.064	0.25	0.064	0.5	0.25	0.12	0.015	0.12	0.03	0.5	
		Highest limit	32	64	64	64	128	128	2	16	16	64	
		N of tested isolates	1	1	1	1	1	1	1	1	1	1	
		N of resistant isolates	0	1	1	1	1	1	0	0	0	0	
Not Available	Not Available	<=0.015	1										
		<=0.03	1										
		0.12	1										
		0.25	1										
		0.5	1										
		1	1				1	1					
		8	1										
		16	1										

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Meat from bovine animals - fresh

Sampling Stage: Retail

Sampler: Official sampling

Analytical Method:

Country of Origin: European Union

Sampling Type: food sample - meat

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER AMR MON

Sampling Details:

MIC	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Collistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	62	62	62	62	62	62	62	62	62	62	62	62	62	62
	N of resistant isolates	2	0	1	1	1	1	1	0	0	1	2	3	0	2
<=0.015							51								
<=0.03										61					
0.03							9								
0.064							1			1					
<=0.25				61										57	19
<=0.5					61				28						
0.5							1							5	38
<=1		1						57							
1				1					29						3
<=2													53		
2		18			1			4	5						
<=4											61				
4		40	24					1					6		
<=8						58						38			
8		1	36												
16			2			3						11			
32												9			
>32															2
64												2			
>64		2											3		
>128						1					1				

	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	62	62	62	62	62	62	62	62	62	62	62	62	62	62
MIC	N of resistant isolates	2	0	1	1	1	1	1	0	0	1	2	3	0	2
	>1024	2													

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Meat from bovine animals - fresh

Sampling Stage: Retail

Sampler: Official sampling

Analytical Method:

Country of Origin: European Union

Sampling Type: food sample - meat

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER ESBL MON pnl2

Sampling Details:

		AM substance	Cefepime	Cefotaxim	Cefotaxime + Clavulanic acid	Cefoxitin	Ceftazidim	Ceftazidime + Clavulanic acid	Ertapenem	Imipenem	Meropenem	Temocillin
Ceftazidime synergy test	Cefotaxime synergy test	ECOFF	0.125	0.25	0.25	8	0.5	0.5	0.06	0.5	0.125	32
		Lowest limit	0.064	0.25	0.064	0.5	0.25	0.12	0.015	0.12	0.03	0.5
		Highest limit	32	64	64	64	128	128	2	16	16	64
		N of tested isolates	3	3	3	3	3	3	3	3	3	3
		N of resistant isolates	3	3	0	0	3	0	0	0	0	0
		MIC										
Positive/Pre sent	Positive/Pre sent	<=0.015							1			
		<=0.03									1	
		0.12			1							
		0.25					1			1		
		2					1					
		8				1						1
		16	1									
		>64		1								
	Negative/Ab sent	<=0.015							2			
		<=0.03									2	
		<=0.064			2							
		0.25					2			2		
		0.5	1									
		1	1									
		4										1
		8		1		2						1

			AM substance	Cefepime	Cefotaxim	Cefotaxime + Clavulanic acid	Cefoxitin	Ceftazidim	Ceftazidime + Clavulanic acid	Ertapenem	Imipenem	Meropenem	Temocillin
Ceftazidime synergy test	Cefotaxime synergy test	MIC	ECOFF	0.125	0.25	0.25	8	0.5	0.5	0.06	0.5	0.125	32
			Lowest limit	0.064	0.25	0.064	0.5	0.25	0.12	0.015	0.12	0.03	0.5
			Highest limit	32	64	64	64	128	128	2	16	16	64
			N of tested isolates	3	3	3	3	3	3	3	3	3	3
			N of resistant isolates	3	3	0	0	3	0	0	0	0	0
Negative/Ab sent	Negative/Ab sent	16			1			1					
		32						1					

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Meat from bovine animals - fresh

Sampling Stage: Retail

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER ESBL MON

Analytical Method:

Country of Origin: European Union

Sampling Details:

MIC	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Collistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	N of resistant isolates	3	0	3	3	2	1	0	0	0	1	3	2	0	3
<=0.015							1								
<=0.03										3					
0.03							1								
<=0.25														3	
<=0.5									1						
<=1								3							
1									2						
<=2													1		
2					1										
<=4											2				
4			2												
>4				3											
<=8						1									
>8					2		1								
16			1												
32						1									
>32															3
64													1		
>64		3											1		
128						1									
>128											1				

	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	3	3	3	3	3	3	3	3	3	3	3	3	3	3
MIC	N of resistant isolates	3	0	3	3	2	1	0	0	0	1	3	2	0	3
	>1024	3													

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Vegetables - leaves

Sampling Stage: Retail

Sampling Type: food sample

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER CARBA MON pnl

Analytical Method:

Country of Origin: Israel

Sampling Details:

MIC	AM substance	Cefepime	Cefotaxim	Cefotaxime + Clavulanic acid	Cefoxitin	Ceftazidim	Ceftazidime + Clavulanic acid	Ertapenem	Imipenem	Meropenem	Temocillin
	ECOFF	0.125	0.25	0.25	8	0.5	0.5	0.06	0.5	0.125	32
	Lowest limit	0.064	0.25	0.064	0.5	0.25	0.12	0.015	0.12	0.03	0.5
	Highest limit	32	64	64	64	128	128	2	16	16	64
	N of tested isolates	1	1	1	1	1	1	1	1	1	1
	N of resistant isolates	0	0	1	1	0	1	1	1	1	0
	<=0.064	1									
	<=0.25		1			1					
	1						1				
	>2							1			
	8			1						1	1
	16								1		
	>64				1						

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Vegetables - leaves

Sampling Stage: Retail

Sampling Type: food sample

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER CARBA MON

Analytical Method:

Country of Origin: Israel

Sampling Details:

MIC	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	N of resistant isolates	1	0	0	0	0	0	0	0	0	1	0	0	0	0
<=0.015															
<=0.25															
<=0.5															
<=1															
<=2															
<=4															
<=8															
8															
>64															

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Meat from bovine animals - meat preparation - intended to be eaten raw

Sampling Stage: Retail

Sampler: Official sampling

Analytical Method:

Country of Origin: European Union

Sampling Type: food sample - meat

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER ESBL MON pnl2

Sampling Details:

		AM substance	Cefepime	Cefotaxim	Cefotaxime + Clavulanic acid	Cefoxitin	Ceftazidim	Ceftazidime + Clavulanic acid	Ertapenem	Imipenem	Meropenem	Temocillin
ECOFF			0.125	0.25	0.25	8	0.5	0.5	0.06	0.5	0.125	32
Lowest limit			0.064	0.25	0.064	0.5	0.25	0.12	0.015	0.12	0.03	0.5
Highest limit			32	64	64	64	128	128	2	16	16	64
N of tested isolates			1	1	1	1	1	1	1	1	1	1
Ceftazidime synergy test	Cefotaxime synergy test	MIC										
		N of resistant isolates	1	1	0	0	1	0	0	0	0	0
Negative/Ab sent	Positive/Pre sent	<=0.03										1
		0.03										1
		0.12										1
		0.25										1
		2										1
		8										1
		>32	1									
		>64										1

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Meat from bovine animals - meat preparation - intended to be eaten raw

Sampling Stage: Retail

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER ESBL MON

Analytical Method:

Country of Origin: European Union

Sampling Details:

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Collistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	1	0	1	1	0	0	0	0	0	0	0	0	0	0
MIC														
<=0.03														
0.03														
<=0.25														
<=0.5														
<=1														
1														
<=2														
<=4														
4														
>4														
<=8														
8														
>64														

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Cattle (bovine animals) - calves (under 1 year)

Sampling Stage: Slaughterhouse

Sampler: Official sampling

Analytical Method:

Country of Origin: Netherlands

Sampling Type: animal sample - caecum

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: AMR MON pnl2

Sampling Details:

		AM substance	Cefepime	Cefotaxim	Cefotaxime + Clavulanic acid	Cefoxitin	Ceftazidim	Ceftazidime + Clavulanic acid	Ertapenem	Imipenem	Meropenem	Temocillin
Ceftazidime synergy test	Cefotaxime synergy test		ECOFF	0.125	0.25	0.25	8	0.5	0.5	0.06	0.5	0.125
		Lowest limit	0.064	0.25	0.064	0.5	0.25	0.12	0.015	0.12	0.03	0.5
		Highest limit	32	64	64	64	128	128	2	16	16	64
		N of tested isolates	1	1	1	1	1	1	1	1	1	1
		N of resistant isolates	1	1	0	0	0	0	0	0	0	0
Not Available	Not Available	MIC										
		<=0.015	1									
		<=0.03	1									
		<=0.064	1									
		<=0.125	1									
		<=0.25	1									
		2	1									
		4	1									
		8	1									

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Cattle (bovine animals) - calves (under 1 year)

Sampling Stage: Slaughterhouse

Sampler: Official sampling

Analytical Method:

Country of Origin: Netherlands

Sampling Type: animal sample - caecum

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: AMR MON

Sampling Details:

MIC	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Collistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	300	300	300	300	300	300	300	300	300	300	300	300	300	300
	N of resistant isolates	69	4	1	0	52	10	0	12	0	6	86	130	0	64
<=0.015							247								
<=0.03										297					
0.03							41								
0.064							2			3					
<=0.25				299										278	105
0.25							6								
<=0.5					300				208						
0.5							4							22	121
<=1		12						286							
1									70						10
<=2			11										120		
2		84		1				14	10						
<=4											289				
4		117	87										48		
<=8						230						214			
8		18	183								3		2		
16			15			18			3		2				
32			1			3			1				5		4
>32									8						60
64		1				2							43		
>64		68	3										82		

	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	300	300	300	300	300	300	300	300	300	300	300	300	300	300
MIC	N of resistant isolates	69	4	1	0	52	10	0	12	0	6	86	130	0	64
	128					19					1				
	>128					28					5				
	>1024											86			

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Cattle (bovine animals) - calves (under 1 year)

Sampling Stage: Slaughterhouse

Sampler: Official sampling

Analytical Method:

Country of Origin: Netherlands

Sampling Details:

Sampling Type: animal sample - caecum

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: ESBL MON pnl2

		AM substance													
			Cefepime	Cefotaxim	Cefotaxime + Clavulanic acid	Cefoxitin	Ceftazidim	Ceftazidime + Clavulanic acid	Ertapenem	Imipenem	Meropenem	Temocillin			
Ceftazidime synergy test	Cefotaxime synergy test	MIC	ECOFF	0.125	0.25	0.25	8	0.5	0.5	0.06	0.5	0.125	32		
		Lowest limit	0.064	0.25	0.064	0.5	0.25	0.12	0.015	0.12	0.03	0.5			
		Highest limit	32	64	64	64	128	128	2	16	16	64			
		N of tested isolates	102	102	102	102	102	102	102	102	102	102			
		N of resistant isolates	101	102	4	10	99	6	3	0	1	1			
Not Available	Not Available	<=0.015	67												
		<=0.03	94												
		0.03	29												
		<=0.064	78												
		0.064	3									7			
		<=0.125	19									12			
		0.12	1	18											
		0.25	2	2									66	59	
		0.5	1	3									11	31	1
		1	2	12									2		
		2	6	2	2	5	25	1				2			
		4	2	1	1	41	16	2	22						
		8	16	2	1	46	25	1	52						
		16	10	7	4				17	1	23				
		32	30	4	3				3	2					
		>32	32												

			AM substance	Cefepime	Cefotaxim	Cefotaxime + Clavulanic acid	Cefoxitin	Ceftazidim	Ceftazidime + Clavulanic acid	Ertapenem	Imipenem	Meropenem	Temocillin
Ceftazidime synergy test	Cefotaxime synergy test	MIC	ECOFF	0.125	0.25	0.25	8	0.5	0.5	0.06	0.5	0.125	32
			Lowest limit	0.064	0.25	0.064	0.5	0.25	0.12	0.015	0.12	0.03	0.5
			Highest limit	32	64	64	64	128	128	2	16	16	64
			N of tested isolates	102	102	102	102	102	102	102	102	102	102
			N of resistant isolates	101	102	4	10	99	6	3	0	1	1
Not Available	Not Available	64			9		1	1					1
		>64			77		2						

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Cattle (bovine animals) - calves (under 1 year)

Sampling Stage: Slaughterhouse

Sampler: Official sampling

Analytical Method:

Country of Origin: Netherlands

Sampling Type: animal sample - caecum

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: ESBL MON

Sampling Details:

MIC	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Collistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	102	102	102	102	102	102	102	102	102	102	102	102	102	102
	N of resistant isolates	102	7	102	96	40	35	1	14	1	12	64	79	0	55
<=0.015		54													
<=0.03		100													
0.03		13													
0.064		1													
0.12		2													
<=0.25		8428													
0.25		111													
<=0.5		655													
0.5		121717													
<=1		94													
1		112711													
<=2		117													
2		130761													
<=4		74													
4		2212115													
>4		98													
<=8		6136													
8		61211131													
>8		218													
16		11132													
32		3171													

	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	102	102	102	102	102	102	102	102	102	102	102	102	102	102
MIC	N of resistant isolates	102	7	102	96	40	35	1	14	1	12	64	79	0	55
	>32								5						54
	64		1			4							28		
	>64	102	3										51		
	128					15					1				
	>128					20					11				
	>1024											64			

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Cattle (bovine animals) - dairy cows

Sampling Stage: Farm

Sampler: Official sampling

Analytical Method:

Country of Origin: Netherlands

Sampling Details:

Sampling Type: animal sample - faeces

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER ESBL MON pnl2

		AM substance												
			Cefepime	Cefotaxim	Cefotaxime + Clavulanic acid	Cefoxitin	Ceftazidim	Ceftazidime + Clavulanic acid	Ertapenem	Imipenem	Meropenem	Temocillin		
Ceftazidime synergy test	Cefotaxime synergy test	MIC	ECOFF	0.125	0.25	0.25	8	0.5	0.5	0.06	0.5	0.125	32	
		Lowest limit	0.064	0.25	0.064	0.5	0.25	0.12	0.015	0.12	0.03	0.5		
		Highest limit	32	64	64	64	128	128	2	16	16	64		
		N of tested isolates	21	21	21	21	21	21	21	21	21	21		
		N of resistant isolates	19	21	5	7	21	5	1	0	0	0		
Not Available	Not Available	<=0.015										14		
		<=0.03											21	
		0.03										5		
		<=0.064	16											
		0.064										1		
		<=0.125										14	12	
		0.12	2								1			
		0.25	2								2	8		
		0.5	1								1			
		1	1				3							
		2	1			1	1		1					
		4	3	2	2	10	4	1	8					
		8	3	3	1	4	6	1	12					
		16	5	4				3	2	1				
		32	2	3										
		>32	3											

			AM substance	Cefepime	Cefotaxim	Cefotaxime + Clavulanic acid	Cefoxitin	Ceftazidim	Ceftazidime + Clavulanic acid	Ertapenem	Imipenem	Meropenem	Temocillin
Ceftazidime synergy test	Cefotaxime synergy test	MIC	ECOFF	0.125	0.25	0.25	8	0.5	0.5	0.06	0.5	0.125	32
			Lowest limit	0.064	0.25	0.064	0.5	0.25	0.12	0.015	0.12	0.03	0.5
			Highest limit	32	64	64	64	128	128	2	16	16	64
			N of tested isolates	21	21	21	21	21	21	21	21	21	21
			N of resistant isolates	19	21	5	7	21	5	1	0	0	0
Not Available	Not Available	64			2		2	1					
		>64			13		1						

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Cattle (bovine animals) - dairy cows

Sampling Stage: Farm

Sampler: Official sampling

Analytical Method:

Country of Origin: Netherlands

Sampling Type: animal sample - faeces

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER ESBL MON

Sampling Details:

MIC	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Collistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	21	21	21	21	21	21	21	21	21	21	21	21	21	21
	N of resistant isolates	21	0	21	21	6	13	0	2	0	7	8	11	0	8
<=0.015							8								
<=0.03										21					
0.12							5								
<=0.25														21	7
0.25							2								
<=0.5									12						
0.5							2								6
<=1								21							
1				1	2				6						
<=2			2										10		
2				1	4				1						
<=4											11				
4			8	2	4		1								
>4				17											
<=8						15						13			
8			11		7		1				2				
>8					4		2								
16									1		1		1		
32											1				
>32									1						8
64													7		

	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	21	21	21	21	21	21	21	21	21	21	21	21	21	21
MIC	N of resistant isolates	21	0	21	21	6	13	0	2	0	7	8	11	0	8
	>64	21											3		
	128					2					1				
	>128					4					5				
	>1024											8			

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Cattle (bovine animals) - dairy cows

Sampling Stage: Farm

Sampler: Official sampling

Analytical Method:

Country of Origin: Unknown

Sampling Type: animal sample - faeces

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER AMR MON

Sampling Details:

MIC	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Collistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	196	196	196	196	196	196	196	196	196	196	196	196	196	196
	N of resistant isolates	1	0	0	0	1	0	0	0	0	0	1	3	0	1
<=0.015							179								
<=0.03										196					
0.03							16								
0.064							1								
<=0.25				196										195	105
<=0.5					196				141						
0.5														1	85
<=1		13						191							
1									47						5
<=2			12										154		
2		46						5	8						
<=4											196				
4		115	72										39		
<=8						182						195			
8		21	111												
16			1			13									
>32															1
>64		1											3		
>128						1									
>1024												1			

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Meat from turkey - fresh - chilled

Sampling Stage: Retail

Sampler: Official sampling

Analytical Method:

Country of Origin: European Union

Sampling Type: food sample - meat

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER AMR MON

Sampling Details:

MIC	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Collistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	14	14	14	14	14	14	14	14	14	14	14	14	14	14
	N of resistant isolates	10	0	0	0	0	5	2	0	0	2	2	7	0	4
<=0.015							8								
<=0.03										12					
0.064							1			2					
<=0.25				14										11	5
0.25							3								
<=0.5					14				5						
0.5							2							3	5
<=1								10							
1									8						
<=2													5		
2		1						2	1						
<=4											10				
4		2	4										2		
<=8						14						5			
8		1	10					2			1				
16											1	5			
32												1			
>32															4
64												1	4		
>64		10											3		
>128											2				

	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	14	14	14	14	14	14	14	14	14	14	14	14	14	14
MIC	N of resistant isolates	10	0	0	0	0	5	2	0	0	2	2	7	0	4
	>1024	2													

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Pigs - fattening pigs

Sampling Stage: Farm

Sampler: Official sampling

Analytical Method:

Country of Origin: Netherlands

Sampling Details:

Sampling Type: animal sample - faeces

Sampling Strategy: Objective sampling

Sampling Context: Surveillance

Programme Code: OTHER ESBL MON pnl2

		AM substance	Cefepime	Cefotaxim	Cefotaxime + Clavulanic acid	Cefoxitin	Ceftazidim	Ceftazidime + Clavulanic acid	Ertapenem	Imipenem	Meropenem	Temocillin
Ceftazidime synergy test	Cefotaxime synergy test	ECOFF	0.125	0.25	0.25	8	0.5	0.5	0.06	0.5	0.125	32
		Lowest limit	0.064	0.25	0.064	0.5	0.25	0.12	0.015	0.12	0.03	0.5
		Highest limit	32	64	64	64	128	128	2	16	16	64
		N of tested isolates	5	5	5	5	5	5	5	5	5	5
		N of resistant isolates	3	5	4	4	5	4	0	0	0	0
		MIC										
Positive/Pre sent		<=0.015							1			
		<=0.03									1	
		<=0.064			1							
		0.25					1			1		
		1					1					
		4			1							
	Negative/Ab sent	8	1									1
		>64		1								
		<=0.015						1				
		<=0.03									4	
		0.03						3				
		0.12	2									
Negative/Ab sent		0.25	2							4		
		0.5			1							
		1		1								
		2			3			1				
		4		3			1	1				

		AM substance												
			Cefepime	Cefotaxim	Cefotaxime + Clavulanic acid			Ceftazidim	Ceftazidime + Clavulanic acid		Ertapenem	Imipenem	Meropenem	Temocillin
Ceftazidime synergy test	Cefotaxime synergy test	MIC	ECOFF	0.125	0.25	0.25	8	0.5	0.5	0.06	0.5	0.125	32	
		Lowest limit	0.064	0.25	0.064	0.5	0.25	0.12	0.015	0.12	0.03	0.5		
		Highest limit	32	64	64	64	128	128	2	16	16	64		
		N of tested isolates	5	5	5	5	5	5	5	5	5	5		
		N of resistant isolates	3	5	4	4	5	4	0	0	0	0		
Negative/Ab sent	Negative/Ab sent		8					2	2					4
		16					1	1						
		64					3							

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Pigs - fattening pigs

Sampling Stage: Farm

Sampling Type: animal sample - faeces

Sampling Context: Surveillance

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER ESBL MON

Analytical Method:

Country of Origin: Netherlands

Sampling Details:

MIC	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Collistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	N of resistant isolates	5	0	5	5	0	2	0	0	0	2	2	2	0	1
<=0.015							1								
<=0.03										5					
0.03							2								
0.12							2								
<=0.25														5	2
<=0.5									4						
0.5															1
<=1								5							
1				1	1				1						1
<=2													3		
2				3											
<=4											3				
4			1		1										
>4				1											
<=8						5						1			
8			4		3										
16												2			
>32															1
64											2				
>64		5											2		
>1024												2			

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Pigs - fattening pigs

Sampling Stage: Slaughterhouse

Sampler: Official sampling

Analytical Method:

Country of Origin: Netherlands

Sampling Details:

Sampling Type: animal sample - caecum

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: AMR MON pnl2

		AM substance											
			Cefepime	Cefotaxim	Cefotaxime + Clavulanic acid	Cefoxitin	Ceftazidim	Ceftazidime + Clavulanic acid	Ertapenem	Imipenem	Meropenem	Temocillin	
Ceftazidime synergy test	Cefotaxime synergy test	MIC	ECOFF	0.125	0.25	0.25	8	0.5	0.5	0.06	0.5	0.125	32
		Lowest limit	0.064	0.25	0.064	0.5	0.25	0.12	0.015	0.12	0.03	0.5	
		Highest limit	32	64	64	64	128	128	2	16	16	64	
		N of tested isolates	1	1	1	1	1	1	1	1	1	1	
		N of resistant isolates	1	1	0	0	1	0	0	0	0	0	
Not Available	Not Available	<=0.015	1										
		<=0.03	1										
		<=0.064	1										
		<=0.125	1						1				
		1	1										
		2	1										
		8	1										
		16	1										
		64	1										

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Pigs - fattening pigs

Sampling Stage: Slaughterhouse

Sampling Type: animal sample - caecum

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: AMR MON

Analytical Method:

Country of Origin: Netherlands

Sampling Details:

MIC	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Collistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	302	302	302	302	302	302	302	302	302	302	302	302	302	302
	N of resistant isolates	64	0	1	1	26	3	0	1	0	2	86	87	0	69
<=0.015							271								
<=0.03										298					
0.03							27								
0.064							1			4					
<=0.25				301										279	113
0.25							1								
<=0.5					301				192						
0.5							1							23	113
<=1		8						291							
1									90						5
<=2			17										184		
2		77			1			11	19						2
<=4											296				
4		137	115				1		1				28		
>4				1											
<=8						260						215			
8		16	161								3		3		
16		1	9			16					1	1			
32		1				9							2		
>32															69
64						5							25		

	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	302	302	302	302	302	302	302	302	302	302	302	302	302	302
MIC	N of resistant isolates	64	0	1	1	26	3	0	1	0	2	86	87	0	69
	>64	62											60		
	128					6					1				
	>128					6					1				
	>1024											86			

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Pigs - fattening pigs

Sampling Stage: Slaughterhouse

Sampler: Official sampling

Analytical Method:

Country of Origin: Netherlands

Sampling Details:

Sampling Type: animal sample - caecum

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: ESBL MON pnl2

Ceftazidime synergy test	Cefotaxime synergy test	MIC	AM substance	Cefepime	Cefotaxim	Cefotaxime + Clavulanic acid	Cefoxitin	Ceftazidim	Ceftazidime + Clavulanic acid	Ertapenem	Imipenem	Meropenem	Temocillin
			ECOFF	0.125	0.25	0.25	8	0.5	0.5	0.06	0.5	0.125	32
			Lowest limit	0.064	0.25	0.064	0.5	0.25	0.12	0.015	0.12	0.03	0.5
			Highest limit	32	64	64	64	128	128	2	16	16	64
			N of tested isolates	50	50	50	50	50	50	50	50	50	50
			N of resistant isolates	31	50	29	29	49	29	2	1	0	0
Not Available	Not Available	<=0.015	22										
		<=0.03	48										
		0.03	24										
		<=0.064	1	18									
		0.064	2										
		<=0.125	8										
		0.12	18	3									
		0.25	9	11									
		0.5	1	1									
		1	1	5									
		2	2	8	18	1	10	3					
		4	1	17	3	10	8	12	7				
		8	4	6	3	10	20	10	34				
		16	5	1	3		5	3	9				
		32	4	1	7		2						
		>32	4										

			AM substance										
				Cefepime	Cefotaxim	Cefotaxime + Clavulanic acid	Cefoxitin	Ceftazidim	Ceftazidime + Clavulanic acid	Ertapenem	Imipenem	Meropenem	Temocillin
			ECOFF	0.125	0.25	0.25	8	0.5	0.5	0.06	0.5	0.125	32
			Lowest limit	0.064	0.25	0.064	0.5	0.25	0.12	0.015	0.12	0.03	0.5
			Highest limit	32	64	64	64	128	128	2	16	16	64
			N of tested isolates	50	50	50	50	50	50	50	50	50	50
Ceftazidime synergy test	Cefotaxime synergy test	MIC	N of resistant isolates	31	50	29	29	49	29	2	1	0	0
Not Available	Not Available	64			6		16	1	1				
		>64			11		3						

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Pigs - fattening pigs

Sampling Stage: Slaughterhouse

Sampling Type: animal sample - caecum

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: ESBL MON

Analytical Method:

Country of Origin: Netherlands

Sampling Details:

MIC	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Collistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	50	50	50	50	50	50	50	50	50	50	50	50	50	50
	N of resistant isolates	50	5	50	49	5	13	0	1	0	13	30	23	0	22
<=0.015							30								
<=0.03										50					
0.03							5								
0.064							2								
0.12							8								
<=0.25														41	16
0.25							4								
<=0.5					1				30						
0.5							1							9	11
<=1								45							
1				2	5				16						1
<=2													20		
2				11	9			5	3						
<=4											36				
4			11	11	9				1				7		
>4				26											
<=8						42						20			
8			29		18										
>8					8										
16			5			3					1				
32			1								1				

	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	50	50	50	50	50	50	50	50	50	50	50	50	50	50
MIC	N of resistant isolates	50	5	50	49	5	13	0	1	0	13	30	23	0	22
	>32														22
	64	1	2			1					7		7		
	>64	49	2										16		
	128					2					3				
	>128					2					2				
	>1024											30			

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Meat from broilers (Gallus gallus) - fresh - chilled

Sampling Stage: Processing plant

Sampler: Official sampling

Analytical Method:

Country of Origin: European Union

Sampling Type: food sample - meat

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER ESBL MON pnl2

Sampling Details:

		AM substance												
			Cefepime	Cefotaxim	Cefotaxime + Clavulanic acid	Cefoxitin	Ceftazidim	Ceftazidime + Clavulanic acid	Ertapenem	Imipenem	Meropenem	Temocillin		
Ceftazidime synergy test	Cefotaxime synergy test	MIC	ECOFF	0.125	0.25	0.25	8	0.5	0.5	0.06	0.5	0.125	32	
		Lowest limit	0.064	0.25	0.064	0.5	0.25	0.12	0.015	0.12	0.03	0.5		
		Highest limit	32	64	64	64	128	128	2	16	16	64		
		N of tested isolates	9	9	9	9	9	9	9	9	9	9		
		N of resistant isolates	9	9	1	2	9	1	2	0	0	0		
Positive/Pre sent	Negative/Ab sent	0.064										1		
		0.12										1		
		0.5	1										1	
		8										1		
		16											1	
		32												
		64												
Negative/Ab sent	Positive/Pre sent	<=0.03											2	
		0.03										3		
		<=0.064												
		0.064											2	
		<=0.125										1		
		0.12										2	1	
		0.25										3	4	
		1										1		
		2										1		
		4											1	

Ceftazidime synergy test	Cefotaxime synergy test	MIC	AM substance	Cefepime	Cefotaxim	Cefotaxime + Clavulanic acid	Cefoxitin	Ceftazidim	Ceftazidime + Clavulanic acid	Ertapenem	Imipenem	Meropenem	Temocillin
			ECOFF	0.125	0.25	0.25	8	0.5	0.5	0.06	0.5	0.125	32
			Lowest limit	0.064	0.25	0.064	0.5	0.25	0.12	0.015	0.12	0.03	0.5
			Highest limit	32	64	64	64	128	128	2	16	16	64
			N of tested isolates	9	9	9	9	9	9	9	9	9	9
			N of resistant isolates	9	9	1	2	9	1	2	0	0	0
Ceftazidime synergy test	Positive/Pre sent	8		1			3	1					2
		16					1	1					1
		32		1									
		>32		2									
		64			1								
		>64			3								
	Negative/Ab sent	<=0.015								4			
		<=0.03										4	
		<=0.064				4							
		<=0.125						1					
		0.25						3		4			
		1		3									
		2		1									
		4					2						
		8			1		2	1					4
		16			3								
		32						3					

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Meat from broilers (Gallus gallus) - fresh - chilled

Sampling Stage: Processing plant

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER ESBL MON

Analytical Method:

Country of Origin: European Union

Sampling Details:

MIC	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Collistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	N of resistant isolates	9	0	9	9	2	6	0	1	0	4	6	4	0	5
<=0.015							1								
<=0.03										8					
0.03							2								
0.064										1					
<=0.25														9	3
0.25							3								
<=0.5									5						
0.5															1
<=1								9							
1					1		1		3						
<=2													5		
2					1										
<=4											4				
4			2				1		1						
>4				9											
<=8						7						1			
8			6		3		1				1				
>8					4										
16			1												
32												2	1		
>32															5

MIC	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	N of resistant isolates	9	0	9	9	2	6	0	1	0	4	6	4	0	5
	64	1													
>64	9												3		
>128	1										4				
>1024	6														

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Meat from broilers (Gallus gallus) - fresh - chilled

Sampling Stage: Retail

Sampler: Official sampling

Analytical Method:

Country of Origin: European Union

Sampling Details:

Sampling Type: food sample - meat

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: ESBL MON pnI2

		AM substance		Cefepime	Cefotaxim	Cefotaxime + Clavulanic acid	Cefoxitin	Ceftazidim	Ceftazidime + Clavulanic acid	Ertapenem	Imipenem	Meropenem	Temocillin
Ceftazidime synergy test	Cefotaxime synergy test	MIC	ECOFF	0.125	0.25	0.25	8	0.5	0.5	0.06	0.5	0.125	32
			Lowest limit	0.064	0.25	0.064	0.5	0.25	0.12	0.015	0.12	0.03	0.5
			Highest limit	32	64	64	64	128	128	2	16	16	64
			N of tested isolates	15	15	15	15	15	15	15	15	15	15
			N of resistant isolates	15	15	3	6	15	3	2	0	0	0
Positive/Pre sent	Negative/Ab sent	<=0.015								2			
		<=0.03										2	
		<=0.064				2							
		0.064										2	
		<=0.125						1					
		0.12								2			
		0.25						1			2		
		0.5		3							2		
		2		1									
		4					2						
		8				2							3
		16			4				2				1
		32						2					
		64					1	2					
		>64					1						
Negative/Ab sent	Positive/Pre sent	<=0.03										2	
		0.03								2			

Ceftazidime synergy test	Cefotaxime synergy test	MIC	AM substance	Cefepime	Cefotaxim	Cefotaxime + Clavulanic acid	Cefoxitin	Ceftazidim	Ceftazidime + Clavulanic acid	Ertapenem	Imipenem	Meropenem	Temocillin
		ECOFF		0.125	0.25	0.25	8	0.5	0.5	0.06	0.5	0.125	32
		Lowest limit		0.064	0.25	0.064	0.5	0.25	0.12	0.015	0.12	0.03	0.5
		Highest limit		32	64	64	64	128	128	2	16	16	64
		N of tested isolates		15	15	15	15	15	15	15	15	15	15
		N of resistant isolates		15	15	3	6	15	3	2	0	0	0
Negative/Ab sent	Positive/Pre sent	<=0.064				1							
		0.12				1							
		0.25							2		2		
		2						1					
		4					1						
		8		1			1						2
		32						1					
		>32		1									
		64			1								
		>64			1								
	Negative/Ab sent	<=0.015								5			
		<=0.03										9	
		0.03								4			
		<=0.064				4							
		<=0.125							2		1		
		0.12				3							
		0.25		3		1			6		6		
		0.5		2							2		
		1		2				1					
		2		1	1			2					
		4			4		2	5					1
		8		1	3	1	3		1				6
		16					1	1					1
		32			1		2						1
		64					1						

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Meat from broilers (Gallus gallus) - fresh - chilled

Sampling Stage: Retail

Sampler: Official sampling

Analytical Method:

Country of Origin: European Union

Sampling Type: food sample - meat

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: ESBL MON

Sampling Details:

MIC	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Collistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	15	15	15	15	15	15	15	15	15	15	15	15	15	15
	N of resistant isolates	15	0	15	15	3	7	0	0	0	7	5	5	0	4
<=0.015							5								
<=0.03										15					
0.03							3								
<=0.25														15	6
0.25							2								
<=0.5									14						
0.5															3
<=1								15							
1					3		2		1						2
<=2													9		
2				1	2										
<=4											8				
4			4	4	4		3						1		
>4				10											
<=8						10						2			
8			6		1										
>8					5										
16			5			2						5			
32												2	1		
>32															4
64						2					1	1	2		

	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	15	15	15	15	15	15	15	15	15	15	15	15	15	15
MIC	N of resistant isolates	15	0	15	15	3	7	0	0	0	7	5	5	0	4
	>64	15											2		
	128										1				
	>128					1					5				
	>1024											5			

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Meat from broilers (Gallus gallus) - fresh - chilled

Sampling Stage: Retail

Sampler: Official sampling

Analytical Method:

Country of Origin: European Union

Sampling Type: food sample - meat

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER AMR MON

Sampling Details:

MIC	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Collistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	223	223	223	223	223	223	223	223	223	223	223	223	223	223
	N of resistant isolates	86	4	0	0	8	43	3	7	0	33	62	71	0	51
<=0.015							140								
<=0.03										222					
0.03							33								
0.064							7			1					
0.12							2								
<=0.25				223										196	85
0.25							24								
<=0.5					223				127						
0.5							5							25	68
<=1		7						211							
1									77					2	17
<=2			10										146		
2		49						9	12						2
<=4											180				
4		77	94				1	2	5				6		
<=8						206						74			
8		4	108				7	1			6				
>8							4								
16			7			9					4	30	1		
32						2						43	3		
>32									2						51

MIC	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	223	223	223	223	223	223	223	223	223	223	223	223	223	223
	N of resistant isolates	86	4	0	0	8	43	3	7	0	33	62	71	0	51
64			3			2					3	14	16		
>64		86	1										51		
128						1					8	4			
>128						3					22				
512												4			
1024												2			
>1024												52			

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked

Sampling Stage: Border Control Posts

Sampling Type: food sample

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER ESBL MON pnl2

Analytical Method:

Country of Origin: Thailand

Sampling Details:

		AM substance										
		Cefepime	Cefotaxim	Cefotaxime + Clavulanic acid	Cefoxitin	Ceftazidim	Ceftazidime + Clavulanic acid	Ertapenem	Imipenem	Meropenem	Temocillin	
		ECOFF	0.125	0.25	0.25	8	0.5	0.5	0.06	0.5	0.125	32
		Lowest limit	0.064	0.25	0.064	0.5	0.25	0.12	0.015	0.12	0.03	0.5
		Highest limit	32	64	64	64	128	128	2	16	16	64
		N of tested isolates	1	1	1	1	1	1	1	1	1	1
Ceftazidime synergy test	Cefotaxime synergy test	MIC	N of resistant isolates	1	1	0	0	1	0	0	0	0
Negative/Ab sent	Positive/Pre sent	<=0.03	1									
		0.03	1									
		<=0.064	1									
		<=0.125	1									
		0.25	1									
		4	1									
		8	1									
		32	1									
		>64	1									

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked															
Sampling Stage: Border Control Posts					Sampling Type: food sample					Sampling Context: Monitoring					
Sampler: Official sampling					Sampling Strategy: Objective sampling					Programme Code: OTHER ESBL MON					
Analytical Method:															
Country of Origin: Thailand															
Sampling Details:															
	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MIC	N of resistant isolates	1	0	1	1	0	1	0	0	0	1	1	0	0	0
	<=0.03									1					
	<=0.25													1	
	<=1							1							
	1								1						
	<=2												1		
	2														1
	>4			1											
	<=8					1									
	8				1										
	>8								1						
	16		1												
	>64	1													
	>128										1				
	>1024											1			

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked

Sampling Stage: Border Control Posts

Sampling Type: food sample

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER ESBL MON pnl2

Analytical Method:

Country of Origin: Brazil

Sampling Details:

		AM substance		Cefepime	Cefotaxim	Cefotaxime + Clavulanic acid	Cefoxitin	Ceftazidim	Ceftazidime + Clavulanic acid	Ertapenem	Imipenem	Meropenem	Temocillin
Ceftazidime synergy test	Cefotaxime synergy test	MIC	ECOFF	0.125	0.25	0.25	8	0.5	0.5	0.06	0.5	0.125	32
			Lowest limit	0.064	0.25	0.064	0.5	0.25	0.12	0.015	0.12	0.03	0.5
			Highest limit	32	64	64	64	128	128	2	16	16	64
			N of tested isolates	6	6	6	6	6	6	6	6	6	6
			N of resistant isolates	6	6	0	0	6	0	0	0	0	0
			<=0.015	5									
			<=0.03	6									
Negative/Ab sent	Positive/Pre sent	MIC	<=0.064	3									
			0.064	1									
			<=0.125	1									
			0.12	3									
			0.25	4									
			0.5	1									
			2	2									
			4	2									
			8	4									
			16	2									
			32	3									
			>32	1									
			64	1									
			>64	5									

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked

Sampling Stage: Border Control Posts

Sampling Type: food sample

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER ESBL MON

Analytical Method:

Country of Origin: Brazil

Sampling Details:

MIC	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Collistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	N of resistant isolates	6	0	6	6	0	4	0	1	0	4	3	2	0	2
<=0.015							1								
<=0.03										6					
0.03							1								
<=0.25														6	1
0.25							2								
<=0.5									3						
0.5							1								2
<=1								6							
1									2						1
<=2													3		
2					2										
<=4											2				
4			1		1								1		
>4				6											
<=8						6						2			
8			5		3										
>8							1								
16												1			
32															1
>32									1						1
64													1		

	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	6	6	6	6	6	6	6	6	6	6	6	6	6	6
MIC	N of resistant isolates	6	0	6	6	0	4	0	1	0	4	3	2	0	2
	>64	6											1		
	128										1				
	>128										3				
	>1024											3			

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Gallus gallus (fowl) - broilers

Sampling Stage: Slaughterhouse

Sampler: Official sampling

Analytical Method:

Country of Origin: Netherlands

Sampling Details:

Sampling Type: animal sample - caecum

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: AMR MON pnl2

		AM substance		Cefepime	Cefotaxim	Cefotaxime + Clavulanic acid	Cefoxitin	Ceftazidim	Ceftazidime + Clavulanic acid	Ertapenem	Imipenem	Meropenem	Temocillin
Ceftazidime synergy test	Cefotaxime synergy test	ECOFF	0.125	0.25	0.25	8	0.5	0.5	0.06	0.5	0.125	32	
		Lowest limit	0.064	0.25	0.064	0.5	0.25	0.12	0.015	0.12	0.03	0.5	
		Highest limit	32	64	64	64	128	128	2	16	16	64	
		N of tested isolates	1	1	1	1	1	1	1	1	1	1	
		N of resistant isolates	0	1	0	0	0	0	0	0	0	0	
		MIC											
Not Available	Not Available	<=0.015	1										
		<=0.03	1										
		<=0.064	1										
		<=0.125	1										
		0.12	1										
		<=0.25	1										
		0.5	1										
		2	1										
		4	1										

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Gallus gallus (fowl) - broilers

Sampling Stage: Slaughterhouse

Sampling Type: animal sample - caecum

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: AMR MON

Analytical Method:

Country of Origin: Netherlands

Sampling Details:

MIC	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Collistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	305	305	305	305	305	305	305	305	305	305	305	305	305	305
	N of resistant isolates	133	0	1	0	11	105	0	9	0	89	125	92	0	94
<=0.015							185								
<=0.03										305					
0.03							14								
0.064							1								
0.12							10								
<=0.25				304										276	118
0.25							58								
<=0.5					305				206						
0.5				1			17							29	86
<=1	6							288							
1							5		76						7
<=2			10										178		
2	71						1	17	14						
<=4											197				
4	87	106					4						34		1
<=8						275						179			
8	8	155					5		3		10		1		
>8							5								
16	1	34				19			3		9	1	2		
32						5			3		2				1
>32															92

	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	305	305	305	305	305	305	305	305	305	305	305	305	305	305
MIC	N of resistant isolates	133	0	1	0	11	105	0	9	0	89	125	92	0	94
	64					5					11		39		
	>64	132											51		
	128										38	1			
	>128					1					38				
	>1024											124			

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Gallus gallus (fowl) - broilers

Sampling Stage: Slaughterhouse

Sampler: Official sampling

Analytical Method:

Country of Origin: Netherlands

Sampling Details:

Sampling Type: animal sample - caecum

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: ESBL MON pnI2

		AM substance		Cefepime	Cefotaxim	Cefotaxime + Clavulanic acid	Cefoxitin	Ceftazidim	Ceftazidime + Clavulanic acid	Ertapenem	Imipenem	Meropenem	Temocillin
Ceftazidime synergy test	Cefotaxime synergy test	ECOFF	MIC	0.125	0.25	0.25	8	0.5	0.5	0.06	0.5	0.125	32
		Lowest limit	MIC	0.064	0.25	0.064	0.5	0.25	0.12	0.015	0.12	0.03	0.5
		Highest limit	MIC	32	64	64	64	128	128	2	16	16	64
		N of tested isolates	MIC	31	31	31	31	31	31	31	31	31	31
		N of resistant isolates	MIC	30	31	3	5	30	3	1	0	0	0
		<=0.015	MIC							21			
		<=0.03	MIC									29	
Not Available	Not Available	0.03	MIC							8			
		<=0.064	MIC			20							
		0.064	MIC							1		2	
		<=0.125	MIC					7			8		
		0.12	MIC	1		8				1			
		0.25	MIC	3					19		20		
		0.5	MIC	5				1	2		3		
		1	MIC	6	1			2					
		2	MIC	1		1		11					
		4	MIC	2	3		12	1	1				8
		8	MIC	1	7	2	14	3	1				17
		16	MIC	3	4		2	6	1				6
		32	MIC	3	1		1	5					
		>32	MIC	6									

			AM substance										
				Cefepime	Cefotaxim	Cefotaxime + Clavulanic acid	Cefoxitin	Ceftazidim	Ceftazidime + Clavulanic acid	Ertapenem	Imipenem	Meropenem	Temocillin
			ECOFF	0.125	0.25	0.25	8	0.5	0.5	0.06	0.5	0.125	32
			Lowest limit	0.064	0.25	0.064	0.5	0.25	0.12	0.015	0.12	0.03	0.5
			Highest limit	32	64	64	64	128	128	2	16	16	64
			N of tested isolates	31	31	31	31	31	31	31	31	31	31
Ceftazidime synergy test	Cefotaxime synergy test	MIC	N of resistant isolates	30	31	3	5	30	3	1	0	0	0
Not Available	Not Available	64			2			2					
		>64		13		2							

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Gallus gallus (fowl) - broilers

Sampling Stage: Slaughterhouse

Sampling Type: animal sample - caecum

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: ESBL MON

Analytical Method:

Country of Origin: Netherlands

Sampling Details:

MIC	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Collistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	31	31	31	31	31	31	31	31	31	31	31	31	31	31
	N of resistant isolates	31	2	31	29	7	18	0	1	0	11	21	14	0	18
<=0.015							12								
<=0.03										31					
0.03							1								
0.12							2								
<=0.25														29	5
0.25							3								
<=0.5					2				22						
0.5							6							2	6
<=1								28							
1				1	3		4		7						2
<=2			1										15		
2				1	7			3	1						
<=4											14				
4			12	3	3		2						2		
>4				26											
<=8						24						9			
8			16		3						3				
>8					13		1								
16									1		3		1		
32			2			1						1	4		
>32															18

	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	31	31	31	31	31	31	31	31	31	31	31	31	31	31
MIC	N of resistant isolates	31	2	31	29	7	18	0	1	0	11	21	14	0	18
	64					2					1		6		
	>64	31											3		
	128					1					3				
	>128					3					7				
	>1024											21			

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Crustaceans - shrimps - cooked

Sampling Stage: Border Control Posts

Sampling Type: food sample

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER CARBA MON pnl

Analytical Method:

Country of Origin: Bangladesh

Sampling Details:

AM substance	Cefepime	Cefotaxim	Cefotaxime + Clavulanic acid	Cefoxitin	Ceftazidim	Ceftazidime + Clavulanic acid	Ertapenem	Imipenem	Meropenem	Temocillin	
	ECOFF	0.125	0.25	0.25	8	0.5	0.5	0.06	0.5	0.125	32
	Lowest limit	0.064	0.25	0.064	0.5	0.25	0.12	0.015	0.12	0.03	0.5
	Highest limit	32	64	64	64	128	128	2	16	16	64
	N of tested isolates	1	1	1	1	1	1	1	1	1	1
MIC	N of resistant isolates	1	1	0	0	1	0	0	0	0	0
<=0.015		1									
<=0.03		1									
<=0.064		1									
0.25		1									
4		1									
8		1									
16		1									
>64		1									

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Crustaceans - shrimps - cooked

Sampling Stage: Border Control Posts

Sampling Type: food sample

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER CARBA MON

Analytical Method:

Country of Origin: Bangladesh

Sampling Details:

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Collistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	1	0	1	1	0	1	0	0	0	0	0	0	0	0
MIC														
<=0.03									1					
<=0.25													1	
0.25						1								
<=0.5								1						
0.5														1
<=1							1							
<=2												1		
<=4										1				
>4			1											
<=8					1									
8				1										
16		1									1			
>64	1													

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Ready-to-eat salads

Sampling Stage: Retail

Sampler: Official sampling

Analytical Method:

Country of Origin: European Union

Sampling Type: food sample

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER ESBL MON pnl2

Sampling Details:

		AM substance	Cefepime	Cefotaxim	Cefotaxime + Clavulanic acid	Cefoxitin	Ceftazidim	Ceftazidime + Clavulanic acid	Ertapenem	Imipenem	Meropenem	Temocillin
Ceftazidime synergy test	Cefotaxime synergy test	ECOFF	0.125	0.25	0.25	8	0.5	0.5	0.06	0.5	0.125	32
		Lowest limit	0.064	0.25	0.064	0.5	0.25	0.12	0.015	0.12	0.03	0.5
		Highest limit	32	64	64	64	128	128	2	16	16	64
		N of tested isolates	1	1	1	1	1	1	1	1	1	1
		N of resistant isolates	1	1	0	0	1	0	0	0	0	0
		MIC										
Negative/Ab sent	Positive/Pre sent	<=0.03										1
		0.03										1
		0.12										1
		0.25										1
		8										1
		16										1
		>32	1									
		>64										1

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Ready-to-eat salads

Sampling Stage: Retail

Sampling Type: food sample

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER ESBL MON

Analytical Method:

Country of Origin: European Union

Sampling Details:

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Collistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	1	0	1	1	0	1	0	0	0	0	1	1	0	1
MIC														
<=0.03														
<=0.25														
<=0.5														
0.5														
<=1														
>4														
<=8														
8														
>8														
>32														
>64														
>1024														

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Vegetables - pre-cut - non-ready-to-eat

Sampling Stage: Retail

Sampler: Official sampling

Analytical Method:

Country of Origin: Unknown

Sampling Type: food sample

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER AMR MON

Sampling Details:

MIC	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Collistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	53	53	53	53	53	53	53	53	53	53	53	53	53	53
	N of resistant isolates	1	0	0	0	1	2	0	0	0	1	2	0	0	0
<=0.015							30								
<=0.03										53					
0.03							16								
0.064							5								
<=0.25				53										52	12
<=0.5					53				30						
0.5							2							1	36
<=1		1						50							
1									21						5
<=2			1										43		
2		9						3	2						
<=4											50				
4		34	11										9		
<=8						41						18			
8		8	39								1		1		
16			2			11					1	16			
32												12			
64						1						5			
>64		1													
128												1			
>128											1				

	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	53	53	53	53	53	53	53	53	53	53	53	53	53	53
MIC	N of resistant isolates	1	0	0	0	1	2	0	0	0	1	2	0	0	0
	>1024	1													

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Fish - raw - frozen

Sampling Stage: Border Control Posts

Sampling Type: food sample

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER CARBA MON pnl

Analytical Method:

Country of Origin: Vietnam

Sampling Details:

AM substance	Cefepime	Cefotaxim	Cefotaxime + Clavulanic acid	Cefoxitin	Ceftazidim	Ceftazidime + Clavulanic acid	Ertapenem	Imipenem	Meropenem	Temocillin	
	ECOFF	0.125	0.25	0.25	8	0.5	0.5	0.06	0.5	0.125	32
MIC	Lowest limit	0.064	0.25	0.064	0.5	0.25	0.12	0.015	0.12	0.03	0.5
	Highest limit	32	64	64	64	128	128	2	16	16	64
	N of tested isolates	1	1	1	1	1	1	1	1	1	1
	N of resistant isolates	0	0	0	0	0	0	1	1	1	0
	<=0.064	1		1							
	<=0.125						1				
	<=0.25		1			1					
	2										1
	>2							1			
	4				1						
>16								1	1		

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Fish - raw - frozen

Sampling Stage: Border Control Posts

Sampling Type: food sample

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER CARBA MON

Analytical Method:

Country of Origin: Vietnam

Sampling Details:

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Collistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	1	0	0	0	0	0	0	0	1	0	0	0	0	0
MIC														
0.03						1								
<=0.25			1											1
<=0.5				1				1						
0.5													1	
<=1							1							
<=4										1				
4												1		
<=8					1						1			
16		1												
>16									1					
>64	1													

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Fish - raw - frozen

Sampling Stage: Border Control Posts

Sampling Type: food sample

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER CARBA MON pnl

Analytical Method:

Country of Origin: China

Sampling Details:

AM substance	Cefepime	Cefotaxim	Cefotaxime + Clavulanic acid	Cefoxitin	Ceftazidim	Ceftazidime + Clavulanic acid	Ertapenem	Imipenem	Meropenem	Temocillin
	ECOFF	0.125	0.25	0.25	8	0.5	0.5	0.06	0.5	0.125
Lowest limit	0.064	0.25	0.064	0.5	0.25	0.12	0.015	0.12	0.03	0.5
Highest limit	32	64	64	64	128	128	2	16	16	64
N of tested isolates	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	0	0	1	1	0	1	1	1	1	0
MIC	0.12	1								
<=0.25		1			1					
1			1			1				
>2							1			
8									1	1
16								1		
>64				1						

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Fish - raw - frozen

Sampling Stage: Border Control Posts

Sampling Type: food sample

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER CARBA MON

Analytical Method:

Country of Origin: China

Sampling Details:

AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Collistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
N of tested isolates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N of resistant isolates	1	0	0	1	0	0	1	0	1	0	0	0	0	0
MIC														
0.03						1								
<=0.25			1										1	
<=0.5								1						
0.5														1
1				1										
<=2												1		
<=4										1				
4									1					
<=8					1						1			
16		1												
>16							1							
>64	1													

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Gallus gallus (fowl) - laying hens

Sampling Stage: Slaughterhouse

Sampler: Official sampling

Analytical Method:

Country of Origin: Netherlands

Sampling Type: animal sample - caecum

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER AMR MON

Sampling Details:

MIC	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Collistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	200	200	200	200	200	200	200	200	200	200	200	200	200	200
	N of resistant isolates	21	0	0	0	2	13	0	1	0	13	14	30	0	12
<=0.015							155								
<=0.03										200					
0.03							30								
0.064							2								
0.12							5								
<=0.25				200										193	89
0.25							8								
<=0.5					200				119						
0.5														7	91
<=1		4						197							
1									56						8
<=2			1										138		
2		48						3	24						
<=4											183				
4		110	60						1				30		
<=8						186						185			
8		17	127								4		2		
16			12			12						1			
32						1							1		
>32															12
64						1					2		14		

	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	200	200	200	200	200	200	200	200	200	200	200	200	200	200
MIC	N of resistant isolates	21	0	0	0	2	13	0	1	0	13	14	30	0	12
	>64	21											15		
	128										6				
	>128										5				
	>1024											14			

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Gallus gallus (fowl) - laying hens

Sampling Stage: Slaughterhouse

Sampling Type: animal sample - caecum

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER ESBL MON pnl2

Analytical Method:

Country of Origin: Netherlands

Sampling Details:

		AM substance											
			Cefepime	Cefotaxim	Cefotaxime + Clavulanic acid	Cefoxitin	Ceftazidim	Ceftazidime + Clavulanic acid	Ertapenem	Imipenem	Meropenem	Temocillin	
Ceftazidime synergy test	Cefotaxime synergy test	MIC	ECOFF	0.125	0.25	0.25	8	0.5	0.5	0.06	0.5	0.125	32
		Lowest limit	0.064	0.25	0.064	0.5	0.25	0.12	0.015	0.12	0.03	0.5	
		Highest limit	32	64	64	64	128	128	2	16	16	64	
		N of tested isolates	28	28	28	28	28	28	28	28	28	28	
		N of resistant isolates	28	28	3	7	26	3	1	0	0	0	
Not Available	Not Available	<=0.015									12		
		<=0.03										27	
		0.03									14		
		<=0.064										16	
		0.064									1		1
		<=0.125								9		4	
		0.12								9	1		
		<=0.25							1				
		0.25	2						13			21	
		0.5	1					1	3			3	
		1						7					
		2	2				1	11				1	
		4	1			1	10	2	1				9
		8	6	2	2	10	2	1				13	
		16	11	3			4	3				5	
		32	4	1				1	1				
>32	1												

			AM substance										
				Cefepime	Cefotaxim	Cefotaxime + Clavulanic acid	Cefoxitin	Ceftazidim	Ceftazidime + Clavulanic acid	Ertapenem	Imipenem	Meropenem	Temocillin
			ECOFF	0.125	0.25	0.25	8	0.5	0.5	0.06	0.5	0.125	32
			Lowest limit	0.064	0.25	0.064	0.5	0.25	0.12	0.015	0.12	0.03	0.5
			Highest limit	32	64	64	64	128	128	2	16	16	64
			N of tested isolates	28	28	28	28	28	28	28	28	28	28
Ceftazidime synergy test	Cefotaxime synergy test	MIC	N of resistant isolates	28	28	3	7	26	3	1	0	0	0
Not Available	Not Available	64											
		>64	3										

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Gallus gallus (fowl) - laying hens

Sampling Stage: Slaughterhouse

Sampler: Official sampling

Analytical Method:

Country of Origin: Netherlands

Sampling Type: animal sample - caecum

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER ESBL MON

Sampling Details:

MIC	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Collistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	28	28	28	28	28	28	28	28	28	28	28	28	28	28
	N of resistant isolates	28	1	28	27	4	17	0	1	0	12	5	9	0	5
<=0.015							8								
<=0.03										28					
0.03							3								
0.12							1								
<=0.25														26	6
0.25							1								
<=0.5					1				19						
0.5							3							2	10
<=1								27							
1					14		1		5						7
<=2													14		
2					6			1	3						
<=4											12				
4			10		1				1				5		
>4				28											
<=8						23						20			
8			17		3						2				
>8					3		11								
16						1					2	3			
32													1		
>32															5

	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	28	28	28	28	28	28	28	28	28	28	28	28	28	28
MIC	N of resistant isolates	28	1	28	27	4	17	0	1	0	12	5	9	0	5
	64												5		
	>64	28	1										3		
	128					2									
	>128					2					12				
	>1024											5			

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Vegetables - pre-cut - ready-to-eat

Sampling Stage: Retail

Sampler: Official sampling

Analytical Method:

Country of Origin: Unknown

Sampling Details:

Sampling Type: food sample

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER AMR MON pnl2

		AM substance											
			Cefepime	Cefotaxim	Cefotaxime + Clavulanic acid	Cefoxitin	Ceftazidim	Ceftazidime + Clavulanic acid	Ertapenem	Imipenem	Meropenem	Temocillin	
Ceftazidime synergy test	Cefotaxime synergy test	MIC	ECOFF	0.125	0.25	0.25	8	0.5	0.5	0.06	0.5	0.125	32
			Lowest limit	0.064	0.25	0.064	0.5	0.25	0.12	0.015	0.12	0.03	0.5
			Highest limit	32	64	64	64	128	128	2	16	16	64
			N of tested isolates	1	1	1	1	1	1	1	1	1	1
			N of resistant isolates	0	0	0	0	0	0	0	0	0	0
Not Available	Not Available								1				
											1		
			1		1								
											1		
				1			1						
								1					
													1

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Vegetables - pre-cut - ready-to-eat

Sampling Stage: Retail

Sampler: Official sampling

Analytical Method:

Country of Origin: Unknown

Sampling Type: food sample

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER AMR MON

Sampling Details:

MIC	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Collistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	133	133	133	133	133	133	133	133	133	133	133	133	133	133
	N of resistant isolates	6	0	0	1	3	2	0	1	0	1	7	10	0	5
<=0.015							81								
<=0.03										133					
0.03							43								
0.064							7								
<=0.25				133										124	37
0.25							1								
<=0.5					132				65						
0.5														9	75
<=1		1						128							
1					1				60						16
<=2			7										103		
2		23						5	7						
<=4											128				
4		97	44						1				19		1
<=8						119						58			
8		6	80				1				4		1		
16			2			11						34			
32												25			
>32															4
64						1						9	4		
>64		6											6		

	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	133	133	133	133	133	133	133	133	133	133	133	133	133	133
MIC	N of resistant isolates	6	0	0	1	3	2	0	1	0	1	7	10	0	5
	128											1			
	>128					2					1				
	>1024											6			

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Vegetables - pre-cut - ready-to-eat

Sampling Stage: Retail

Sampler: Official sampling

Analytical Method:

Country of Origin: European Union

Sampling Type: food sample

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER ESBL MON pnl2

Sampling Details:

		AM substance		Cefepime	Cefotaxim	Cefotaxime + Clavulanic acid	Cefoxitin	Ceftazidim	Ceftazidime + Clavulanic acid	Ertapenem	Imipenem	Meropenem	Temocillin
Ceftazidime synergy test	Cefotaxime synergy test	ECOFF		0.125	0.25	0.25	8	0.5	0.5	0.06	0.5	0.125	32
		Lowest limit		0.064	0.25	0.064	0.5	0.25	0.12	0.015	0.12	0.03	0.5
		Highest limit		32	64	64	64	128	128	2	16	16	64
		N of tested isolates		2	2	2	2	2	2	2	2	2	2
		N of resistant isolates		2	2	0	0	2	0	0	0	0	0
		MIC											
Negative/Absent	Positive/Pre-sent	<=0.015								1			
		<=0.03										2	
		0.03								1			
		<=0.064				2							
		0.25							2		2		
		8					2	1					2
		16		1				1					
		>32		1									
		>64			2								

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Vegetables - pre-cut - ready-to-eat

Sampling Stage: Retail

Sampling Type: food sample

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER ESBL MON

Analytical Method:

Country of Origin: European Union

Sampling Details:

MIC	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Collistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	N of resistant isolates	2	0	2	2	0	0	0	0	0	0	0	0	0	0
<=0.015															
<=0.03															
0.03															
<=0.25															
<=0.5															
0.5															
<=1															
1															
<=2															
<=4															
4															
>4															
<=8															
8															
32															
>64															

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Meat from pig - fresh

Sampling Stage: Retail

Sampler: Official sampling

Analytical Method:

Country of Origin: European Union

Sampling Type: food sample - meat

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER AMR MON pnl2

Sampling Details:

		AM substance										
		Cefepime	Cefotaxim	Cefotaxime + Clavulanic acid	Cefoxitin	Ceftazidim	Ceftazidime + Clavulanic acid	Ertapenem	Imipenem	Meropenem	Temocillin	
Ceftazidime synergy test	Cefotaxime synergy test	ECOFF	0.125	0.25	0.25	8	0.5	0.5	0.06	0.5	0.125	32
		Lowest limit	0.064	0.25	0.064	0.5	0.25	0.12	0.015	0.12	0.03	0.5
		Highest limit	32	64	64	64	128	128	2	16	16	64
		N of tested isolates	1	1	1	1	1	1	1	1	1	1
		N of resistant isolates	0	0	0	0	0	0	0	0	0	0
		MIC										
Not Available	Not Available	<=0.015						1				
		<=0.03									1	
		<=0.064	1		1							
		<=0.125						1		1		
		<=0.25		1			1					
		2										1
		4				1						

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Meat from pig - fresh

Sampling Stage: Retail

Sampler: Official sampling

Analytical Method:

Country of Origin: European Union

Sampling Type: food sample - meat

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER AMR MON

Sampling Details:

MIC	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Collistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	43	43	43	43	43	43	43	43	43	43	43	43	43	43
	N of resistant isolates	4	0	0	0	1	0	0	0	0	0	6	9	0	6
<=0.015							34								
<=0.03										42					
0.03							8								
0.064							1			1					
<=0.25				43										39	9
<=0.5					43				28						
0.5														4	23
<=1		1						43							
1									12						5
<=2			4										31		
2		14							3						
<=4											43				
4		19	20										3		
<=8						38						17			
8		5	14												
16			5			4						10			
32												9			
>32															6
64						1						1	4		
>64		4											5		
>1024												6			

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Meat from pig - fresh

Sampling Stage: Retail

Sampler: Official sampling

Analytical Method:

Country of Origin: European Union

Sampling Type: food sample - meat

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER ESBL MON pnl2

Sampling Details:

		AM substance	Cefepime	Cefotaxim	Cefotaxime + Clavulanic acid	Cefoxitin	Ceftazidim	Ceftazidime + Clavulanic acid	Ertapenem	Imipenem	Meropenem	Temocillin
Ceftazidime synergy test	Cefotaxime synergy test	ECOFF	0.125	0.25	0.25	8	0.5	0.5	0.06	0.5	0.125	32
		Lowest limit	0.064	0.25	0.064	0.5	0.25	0.12	0.015	0.12	0.03	0.5
		Highest limit	32	64	64	64	128	128	2	16	16	64
		N of tested isolates	4	4	4	4	4	4	4	4	4	4
		N of resistant isolates	1	4	3	2	4	3	0	0	0	0
		MIC										
Positive/Pre sent	Positive/Pre sent	<=0.015							1			
		<=0.03									1	
		<=0.064			1							
		0.25					1			1		
		2					1					
		8				1						1
		>32	1									
		>64		1								
	Negative/Ab sent	<=0.015							2			
		<=0.03									3	
		0.03							1			
		<=0.064	1									
		0.12	2									
		0.25								3		
		0.5			1							
		1		2	1			1				
		2			1		2	1				

		AM substance											
			Cefepime	Cefotaxim	Cefotaxime + Clavulanic acid			Ceftazidim	Ceftazidime + Clavulanic acid		Ertapenem	Imipenem	Meropenem
Ceftazidime synergy test	Cefotaxime synergy test	MIC	ECOFF	0.125	0.25	0.25	8	0.5	0.5	0.06	0.5	0.125	32
		Lowest limit	0.064	0.25	0.064	0.5	0.25	0.12	0.015	0.12	0.03	0.5	
		Highest limit	32	64	64	64	128	128	2	16	16	64	
		N of tested isolates	4	4	4	4	4	4	4	4	4	4	
		N of resistant isolates	1	4	3	2	4	3	0	0	0	0	
		4	1			1			2				
Negative/Ab sent	Negative/Ab sent	8				1	1	1					
		16				1							
		64				1							

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Meat from pig - fresh

Sampling Stage: Retail

Sampler: Official sampling

Analytical Method:

Country of Origin: European Union

Sampling Type: food sample - meat

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER ESBL MON

Sampling Details:

MIC	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Collistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	8	16	0.25	0.5	16	0.064	2	2	0.125	16	64	8	1	2
	Lowest limit	1	2	0.25	0.5	8	0.015	1	0.5	0.03	4	8	2	0.25	0.25
	Highest limit	64	64	4	8	128	8	16	32	16	128	1024	64	8	32
	N of tested isolates	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	N of resistant isolates	4	1	4	4	0	1	0	0	0	1	2	2	0	3
<=0.015							2								
<=0.03										4					
0.03							1								
<=0.25														4	1
0.25							1								
<=0.5									1						
<=1								4							
1				2					3						
<=2													2		
2				1	3										
<=4											3				
>4				1											
<=8						4						1			
8			3		1										
32												1			
>32															3
64													1		
>64		4	1										1		
>128											1				
>1024												2			

Specific monitoring of ESBL-/AmpC-/carbapenemase-producing bacteria and specific monitoring of carbapenemase-producing bacteria, in the absence of isolate detected

Programme Code	Matrix Detailed	Zoonotic Agent Detailed	Sampling Strategy	Sampling Stage	Sampling Details	Sampling Context	Sampler	Sample Type	Sampling Unit Type	Sample Origin	Comment	Total Units Tested	Total Units Positive
CARBA MON	Spices and herbs - fresh	Escherichia coli, non-pathogenic, unspecified	Objective sampling	Wholesale	n=5	Monitoring	Official sampling	food sample	single (food/feed)	Unknown	MRHH20P06 Versekruiden	60	0
	Vegetables - leaves	Escherichia coli, non-pathogenic, unspecified	Objective sampling	Wholesale	N_A	Monitoring	Official sampling	food sample	single (food/feed)	Unknown	MRHH20P10 Zeewier	19	0
OTHER CARBA MON	Cattle (bovine animals) - dairy cows	Escherichia coli, non-pathogenic, unspecified	Objective sampling	Farm	N_A	Monitoring - active	Official sampling	animal sample - faeces	animal	Netherlands	CPE culture and RT-PCR performed	303	0
	Cattle (bovine animals) - meat production animals - calves (under 1 year)	Escherichia coli, non-pathogenic, unspecified	Objective sampling	Slaughterhouse	N_A	Monitoring - active	Official sampling	animal sample - caecum	animal	Netherlands	CPE culture and RT-PCR performed	297	0
	Gallus gallus (fowl) - broilers	Escherichia coli, non-pathogenic, unspecified	Objective sampling	Slaughterhouse	N_A	Monitoring - EFSA specifications	Official sampling	animal sample - caecum	animal	Netherlands	CPE culture and RT-PCR performed	305	0

Specific monitoring of ESBL-/AmpC-/carbapenemase-producing bacteria and specific monitoring of carbapenemase-producing bacteria, in the absence of isolate detected

Programme Code	Matrix Detailed	Zoonotic Agent Detailed	Sampling Strategy	Sampling Stage	Sampling Details	Sampling Context	Sampler	Sample Type	Sampling Unit Type	Sample Origin	Comment	Total Units Tested	Total Units Positive
OTHER CARBA MON	Gallus gallus (fowl) - laying hens - before slaughter	Escherichia coli, non-pathogenic, unspecified	Objective sampling	Farm	N_A	Monitoring - active	Official sampling	animal sample - faeces	animal	Netherlands	CPE culture and RT-PCR performed	200	0
	Pigs - fattening pigs	Escherichia coli, non-pathogenic, unspecified	Objective sampling	Slaughterhouse	N_A	Monitoring - active	Official sampling	animal sample - caecum	animal	Netherlands	CPE culture and RT-PCR performed	303	0
OTHER ESBL MON	Meat from sheep - fresh	Escherichia coli, non-pathogenic, unspecified	Objective sampling	Retail	N_A	Monitoring	Official sampling	food sample - meat	single (food/feed)	Unknown	MRHH20101 Kleine herkauwers TOTAAL	46	0
	Mushrooms	Escherichia coli, non-pathogenic, unspecified	Objective sampling	Retail	N_A	Monitoring	Official sampling	food sample	single (food/feed)	Unknown	MRHH20136 Paddestoelen	80	0
	Vegetables - pre-cut - non-ready-to-eat	Escherichia coli, non-pathogenic, unspecified	Objective sampling	Retail	N_A	Monitoring	Official sampling	food sample	single (food/feed)	Unknown	MRHH20135 Wokgroenten	257	0



Latest Transmission set

Table Name	Last submitted dataset transmission date
Animal Population	22-Jul-2022
Disease Status	22-Jul-2022
Food Borne Outbreaks	22-Jul-2022
Prevalence	22-Jul-2022

Institutions and Laboratories involved in zoonoses monitoring and reporting

These are the most important organisations involved in the *EU One Health Zoonoses Report* in the Netherlands :

- Netherlands Food and Consumer Product Safety Authority (NVWA)
www.nvwa.nl
The NVWA provides information on health of animals and plants, animal welfare and the safety of food and consumer products and maintains the legislation in the field of nature.
The NVWA is the competent authority for the EUOHZ report.
- Wageningen Bioveterinary Research (WBVR)
<https://www.wur.nl/en/Research-Results/Research-Institutes/Bioveterinary-Research.htm>
WBVR collaborates with public and private partners to safeguard animal and public health through prevention, eradication and control of animal diseases
- Wageningen Food Safety Research (WFSR)
<https://www.wur.nl/en/Research-Results/Research-Institutes/food-safety-research.htm>
WFSR is your innovative partner for safe and authentic food. We are specialized in (forensic) measurements, perform top level research and develop methods to detect substances in food and feed.
- Animal Health Services (Royal GD)
<https://www.gdanimalhealth.com/>
GD is a leading organisation in animal health and animal production. With our state-of-the-art veterinary laboratories and research facilities and with our veterinary knowledge and expertise we support our customers worldwide. Customers come to us for high quality and independent consultancy, contract research and animal health programmes.
- GMP+ International
<https://gmpplus.org/en/>
We deploy a certification scheme that facilitates companies to contribute to safe feed. To keep our scheme and community up to date we gather and share worldwide valuable information regarding feed safety assurance
- National Institute for Public Health and the Environment (RIVM)
<https://www.rivm.nl/en>
The RIVM conducts independent (scientific) research in the field of Public Health, Health Services, Environmental Safety and Security. In our role as trusted advisor, we support citizens, professionals and governments in the challenge of keeping the environment and ourselves healthy.
- Veterinair Microbiologisch Diagnostisch Centrum (VDMC)
<https://www.uu.nl/onderzoek/veterinair-microbiologisch-diagnostisch-centrum>
The VDMC of the Faculty of Veterinary Medicine (Utrecht University) examines materials from animals for the presence of infectious agents or specific antibodies against them.

- Netherlands Control Authority for Milk and Milk products (COKZ)
<https://cokz.nl/>
COKZ, including the NCAE (Netherlands Control Authority Egg sector) monitors the safety and quality of dairy products, eggs and egg products produced in the Netherlands and offer the sectors better access to national and international markets.

-+++++Short description of the institutions and laboratories involved in data collection and reporting

Animal population

1. Sources of information and the date(s) (months, years) the information relates to^(a)

The data from the tables comes from the Central Bureau of Statistics¹. From 2015, data from the NVWA has been used for the number of poultry and in the other years figures from CBS. The NVWA reports the total number of available Unique Holdings Numbers (UBNs²), while the CBS lists the UBNs with animals actually present at the time of the agricultural census. As a result, the CBS figures may deviate from the figures that the NVWA reports to, among others, the EFSA and the OIE. Because especially the farms with animals are important when it comes to zoonoses, where possible, the figures from the CBS data are used. The CBS figures can be of a provisional nature and therefore the figures reported in the report of previous years may differ from the current figures.

2. Definitions used for different types of animals, herds, flocks and holdings as well as the production types covered

Definitions, productions, general demographic information and zoonoses that are important for the Netherlands are listed every year in the State of Zoonoses (SvZ)³. This report provides an annual overview of the trends of zoonoses that, among other things, have to be reported to the Municipal Health Service (-GGD -if it concerns humans) or the NVWA (animals) due to their infectivity. A number of special zoonotic developments, investigations or outbreaks are also highlighted in the SvZ and an annually changing zoonosis-related theme is discussed.

3. National changes of the numbers of susceptible population and trends

The numbers of animals slaughtered stabilized last years. With the exception of farms with chickens and goats, the number of farms with farm animals continues to decrease.

4. Geographical distribution and size distribution of the herds, flocks and holdings^(b)

- <https://agrimatie.nl/>

Wageningen Economic Research makes research on primary companies in agriculture, horticulture and fishing, on behalf of the Ministry of Agriculture, Nature and Food Quality

- <https://www.wur.nl/nl/Onderzoek-Resultaten/Onderzoeksinstituten/livestock-research/show-wlr/Handboek-Kwantitatieve-Informatie-Veehouderij-KWIN.htm>

Wageningen University & Research, Manual Quantitative Information Livestock Farming

- <https://opendata.cbs.nl/statline/#/CBS/nl/?fromstatweb>

¹ <https://www.cbs.nl>

² <https://www.rvo.nl/onderwerpen/agrarisch-ondernemen/dieren-houden/dieren-registreren>

³ <https://onehealth.nl/documenten-0> and

https://www.rivm.nl/publicaties?search=%22staat+van+zoonosen%22&bibcite_year=All

- <https://ecdc.europa.eu/en/surveillance-atlas-infectious-diseases>

5. Additional information

For different animal species, different requirements are in place with respect to the time period within which animals and animal movements have to be registered in the central identification and registration system⁴.

Live animals such as companion animals, wild and exotic animals destined for zoos and horses for sport are regularly transported around the world. . The Border Control Post (GCP) Schiphol, registered the last years about 15.000 shipments per year from dozens of countries outside the EU (third countries) were offered for import control. Of the consignments, about 60% consisted of consignments of live animals and 40% of products of animal origin. Not all of these animals remain in the Netherlands; part of it is transported to another country within or outside Europe.

The GCP data of 2020 are not yet available but it has been a significant decrease of shipments due to the COVID-19 pandemic.

Companion animals are part of our living environment. More than half of Dutch households have one or more pets. A study was done in 2015 into the number of pets. It is estimated that the total number of companion animals is 33.4 million. These are approximately 2.6 million cats, 1.5 million dogs, 3.9 million songbirds and ornamental birds, 5 million carrier pigeons, 1.2 million rabbits, 0.5 million rodents, 0.65 million reptiles, 9 million aquarium fish and 9 million pond fish⁵.

(a): National identification and registration system(s), source of reported statistics (Eurostat, others)

(b): Link to website with density maps if available, tables with number of herds and flocks according to geographical area

⁴ <https://www.rvo.nl/onderwerpen/agrarisch-ondernemen/dieren-houden/identificatie-en-registratie-dieren>

⁵ Feiten en cijfers van de gezelschapsdierensector 2015, Faculteit Diergeneeskunde (Universiteit Utrecht) en HAS Den Bosch

General evaluation*: brucellosis**1. History of the disease and/or infection in the country^(a)**

Human contamination mainly occurs through contact with infected animals, drinking raw milk or other unpasteurized dairy products. In the Netherlands, sporadic cases of human infections with *Brucella* are reported, usually after a visit abroad or through the consumption of raw milk dairy products from abroad.

2. Evaluation of status, trends and relevance as a source for humans

The last years about 5-10 patients per year are registered in the national registration of infectious diseases (Osiris). Most of them is travel related. In a few cases is the source of the infection unclear.

3. Any recent specific action in the Member State or suggested for the European Union^(b)

None

4. Additional information

<https://www.rivm.nl/brucellose>

*** For each zoonotic agent**

(a): Epidemiological evaluation (trends and sources) over time until recent/current situation for the different relevant matrixes (food, feed, animal). If relevant: the official “disease status” to be specified for the whole country and/or specific regions within the country

(b): If applicable

Description of Monitoring/Surveillance/Control programmes system*: brucellosis in swine (*Brucella suis*)**1. Monitoring/Surveillance/Control programmes system^(a)**

To monitor the free status, a number of checks are also carried out on pigs. This also includes reports made by Royal GD for *B. suis* by artificial insemination (AI) pig associations and pig breeders. The use of reproduction material must be free of brucellosis before the animals are used for reproduction. Boars are screened for semen collection, sows when there are abnormalities at birth (abortions). In the event of a suspicion, a confirmation of the blood samples is first carried out by WBVR. If this is also ‘not negative’, the NVWA will again take blood from that animal and (possibly) mates and a new confirmatory test will follow.

2. Measures in place^(b)

Test and cull

3. Notification system in place to the national competent authority^(c)
Yes
4. Results of investigations and national evaluation of the situation, the trends ^(d) and sources of infection^(e)
<p>The Netherlands is officially free from <i>Brucella suis</i> since 1973.</p> <p>The findings of the actual report year are comparable to the previous years.</p>
5. Additional information
<p>Sometimes blood samples give a (false) positive test result in the RBT. After confirmation by a SAT, CFT or ELISA most of these animals test negative. If an AI boar consistently tests serologically positive for <i>Brucella suis</i>, the animal will be euthanised for post mortem examination and bacteriological testing. In the past years this happened a few times but never <i>Brucella suis</i> was detected. Most likely the positive serological test originates from cross reaction with <i>Yersinia spp.</i> Serological tests for <i>Brucella suis</i> antibodies are not very specific which is an economic concern for swine AI stations. The EU regulations on <i>Brucella suis</i> monitoring originate in a period that AI boars travelled between sow farms and were good sentinels for the spread of <i>Brucella suis</i>.</p> <p>For country situation please check the World Animal Health Information System of the OIE (WAHIS): https://wahis.oie.int/#/home.</p> <p>* For all combinations of zoonotic agents and matrix (Food, Feed and Animals) for 'Prevalence' and 'Disease Status': one text form reported per each combination of matrix/zoonoses or zoonotic agent</p> <p>(a): Sampling scheme (sampling strategy, frequency of the sampling, type of specimen taken, methods of sampling (description of sampling techniques) + testing scheme (case definition, diagnostic/analytical methods used, diagnostic flow (parallel testing, serial testing) to assign and define cases. If programme approved by the EC, please provide link to the specific programme in the Commission's website.</p> <p>(b): The control program/strategies in place, including vaccination if relevant. If applicable a description of how eradication measures are/were implemented, measures in case of the positive findings or single cases; any specific action decided in the Member State or suggested for the European Union as a whole on the basis of the recent/current situation, if applicable. If programme approved by the EC, please provide link to the specific programme in the Commission's website.</p> <p>(c): Mandatory: Yes/No.</p> <p>(d): Minimum five years.</p> <p>(e): Relevance of the findings in animals to findings in foodstuffs and for human cases (as a source of infection).</p>

* For all combinations of zoonotic agents and matrix (Food, Feed and Animals) for 'Prevalence' and 'Disease Status': one text form reported per each combination of matrix/zoonoses or zoonotic agent

(a): Sampling scheme (sampling strategy, frequency of the sampling, type of specimen taken, methods of sampling (description of sampling techniques) + testing scheme (case definition, diagnostic/analytical methods used, diagnostic flow (parallel testing, serial testing) to assign and define cases. If programme approved by the EC, please provide link to the specific programme in the Commission's website.

(b): The control program/strategies in place, including vaccination if relevant. If applicable a description of how eradication measures are/were implemented, measures in case of the positive findings or single cases; any specific action decided in the Member State or suggested for the European Union as a whole on the basis of the recent/current situation, if applicable. If programme approved by the EC, please provide link to the specific programme in the Commission's website.

(c): Mandatory: Yes/No.

(d): Minimum five years.

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

Description of Monitoring/Surveillance/Control programmes system*: brucellosis in cattle (*B. abortus*)

1. Monitoring/Surveillance/Control programmes system^(a)

A number of checks are carried out to monitor the OIE free status.

Livestock farmers are also obliged to have blood tests carried out by Royal GD on each cattle that has an abortion between days 100 and 260 of the gestation. Veterinarians, farmers and laboratories must report a (clinical) suspicion to the NVWA, which then examines the animals. Cattle offered for export or used for reproduction are often also clinically and serologically examined for brucellosis.

2. Measures in place^(b)

Test and cull

3. Notification system in place to the national competent authority^(c)

Yes

4. Results of investigations and national evaluation of the situation, the trends ^(d) and sources of infection^(e)

No infections have been found in the Netherlands since 1997 and from 1 August 1999 the Netherlands is officially free from bovine brucellosis.

The findings of the actual report are comparable to the previous years.
5. Additional information
For country situation please check the World Animal Health Information System of the OIE
<p>* For all combinations of zoonotic agents and matrix (Food, Feed and Animals) for 'Prevalence' and 'Disease Status': one text form reported per each combination of matrix/zoonoses or zoonotic agent</p> <p>(a): Sampling scheme (sampling strategy, frequency of the sampling, type of specimen taken, methods of sampling (description of sampling techniques) + testing scheme (case definition, diagnostic/analytical methods used, diagnostic flow (parallel testing, serial testing) to assign and define cases. If programme approved by the EC, please provide link to the specific programme in the Commission's website.</p> <p>(b): The control program/strategies in place, including vaccination if relevant. If applicable a description of how eradication measures are/were implemented, measures in case of the positive findings or single cases; any specific action decided in the Member State or suggested for the European Union as a whole on the basis of the recent/current situation, if applicable. If programme approved by the EC, please provide link to the specific programme in the Commission's website.</p> <p>(c): Mandatory: Yes/No.</p> <p>(d): Minimum five years.</p> <p>(e): Relevance of the findings in animals to findings in foodstuffs and for human cases (as a source of infection).</p>

Description of Monitoring/Surveillance/Control programmes system*: brucellosis in sheep/goats (<i>B. melitensis</i>, <i>B. ovis</i>)
1. Monitoring/Surveillance/Control programmes system^(a)
To monitor the OIE free status, a number of controls are performed that are comparable to those of bovine brucellosis. Each year, blood samples were collected from at least 1.475 selected sheep/goat farms. In 2020, 18.628 blood samples were collected from 1.540 farms and all results were negative. In addition, abortion in sheep and goats is notifiable as soon as the number of abortions per farm is higher than normal for that specific farm. In case of notification, serum samples are collected and tested for <i>B. melitensis</i> . However, controls in sheep and goats are less extensive than in cattle, since the number of notifications of increased numbers of small ruminant abortions is generally low.
2. Measures in place^(b)
Test and cull
3. Notification system in place to the national competent authority^(c)
Yes

4. Results of investigations and national evaluation of the situation, the trends ^(d) and sources of infection^(e)
<p>Brucellosis in sheep or goats has never been established in the Netherlands.</p> <p>The findings of the actual report are comparable to the previous years.</p>
5. Additional information
For country situation please check the World Animal Health Information System of the OIE.

Description of Monitoring/Surveillance/Control programmes system*: brucellosis in dogs
1. Monitoring/Surveillance/Control programmes system^(a)
Passive surveillance in place following risk communication to veterinarians in a.o. the Dutch Vet-journal.
2. Measures in place^(b)
Test and neuter
3. Notification system in place to the national competent authority^(c)
Yes
4. Results of investigations and national evaluation of the situation, the trends ^(d) and sources of infection^(e)
<p>In 2016, for the first time, <i>Brucella canis</i> infections were detected in dogs in the Netherlands. Those dogs were all imported from East Europe, mostly Romania and Bulgaria.</p> <p>In the same year a <i>B. suis</i> biovar 1 infection in a dog in the Netherlands was linked to its commercial raw meat-based diet and was linked to imported South American Hare meat / animal byproducts.</p> <p>In 2018 for the first time, <i>B. Canis</i> was detected in Dutch dogs as result of a transmission by an imported dog from Russia.</p> <p>In 2019, 6 suspicions of <i>Brucella canis</i> were reported, 3 of these reports were tested positive. A dog was an adoptive dog from Bulgaria. This dog is euthanized due to the nature of the complaints. At the end of the year, a Jordanian dog was also reported, who immigrated to the Netherlands with the owner. In Jordan, the dog already had periods of lameness. This dog is also euthanized due to the severity of the complaints.</p> <p>But the most impressive case of 2019 has been with a breeding farm. This breeding consisted of 72 dogs with less than half of the animals used for breeding. The owner imported dogs from Russia to start a new breed in the Netherlands. Unfortunately 3 out of 4 dogs turned out to be positive for <i>Brucella canis</i>, these 4 came from the same address in Russia. Due to the way of keeping these dogs, it has turned out to be possible to spread the infection on site, so that in the end it was decided</p>

to euthanize all dogs present and to lay the company empty for six months. No spread outside this breeding site has been demonstrated.

In 2020 was the situation comparable but not breeding farms were involved.

Till now no humans are found *B. canis* positive.

5. Additional information

<https://resource.wur.nl/en/show/Rescuing-a-puppy-abroad-can-be-dangerous-.htm>

https://www.researchgate.net/publication/325478790_Brucella_suis_Infection_in_Dog_Fed_Raw_Meat_the_Netherlands

* For all combinations of zoonotic agents and matrix (Food, Feed and Animals) for 'Prevalence' and 'Disease Status': one text form reported per each combination of matrix/zoonoses or zoonotic agent

(a): Sampling scheme (sampling strategy, frequency of the sampling, type of specimen taken, methods of sampling (description of sampling techniques) + testing scheme (case definition, diagnostic/analytical methods used, diagnostic flow (parallel testing, serial testing) to assign and define cases. If programme approved by the EC, please provide link to the specific programme in the Commission's website.

(b): The control program/strategies in place, including vaccination if relevant. If applicable a description of how eradication measures are/were implemented, measures in case of the positive findings or single cases; any specific action decided in the Member State or suggested for the European Union as a whole on the basis of the recent/current situation, if applicable. If programme approved by the EC, please provide link to the specific programme in the Commission's website.

(c): Mandatory: Yes/No.

(d): Minimum five years.

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

General evaluation*: campylobacteriosis

1. History of the disease and/or infection in the country^(a)

Comparable at EU level.

2. Evaluation of status, trends and relevance as a source for humans

Campylobacter is the most common agent of bacterial gastroenteritis and spreads from animals through different routes, primarily by food. Incidental cases of human campylobacteriosis are, in contrast to various other European countries, not notifiable in the Netherlands. Campylobacteriosis is only required to report if it concerns a human cluster of two or more related cases with a probable origin in consumption of contaminated food or drinking water. Insight into the trend of campylobacteriosis is obtained through the laboratory surveillance carried out by the RIVM with an estimated coverage of 58% of the Dutch population (for laboratory-confirmed campylobacteriosis).

After years of decreasing incidence this has stabilized on 30-35/100,000/yr since 2017. However, in 2020 the number of cases dropped with 30% relative to 2019, most likely due COVID19 measures.

The levels of antimicrobial resistance (although slightly decreased due to less travel-related cases) of *Campylobacter* is a public health concern: in 2020 fractions of human clinical isolates resistant to ciprofloxacin and tetracycline were resp. 62% and 52%.

3. Any recent specific action in the Member State or suggested for the European Union^(b)

None

4. Additional information

With an integrative approach linking genomic and epidemiological data a 4-year project confirmed that poultry and cattle are the main livestock sources of human *Campylobacter* infections. But also pets and surface water is are non-negligible sources of human *Campylobacter* infection. Wild birds and poultry are the main contributors to surface water *Campylobacter* contamination, followed by ruminants, with local livestock density influencing these contributions. Non-foodborne transmission is often involved and likely plays a particular role for cattle. While reservoir specific genetic traits were identified, there was no significant genetic link with severity of symptoms. *Campylobacter* spread in the environment has public health implications, as even in situations of low food contamination that would reduce significantly human infections, exposure can occur via environmental routes.

* For each zoonotic agent

(a): Epidemiological evaluation (trends and sources) over time until recent/current situation for the different relevant matrixes (food, feed, animal). If relevant: the official “disease status” to be specified for the whole country and/or specific regions within the country

(b): If applicable

Description of Monitoring/Surveillance/Control programmes system*: campylobacteriosis

1. Monitoring/Surveillance/Control programmes system^(a)

Poultry at slaughterhouse

Campylobacter farm monitoring has been taking place since 2009 and has been replaced by a monitoring program of carcasses and chicken fillets in the slaughterhouse. An European Process Hygiene Criterion (PHC) has been implemented on 1 January 2018. Results of the sampling are published on the NEPLUVI website.⁶

Animal products in the retail

Meat and other animal products such as raw milk are investigated by the NVWA in the retail.

Poultry meat that contains Campylobacter varies considerably between years (20-40%).

Farm animal

In a joint project RIVM-NVWA called "*surveillance zoonosis in farm animals*" (poultry but also other animals) are investigated for various pathogenic microorganisms including thermophilic Campylobacter and *C. fetus*.

For instance in 2017, the project focused on farms with beef cattle other than calves. In the stable or meadows manure was collected and examined, on average 6 samples per farm. Campylobacter was found in 84% of farms (n = 196). At the sample level (n = 1147) this was 57%.

Antimicrobial resistance

The MARAN reports⁷ describe the resistance in Campylobacter isolates to different types of antibiotics.

Export/clinical controls

For control of *Campylobacter fetus* spp *venerealis*, (preputial or vaginal) lavage from animals for export or on AI stations will be investigated.

2. Measures in place^(b)

If the PHC is exceeded, the NVWA requests the slaughterhouse to draw up an improvement plan to improve hygiene.

3. Notification system in place to the national competent authority^(c)

Campylobacteriosis by bovines is subject to compulsory notification in the Netherlands (*Campylobacter fetus* spp *venerealis*). For other animal species is campylobacteriosis reportable⁸.

⁶ <https://www.nepluvi.nl/page/244/eindrapportages-campylobacter.html>

<https://www.wur.nl/en/Research-Results/Research-Institutes/Bioveterinary-Research/In-the-spotlight/Antibiotic-resistance-2/MARAN-reports.htm> (new edition will in the summer 2021 available)

⁸ No imposing measures but only an obligation to report the cases at regular time intervals for trend estimations. By positive findings by animals hold in locations with a public function such as pet farms the report interval is mostly very short and measures are advised to minimize the risk.

4. Results of investigations and national evaluation of the situation, the trends ^(d) and sources of infection^(e)

Other animals (small ruminants, pets) submitted for clinical or post-mortem examination: a few cases of *Campylobacter* spp. are diagnosed per year.

5. Additional information

<https://www.wur.nl/nl/Onderzoek-Resultaten/Onderzoeksinstituten/Bioveterinary-Research/Dierziekten/Bacteriele-ziekten/Campylobacter-2.htm>

<https://www.rivm.nl/bibliotheek/rapporten/2020-0073.pdf>

* For all combinations of zoonotic agents and matrix (Food, Feed and Animals) for 'Prevalence' and 'Disease Status': one text form reported per each combination of matrix/zoonoses or zoonotic agent

(a): Sampling scheme (sampling strategy, frequency of the sampling, type of specimen taken, methods of sampling (description of sampling techniques) + testing scheme (case definition, diagnostic/analytical methods used, diagnostic flow (parallel testing, serial testing) to assign and define cases. If programme approved by the EC, please provide link to the specific programme in the Commission's website.

(b): The control program/strategies in place, including vaccination if relevant. If applicable a description of how eradication measures are/were implemented, measures in case of the positive findings or single cases; any specific action decided in the Member State or suggested for the European Union as a whole on the basis of the recent/current situation, if applicable. If programme approved by the EC, please provide link to the specific programme in the Commission's website.

(c): Mandatory: Yes/No.

(d): Minimum five years.

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

General evaluation*: echinococcosis

1. History of the disease and/or infection in the country^(a)

Present (endemic) depending on which *Echinococcus* species.

2. Evaluation of status, trends and relevance as a source for humans

Echinococcosis (this applies to both *E. granulosus* and *E. multilocularis*) in humans is not subject to notification in the Netherlands. This means that the incidence/status cannot be precisely measured.

The last years about 40-50 new patients per year were diagnosed with *Echinococcus granulosus*. All these cases were travel related.

For the country situation please check the Surveillance Atlas of Infectious Disease of the ECDC: <http://atlas.ecdc.europa.eu/public/index.aspx>

3. Any recent specific action in the Member State or suggested for the European Union^(b)

None

4. Additional information

In the Netherlands, the fox tapeworm (*E. multilocularis*) was first detected in foxes in parts of South Limburg and East Groningen in 1996-1997. Since then, the parasite in Limburg has spread from the southern region to the north. In the Maastricht area in 2012-2013 a strong increase in the prevalence was found in foxes. The rate of spread of *E. multilocularis* in the Netherlands can be influenced by the arrival of new hosts, such as the raccoon dog (*Nyctereutes procyonoides*).

* For each zoonotic agent

(a): Epidemiological evaluation (trends and sources) over time until recent/current situation for the different relevant matrixes (food, feed, animal). If relevant: the official “disease status” to be specified for the whole country and/or specific regions within the country

(b): If applicable

Description of Monitoring/Surveillance/Control programmes system*: echinococcosis

1. Monitoring/Surveillance/Control programmes system^(a)

Passive surveillance at slaughterhouse

2. Measures in place^(b)

Infested carcasses are destroyed and do not enter the food chain.

3. Notification system in place to the national competent authority^(c)

Echinococcosis in animals is reportable but not notifiable. Dogs and canids are the final host of this parasite, but as an intermediate host the cystic stage occurs in various types of farm animals, such as cattle, sheep and pig. Due to the lack of clinical signs in farm animals as well as diagnostic options in the live animal, the focus of monitoring and control is in the slaughter phase

4. Results of investigations and national evaluation of the situation, the trends ^(d) and sources of infection^(e)

In 2018 positive bovines were found. These animals were imported for slaughtering from Hungary, Bulgaria and Romania. In some international reports and maps these imported cases are given by error as native (Dutch) cases.

The last reported native cystic echinococcosis in bovines is reported in 2004.

5. Additional information

Native cases of *E. granulosus* in humans have not been present in the Netherlands for decades due to good slaughterhouse inspection and hygiene (destruction of positive organs) and the introduction of commercial feeds for dogs, which do not pose a risk through adequate treatment.

A potential risk is the increasing popularity of raw fresh organ meat foods of unknown, mixed origin for dogs, such as BARF (Bones and Raw Food).

* For all combinations of zoonotic agents and matrix (Food, Feed and Animals) for 'Prevalence' and 'Disease Status': one text form reported per each combination of matrix/zoonoses or zoonotic agent

(a): Sampling scheme (sampling strategy, frequency of the sampling, type of specimen taken, methods of sampling (description of sampling techniques) + testing scheme (case definition, diagnostic/analytical methods used, diagnostic flow (parallel testing, serial testing) to assign and define cases. If programme approved by the EC, please provide link to the specific programme in the Commission's website.

(b): The control program/strategies in place, including vaccination if relevant. If applicable a description of how eradication measures are/were implemented, measures in case of the positive

findings or single cases; any specific action decided in the Member State or suggested for the European Union as a whole on the basis of the recent/current situation, if applicable. If programme approved by the EC, please provide link to the specific programme in the Commission`s website.

(c): Mandatory: Yes/No.

(d): Minimum five years.

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

General evaluation*: listeriosis

1. History of the disease and/or infection in the country^(a)

Intensified surveillance of *Listeria monocytogenes* exists in the Netherlands since 2005. From 2006, the results of food monitoring will also be taken into account by the NVWA. In December 2008, listeriosis was included in the list of notifiable human diseases. Besides the obliged notification the RIVM conducts a laboratory surveillance where isolates from the meningitis reference laboratory are sent to RIVM where they are being subjected to whole-genome-sequencing which facilitates outbreak/cluster detection and source matching. The Netherlands food and consumer product safety authority (NVWA) performs routine sequencing on isolates from food. The sequencing data from clinical cases and food are real-time shared which facilitates cluster detection and speeds-up source-finding.

2. Evaluation of status, trends and relevance as a source for humans

Since the start of notification requirement at the end of 2008 there has been an increasing trend in the number of reported listeriosis cases with the highest number in 2019 of 117 cases. In 2020 this slightly dropped to 95 cases, which is still higher than the annual average of 84 (2008-2019).

T. Most clinical isolates were found to be infected with *L. monocytogenes* serotype 4b (54%), 1 / 2a (38%), or 1 / 2b (9%).

Based on whole-genome-sequencing a total of 23 clusters with 50 human isolates from 2020 were identified. Among other clusters, the three largest human clusters in 2020 could be linked to the relevant food product with reasonable epidemiological certainty: five patients (and one patient in 2019) to soft cheese; nine patients (and one patient in 2017 and two in 2019) to eel; eleven patients on trout fillet.

3. Any recent specific action in the Member State or suggested for the European Union^(b)

None

4. Additional information

Reducing the number of listeriosis cases is a spearhead in Europe. Since humans are mainly exposed to *Listeria* through food, legal standards for *L. monocytogenes* have been established at European level for ready-to-eat foods (including infant formulas and foods for special medical purposes). These standards are set out in Regulation (EC) No 2073/2005. In general, a standard of ≤ 100 cfu / gram applies throughout the shelf life of the product and in special cases absence in 25 grams applies immediately after production. The absence requirement in 25 grams applies to infant formula and food for medical use. The NVWA conducts annual research into the occurrence of *L. monocytogenes* in food. The emphasis here is on shelf-life (> 5 days), chilled fresh foodstuffs, which have undergone an additional preparation step after heating, such as cutting. For further details see tables.

Listeria monocytogenes meningitis in the Netherlands, 1985–2014: A nationwide surveillance study: <https://www.sciencedirect.com/science/article/pii/S0163445317301111>

* For each zoonotic agent

(a): Epidemiological evaluation (trends and sources) over time until recent/current situation for the different relevant matrixes (food, feed, animal). If relevant: the official “disease status” to be specified for the whole country and/or specific regions within the country

(b): If applicable

Description of Monitoring/Surveillance/Control programmes system*: listeriosis

1. Monitoring/Surveillance/Control programmes system^(a)

No monitoring/surveillance/control programme for listeria in animals is in place.

2. Measures in place^(b)

By positive findings in single cases in farms with a public function such as pet farms hygienic measures have been taken.

3. Notification system in place to the national competent authority^(c)

Listeriosis in animals (all species) is reportable but not notifiable⁹.

4. Results of investigations and national evaluation of the situation, the trends ^(d) and sources of infection^(e)

Listeria spp. is demonstrated on occasional basis in adult (meningitis, encephalitis) and aborted animals (bovine, sheep/goat) submitted for post mortem examination and very sporadic in milk. Listeriosis is less frequently diagnosed in pigs or pets.

The dairy goat industry occasionally performs testing on bulk milk.

There seems a tendency of an increase in the number of cases of listeria meningo-encephalitis in adult dairy goats. In some cases, large numbers of goats per farm were affected.

5. Additional information

<https://www.gddiergezondheid.nl/nl/Zoekresultaat?search=listeriosis>

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⁹ No imposing measures but only an obligation to report the cases at regular time intervals for trend estimations. By positive findings by animals held in locations with a public function such as pet farms the report interval is mostly very short and measures are advised to minimize the risk.

(b): The control program/strategies in place, including vaccination if relevant. If applicable a description of how eradication measures are/were implemented, measures in case of the positive findings or single cases; any specific action decided in the Member State or suggested for the European Union as a whole on the basis of the recent/current situation, if applicable. If programme approved by the EC, please provide link to the specific programme in the Commission`s website.

(c): Mandatory: Yes/No.

(d): Minimum five years.

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

General evaluation*: Q-fever (*Coxiella burnetii*)**1. History of the disease and/or infection in the country^(a)**

The Q-fever outbreak in the period 2005-2010 counted about 45,000 infected people, of which 4304 have experienced Q fever¹⁰. 95 people are known to have died as a result of the infection. Many (unknown how many but it concerns thousands) still suffer from the chronic Q fever form.

The details of the origin of the outbreak are still not known but the source of the human infection is strong related to goats hold for milk production.

2. Evaluation of status, trends and relevance as a source for humans

After the large Q fever outbreak several measures have been taken which have resulted in the last years in a situation in which the number of human cases (15-20 per year) is the same or even lower compared to the years before 2007.

3. Any recent specific action in the Member State or suggested for the European Union^(b)

None

4. Additional information

Epidemic Q Fever in Humans in the Netherlands: <https://www.ncbi.nlm.nih.gov/pubmed/22711640>

* For each zoonotic agent

(a): Epidemiological evaluation (trends and sources) over time until recent/current situation for the different relevant matrixes (food, feed, animal). If relevant: the official “disease status” to be specified for the whole country and/or specific regions within the country

(b): If applicable

Description of Monitoring/Surveillance/Control programmes system*: Q-fever (*Coxiella burnetii*)**1. Monitoring/Surveillance/Control programmes system^(a)**

On dairy sheep and dairy goat farms (>50 animals), a monitoring programme is in place in which every four weeks bulk milk samples are tested using a *Coxiella burnetii* PCR. Screening is performed at Royal GD and confirmation in repeated, official samples by NVWA is performed by WBVR the National Reference Lab.

Placentas or foetal tissue from small and large ruminants submitted for post-mortem examination are, when suspicious tested for *Coxiella burnetii* using a PCR or immunohistochemistry.

2. Measures in place^(b)

¹⁰ <https://www.rivm.nl/q-koorts>

Abortion in sheep and goats is notifiable as soon as the number of abortions per farm is higher than normal for that specific farm. On dairy sheep and dairy goat farms, a monitoring programme is in place in which every four weeks bulk milk samples are tested using a *Coxiella burnetii* PCR.

Vaccination (Coxevac®) of small ruminants started on a voluntary basis in 2008, became mandatory for the southern provinces in 2009, and for all the provinces of the Netherlands in 2010 for dairy sheep and dairy goat farms, farms with a public function, and small ruminants that go to shows. Probably, vaccination of small ruminants is the most effective measure to prevent shedding of *C. burnetii*, and subsequently environmental contamination and thus human exposure.

3. Notification system in place to the national competent authority^(c)

Yes, but only dairy sheep and goats.

4. Results of investigations and national evaluation of the situation, the trends ^(d) and sources of infection^(e)

No confirmed cases of *Coxiella burnetii* in bulkmilk monitoring programme have been found in 2019

For the last years, there are no new positive cases of *Coxiella* abortions in small ruminants and also none in 2020.

When a potential animal source can be identified in a human Q fever patient, the health municipal authority (GGD) requests the NVWA to carry out a source study. In 2019, the GGD made seven reports of human patients to the NVWA. In 1 case it concerned the owner of a meat sheep farm. No increased number of abortions was observed on this farm. There was no further evidence that animals on this farm or other farms in the area were infected with *C. burnetii*.

In 2 cases it was a visit to a public location where the animals were not fully vaccinated. Both locations were visited by the NVWA and measures were imposed on the companies. Samples were taken from various animals at one of these locations. No *C. burnetii* could be detected in the study material.

Four other patients had no direct contact with animals. At the request of the GGD, the NVWA investigated whether there were *C. burnetii* indications in the environment where the patients lived in. This was not the case because, for example, the animals in the nearby located farms had been appropriate vaccinated.

5. Additional info

Specific GD monitoring in 2017-2018: on 74,5 per cent of the Dutch dairy cattle farms, antibodies against *Coxiella burnetii* were demonstrated in bulk milk¹¹. In 2019, 69,7 per cent of the Dutch dairy cattle farms had antibodies, which was not significantly different compared to 2017.

Since 2013 the GD investigated cattle abortion material with IHC and PCR tests. A few (1-3) cases are found positives per year.

¹¹ GD communication (begeleidende commissie monitoring dierziekte -runderen-) June 2020.

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(b): The control program/strategies in place, including vaccination if relevant. If applicable a description of how eradication measures are/were implemented, measures in case of the positive findings or single cases; any specific action decided in the Member State or suggested for the European Union as a whole on the basis of the recent/current situation, if applicable. If programme approved by the EC, please provide link to the specific programme in the Commission's website.

(c): Mandatory: Yes/No.

(d): Minimum five years.

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

General evaluation*: rabies**1. History of the disease and/or infection in the country^(a)**

Classic rabies virus is absent.

Bat-related rabies viruses, (European Bat Lyssa Virus -EBLV-) is present (endemic).

2. Evaluation of status, trends and relevance as a source for humans

The incidence of human rabies infection in The Netherlands is very low. Since 1962, only eight patients with rabies infection have been described. All eight persons were infected with the virus abroad.

There have never been endemic cases related to EBLV.

3. Any recent specific action in the Member State or suggested for the European Union^(b)

None

4. Additional information

Dimmendaal M. et al. (2019) Een patiënt met rabiës in public health perspectief. Infectieziekten Bulletin: <https://magazines.rivm.nl/2019/03/infectieziekten-bulletin/een-pati%C3%ABnt-met-rabi%C3%ABs-public-health-perspectief>

* For each zoonotic agent

(a): Epidemiological evaluation (trends and sources) over time until recent/current situation for the different relevant matrixes (food, feed, animal). If relevant: the official "disease status" to be specified for the whole country and/or specific regions within the country

(b): If applicable

Description of Monitoring/Surveillance/Control programmes system*: rabies**1. Monitoring/Surveillance/Control programmes system^(a)**

Passive surveillance (clinical, postmortem).

Since 1987 until 2012 all bats found dead were investigated. Since 2013 only the bats who probably have had contact with people. The direct IFT is currently the "gold standard" test and is recommended by both the WHO and the OIE. In May 2018, the OIE identified the PCR test as a good alternative to the direct IFT. From 2019 on the NVWA reports also animals that have only been tested by PCR.

2. Measures in place^(b)

Test and cull.

3. Notification system in place to the national competent authority^(c)

Yes, all animal species.

4. Results of investigations and national evaluation of the situation, the trends ^(d) and sources of infection^(e)

In the Netherlands, the classic rabies virus has been eliminated in wild and domestic animals.

The last case was an imported dog from Morocco in 2012.

Specific to bat-related rabies viruses, European Bat Lyssa Virus (EBLV) 1 and 2 are endemic.

About 5 infection with EBLV are yearly confirmed and these concern only two of the sixteen occurring Dutch bat species, namely the late-kite (*Eptesicus serotinus*) and the lake bat (*Myotis dasycneme*). The prevalence of EBLV-1 among the Dutch studied late-kite population is 23.6%.

The findings of this report year are comparable to the previous years.

5. Additional information

WHO European rabies database with query possibilities: <https://www.who-rabies-bulletin.org/site-page/queries>

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(b): The control program/strategies in place, including vaccination if relevant. If applicable a description of how eradication measures are/were implemented, measures in case of the positive findings or single cases; any specific action decided in the Member State or suggested for the European Union as a whole on the basis of the recent/current situation, if applicable. If programme approved by the EC, please provide link to the specific programme in the Commission's website.

(c): Mandatory: Yes/No.

(d): Minimum five years.

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

General evaluation*: salmonellosis

1. History of the disease and/or infection in the country^(a)

In contrast to various other European countries incidental cases of human salmonellosis are not notifiable in the Netherlands. Salmonellosis is only notifiable when it concerns a human cluster of 2 or more related cases with an origin in consumption of contaminated food or drinking water. Surveillance of salmonellosis is achieved by national laboratory surveillance where medical laboratories can send in to RIVM, with an estimated coverage of 64% of the Dutch population (for laboratory-confirmed salmonellosis). All human and food isolates of *S. Enteritidis* and *S. Typhimurium* are per beginning of 2020 subjected to typing by whole-genome-sequencing which facilitates outbreak/cluster detection, source matching and source attribution.

Trends of *Salmonella* in humans are best described in relation to their sources. As National Reference Center for *Salmonella*, RIVM routinely receives isolates for typing from cattle, pigs, poultry and pets, including reptiles. In addition, isolates from other farm animals such as horses, goats, sheep and ducks, and from environmental samples and foodstuffs imports will be typed. The isolates come from a variety of monitoring programs on farms, slaughterhouses and at supermarkets. These programs are often part of the work of the GD, NVWA and RIVM, but isolates are also submitted by the veterinary faculty, zoos and animal feed industry. Periodically, human data such as serotyping, molecular typing and resistance (determined by WBVR) are sent to the ECDC. These data are now available to the public and can be studied, aggregated by serotype, age, gender, period and country.¹²

2. Evaluation of status, trends and relevance as a source for humans

Recent years the incidence of laboratory confirmed salmonellosis in The Netherlands is fairly stable around 8/100,000/yr, thereby having one of the lowest incidences in the EU. This is reflected in the prevalence of *Salmonella* in farm animals, and meat at retail.

In 2020 an exceptional low number of salmonellosis cases was reported (-44%) which most likely is related to the COVID19 measures. *S. Enteritidis* (25%) and *S. Typhimurium* including the monophasic variant (resp. 15% and 20%) are the most reported serovars. Normally, eggs and pig meat are the most important sources of human salmonellosis, but in 2020 a decrease in the proportion of egg-related cases was observed.

An increasing trend in multi-drug resistance is of public health concern. This especially is related to serotypes *Kentucky* and *Infantis*.

3. Any recent specific action in the Member State or suggested for the European Union^(b)

None

4. Additional information

Every year an update of the data in humans and animals and in food is given in the Infectious Diseases Bulletin.¹³

¹² <https://ecdc.europa.eu/en/surveillance-atlas-infectious-diseases>

¹³ <https://www.rivm.nl/infectieziekten-bulletin>

Other general information is periodically given in the ‘State of food safety¹⁴’ and the publication ‘Registration of food-related outbreaks in the Netherlands’¹⁵

Description of Monitoring/Surveillance/Control programmes system*: salmonellosis

1. Monitoring/Surveillance/Control programmes system^(a)

Poultry

The control of zoonotic Salmonella in poultry is regulated at European level by Regulation (EC) No 2160/2003 and its implementing regulations (EC) No 200/2010 and (EC) No 517/2011. By abolishing the Product Boards as of January 1, 2015, the NVWA has been carrying out the control since that date. A monitoring obligation applies to poultry. When a laboratory demonstrates one of the specifically mentioned Salmonella serotypes in a monitoring sample or in another sample submitted, they must report this to the NVWA. This reporting obligation goes at stable level and is handled as such. The holder can choose whether to request a verification investigation for the suspected stable or whether to accept the infection. If any other stables are present at a company in addition to the suspected stable, these will also be sampled by the NVWA. If the NVWA investigates a stable, in addition to microbiological research, research is also conducted into the presence of antibiotic residues. If residues of relevant antibiotics are demonstrated, the shed can also be declared contaminated, despite a negative result from the microbiological investigation. From January 1, 2018, this study has been replaced by a check of the logbook for the administration of antibiotics to the flock.

Cattle¹⁶

Passive surveillance i.e. in cases salmonella is found in carcasses that have been sent in for post-mortem examination by clinical problems.

Active private surveillance for example for dairy herds (bulk milk).

Swine¹⁷

Passive surveillance i.e. in cases salmonella is found in carcasses that have been sent in for post-mortem examination by clinical problems.

Active private surveillance for example a (serological) monitoring program is implemented and organized by two IQC-organizations¹⁸. Sampling is obligatory in finishers.

Sheep/goat¹⁹

¹⁴ <https://www.nvwa.nl/over-de-nvwa/hoe-de-nvwa-werkt/staten-van/staat-van-voedselveiligheid>

¹⁵ <https://rivm.openrepository.com/handle/10029/622161>

¹⁶ Animal Health Services (GD) <https://www.gdanimalhealth.com/>

¹⁷ Animal Health Services (GD) <https://www.gdanimalhealth.com/>

¹⁸ Institute of Quality & Control (IQC): <https://www.rva.nl/en/accredited-organisations/details/264>

¹⁹ Animal Health Services (GD) <https://www.gdanimalhealth.com/>

Passive surveillance i.e. in case salmonella is found in carcasses that have been submitted for post-mortem examination by clinical problems.

Active private surveillance for example for dairy goats (bulk milk).

Project Surveillance Farm Animals

In the context of a joint RIVM-NVWA project 'Surveillance Farm Animals', research is periodically conducted in a selected farm animal species.

Food

The NVWA monitors the entire food chain, from primary production companies to the retail sector, on legal limits and criteria, according to trends and identifying new risks. At slaughterhouses in the different meat chains, compliance with mandatory own research of these companies (Microbiological criteria for food Regulation (EC) No 2073/2005) is checked and samples are also taken by NVWA for verification.

2. Measures in place^(b)

See above and hereunder

.

3. Notification system in place to the national competent authority^(c)

Yes (poultry and food/feed conform the EU regulation.

Salmonellosis in all other species than poultry is reportable but not notifiable²⁰.

4. Results of investigations and national evaluation of the situation, the trends ^(d) and sources of infection^(e)

Poultry

An important part of the reduction of Salmonella infections in humans seems to be explained by the Salmonella control program in poultry. In all links of the production chain, both the monitoring of the former Product Boards for Livestock, Meat & Eggs (PVE -stopped after 2012-) and the monitoring of NVWA in stores showed a significant decrease of Salmonella infection. However, this stagnated after 2004, but turned out to continue to be seen in the monitoring of poultry meat in stores. From 2011, meat preparations (seasoned or marinated meat) and minced chicken are also considered; the contamination percentage in this is comparable to that in unprepared chicken meat.

Cattle

The number of units tested has increased steadily from between 10,000 and 11,000 in 2013 to approximately 15,000 in 2017 and subsequently decreased to about 10,000 in 2020. In these years,

²⁰ By animals no imposing measures are in place but only an obligation to report the cases at regular time intervals for trend estimations. By positive findings by animals hold in locations with a public function such as pet farms the report interval is mostly very short and measures are advised to minimize the risk. For direct consumption or commercialization of food product at the farm compulsory measures can be taken conform the EU Food Law.

the annual proportion of positive units fluctuated between 6.3% and 9.4%. The estimated prevalence for the period 2017-2018 in veal calves is 17,9%²¹.

The relevance as a source for humans has not changed in recent years. In 2017, 2% of human cases were attributed to cattle²². Source attribution data on 2020 have not yet been published.

Additional information on dairy herds: Between 2013 and 2019, the proportion of bulk milk samples in which antibodies against *Salmonella* spp. were detected using an ELISA, fluctuated between 3% and 12%, with higher proportions of positive samples in the autumn. Between 2013 and 2020, the running annual average of these proportions varied between 3% and 10%. In 2020, this running annual average was 4%.

Swine

The results of the compulsory monitoring of slaughter pigs, depend strongly on the chosen cut-off (OD%) of the ELISA test. In 2020, with a cut-off value of 40% the number of positive animals is 4,868 or 12.5% of the total number of 38,774. With a chosen cut-off value of 10% OD the number of positive animals is 15,509 or 40%. These figures are slightly better than previous years.

In 2020 clinical salmonellosis is diagnosed with 36 submissions of pigs or feces for laboratory testing.

Sheep/goat

A few cases per year. Since 2014, some cases of salmonellosis in dairy goat kids. At some farms, people have also been infected by the same bacterium as demonstrated in the kids.

Project Surveillance Farm Animals

In the context of the project research was conducted in broilers in 2018 and 2019.

The prevalence of *S. Typhimurium* en *S. Enteritidis* in broilers is low (around 0.1%). However, the other *Salmonella* serotypes have also been determined. The most commonly found serotypes were *S. Paratyphi B* var Java and *S. Infantis*. In addition, *S. Agona*, *S. Goldcoast* and *S. Saint Paul* were each found on one farm. *S. Infantis* was also detected in a stool sample in one human participant in this study. (animal caretaker or spouse of owner)

Food

Salmonella was found in ~ 3% of the samples of fresh meat and meat preparations from chicken in 2019, which has been stable for several years.

In fresh pork, the prevalence in 2019 (1.0%) (2017 -0.7%, 2018 - 1.3%). For lamb, the prevalence was 0.4% (2016 - 1.8%, 2017 - 1.0, in 2018 - 0.4% In fresh beef / veal, the percentage of positives has been below 1.0% for years (0.8% in 2019).

The prevalence is also low in other batches of fresh meat, herbs, vegetables, mussels etc.

Feed

²¹ GD communication (begeleidende commissie monitoring dierziekte -runderen-) June 2020

²² <https://www.rivm.nl/publicaties/staat-van-zoonosen-2017> page 50

The prevalence of *Salmonella* in feed samples is stable lats years.

5. Additional information

Most *Salmonella* infections are caused by eating contaminated food such as undercooked eggs, raw meat products, unpasteurized dairy products and, incidentally, by (pre-cut) raw fruits and vegetables. The source attribution model estimates the frequency distribution of serotypes in humans based on the frequency among the sources. This also includes the volume consumed, the degree of contamination and the fraction of the food that is consumed raw or well cooked. It also includes the part caused by reptiles that are kept as pets and where contamination occurs through direct contact with the animals or contact with an environment contaminated by the reptiles (terrarium).

Although it has not been the dominant source for the past six years, eggs, as in other European countries over the past 20 years, have been the main source of salmonellosis. As from 2009, if eggs come from *S. Enteritidis* / *S. Typhimurium*-positive flocks, which may no longer be marketed as table eggs for direct human consumption (EC Decree 1237/2007). These eggs are only suitable for the egg processing industry. In contrast to the historically lowest estimate of egg-related infections in 2018 (18%) compared to the past 35 years, in 2019 we see an increase in the number of egg-related infections to 26%. This is mainly due to the relatively higher number of reported *S. Enteritidis* infections in 2019.

The share of pigs is still the highest, reaching 28% in 2019. This is lower than in 2018 (34%) and is mainly caused by the lower number of reported *S. Typhimurium* infections. Only 2% came from beef and 6% from chicken.

7% of *Salmonella* infections were caused by contact with reptiles. *Salmonella* is a commensal gut bacterium in reptiles.

Of ~ 19%, the source could not be estimated or the *Salmonella* infection had contracted abroad.

Salmonella data from GMP+ feed monitoring

Feed Safety Certification requires companies to set up a HACCP system and therefor control feed safety risks such as *Salmonella*. Monitoring is (of course) an essential step in HACCP. For some analysis performed by certified companies, GMP+ certification also requires the inclusion of analysis results in the GMP+ Monitoring database. This is, for example, the case for analysis on *Salmonella* in compound feed for poultry, pigs, cattle and other animal species. Other analysis results are entered voluntary in the GMP+ Monitoring database. This data is shared anonymously with the GMP+ Community (all certified companies and GMP+ International) to make reports and use this information to improve their own HACCP analysis and monitoring program. GMP+ International uses the data to improve the GMP+ certification scheme.

* For all combinations of zoonotic agents and matrix (Food, Feed and Animals) for 'Prevalence' and 'Disease Status': one text form reported per each combination of matrix/zoonoses or zoonotic agent

- (a): Sampling scheme (sampling strategy, frequency of the sampling, type of specimen taken, methods of sampling (description of sampling techniques) + testing scheme (case definition, diagnostic/analytical methods used, diagnostic flow (parallel testing, serial testing) to assign and define cases. If programme approved by the EC, please provide link to the specific programme in the Commission`s website.
- (b): The control program/strategies in place, including vaccination if relevant. If applicable a description of how eradication measures are/were implemented, measures in case of the positive findings or single cases; any specific action decided in the Member State or suggested for the European Union as a whole on the basis of the recent/current situation, if applicable. If programme approved by the EC, please provide link to the specific programme in the Commission`s website.
- (c): Mandatory: Yes/No.
- (d): Minimum five years.
- (e): Relevance of the findings in animals to findings in foodstuffs and for human cases (as a source of infection).

General evaluation*: toxoplasmosis**1. History of the disease and/or infection in the country^(a)**

Based on the estimated incidence of two children with congenital toxoplasmosis per thousand live births per year toxoplasmosis has one of the highest disease burdens among the food-borne zoonoses with an estimated 1900 DALYs per year.

2. Evaluation of status, trends and relevance as a source for humans

Toxoplasmosis is not notifiable and is not included in the screening program for pregnant women in the Netherlands. The diagnostics are provided by different types laboratories and requested of different kinds applicants (obstetricians, gynecologists, ophthalmologists, internists, occupational physicians). Therefore there is no good insight into (the trend in) the number of cases per year.

3. Any recent specific action in the Member State or suggested for the European Union^(b)

None

4. Additional information

Kortbeek L.M., et al. (2009) Congenital toxoplasmosis and DALYs in the Netherlands. Mem Inst Oswaldo europa.eu/legal-content/NL/ Cruz 104:370-373

Haagsma, J. A., et al. (2015) Assessing disability weights based on the responses of 30,660 people from four European countries. Popul Health Metr 13(1): 10.

Pijnacker, R., et al. (2018) Disease burden of foodrelated pathogens in the Netherlands, 2018, Rijksinstituut voor Volksgezondheid en Milieu RIVM.

* For each zoonotic agent

(a): Epidemiological evaluation (trends and sources) over time until recent/current situation for the different relevant matrixes (food, feed, animal). If relevant: the official “disease status” to be specified for the whole country and/or specific regions within the country

(b): If applicable

Description of Monitoring/Surveillance/Control programmes system*: toxoplasmosis**1. Monitoring/Surveillance/Control programmes system^(a)**

Passive surveillance in animals (i.e. small ruminants after abortion) submitted for clinical and post mortem examination to different institutions.

2. Measures in place^(b)

Risk communication

3. Notification system in place to the national competent authority^(c)
<p>Toxoplasmosis is in all animal species reportable but not notifiable²³.</p>
4. Results of investigations and national evaluation of the situation, the trends ^(d) and sources of infection^(e)
<p><i>T. gondii</i> infection often progresses in animals asymptomatic, although (congenital) toxoplasmosis with neurological and ocular symptoms or abortion can occur. In small ruminants, <i>Toxoplasma gondii</i> is one of the main causes of infectious abortion. Per year a few cases are confirmed.</p>
5. Additional information
<p>In a source attribution study is calculated that within the meat-related infections in the Netherlands beef has a much larger share of human toxoplasmic infections than pork, mutton and mixed meat products together²⁴. Beef is unlike mutton, relatively uncontaminated, but because of its frequent raw consumption (especially filet américain), is the estimated share in human infections high.</p>
<p>* For all combinations of zoonotic agents and matrix (Food, Feed and Animals) for ‘Prevalence’ and ‘Disease Status’: one text form reported per each combination of matrix/zoonoses or zoonotic agent</p> <p>(a): Sampling scheme (sampling strategy, frequency of the sampling, type of specimen taken, methods of sampling (description of sampling techniques) + testing scheme (case definition, diagnostic/analytical methods used, diagnostic flow (parallel testing, serial testing) to assign and define cases. If programme approved by the EC, please provide link to the specific programme in the Commission’s website.</p> <p>(b): The control program/strategies in place, including vaccination if relevant. If applicable a description of how eradication measures are/were implemented, measures in case of the positive findings or single cases; any specific action decided in the Member State or suggested for the European Union as a whole on the basis of the recent/current situation, if applicable. If programme approved by the EC, please provide link to the specific programme in the Commission’s website.</p> <p>(c): Mandatory: Yes/No.</p> <p>(d): Minimum five years.</p> <p>(e): Relevance of the findings in animals to findings in foodstuffs and for human cases (as a source of infection).</p>

²³ By animals no imposing measures are in place but only an obligation to report the cases at regular time intervals for trend estimations. By positive findings by animals held in locations with a public function such as pet farms the report interval is mostly very short and measures are advised to minimize the risk. For direct consumption or commercialization of food product at the farm compulsory measures can be taken conform the EU Food Law.

²⁴ Opsteegh M., et al. (2011) A quantitative microbial risk assessment for meatborne *Toxoplasma gondii* infection in the Netherlands. Int J Food Microbiol 150: 103-114

General evaluation*: trichinellosis**1. History of the disease and/or infection in the country^(a)**

The disease in domestic animals is absent since 2007.

Feral pigs, wild boars and foxes may be infected with *T. britovi* and *T. spiralis* / *T. pseudospiralis*, but the prevalence is very low.

Human trichinellosis is a notifiable disease. Since 2011 a few human clinical cases are reported in The Netherlands. The most of these cases are after a trip to abroad.

2. Evaluation of status, trends and relevance as a source for humans

The diagnosis of *Trichinella* is mainly based on serology. In the Netherlands, serology is only carried out by RIVM. The sera are screened with an ELISA and confirmed by an immunoblot in case of a positive result. In case of special results, consultations are held with the reference center in Rome (EU Reference Laboratory for Parasites, ISS, Dr. E. Pozio).

3. Any recent specific action in the Member State or suggested for the European Union^(b)

None

4. Additional information

<https://lci.rivm.nl/richtlijnen/trichinellose>

* For each zoonotic agent

(a): Epidemiological evaluation (trends and sources) over time until recent/current situation for the different relevant matrixes (food, feed, animal). If relevant: the official “disease status” to be specified for the whole country and/or specific regions within the country

(b): If applicable

Description of Monitoring/Surveillance/Control programmes system: trichinellosis**1. Monitoring/Surveillance/Control programmes system^(a)**

Consumption animals, which are sensitive to *Trichinella* spp., must be investigated according to Directive EU 2075/2005 using the artificial digestion method. However, the risk is marginal when pigs are kept indoors and therefore EU legislation in 2015 adapted in such a way that in principle slaughter pigs, which are kept under controlled biosecurity conditions (controlled housing), no longer need to be tested in Europe. In the Netherlands, control of all pigs, horses and wild boars for *Trichinella* still takes place during the slaughter phase. and is done by examining one (meat pig) to five grams (horse and wild boar) muscle meat from a predilection site of each carcass for the appearance of *Trichinella*. Although the risk of infection in pigs kept under controlled housing systems is therefore minimal, there is a risk for kept pigs and game, because *Trichinella* is endemic to sensitive wild omnivorous and carnivorous animals (game cycle).

2. Measures in place^(b)
Test and cull/freeze treatment.
3. Notification system in place to the national competent authority^(c)
Yes
4. Results of investigations and national evaluation of the situation, the trends ^(d) and sources of infection^(e)
<p>In the Netherlands, all consumption animals are still tested with the artificial digestion method.</p> <p>In 2020 all routinely examined animals (pigs, wild boars, horses) were negative for Trichinella.</p> <p>Serological monitoring of Trichinella in wild boars has been discontinued in 2016 so that there is no longer any insight into low-grade infestation in the wild cycle.</p>
5. Additional information
None
<p>* For all combinations of zoonotic agents and matrix (Food, Feed and Animals) for 'Prevalence' and 'Disease Status': one text form reported per each combination of matrix/zoonoses or zoonotic agent</p> <p>(a): Sampling scheme (sampling strategy, frequency of the sampling, type of specimen taken, methods of sampling (description of sampling techniques) + testing scheme (case definition, diagnostic/analytical methods used, diagnostic flow (parallel testing, serial testing) to assign and define cases. If programme approved by the EC, please provide link to the specific programme in the Commission`s website.</p> <p>(b): The control program/strategies in place, including vaccination if relevant. If applicable a description of how eradication measures are/were implemented, measures in case of the positive findings or single cases; any specific action decided in the Member State or suggested for the European Union as a whole on the basis of the recent/current situation, if applicable. If programme approved by the EC, please provide link to the specific programme in the Commission`s website.</p> <p>(c): Mandatory: Yes/No.</p> <p>(d): Minimum five years.</p> <p>(e): Relevance of the findings in animals to findings in foodstuffs and for human cases (as a source of infection).</p>

General evaluation*: tuberculosis due to *M. bovis*

1. History of the disease and/or infection in the country^(a)

Every year we have seen a steady decline in the number of tuberculosis patients in the Netherlands. Last years about 850 new cases of tuberculosis and 1500 tuberculosis infections. The most of the cases (75%) are imported and caused by *Mycobacterium tuberculosis* (97%), in 1% of cases by *M. africanum*, and in 1-1.5% by *M. bovis*.

2. Evaluation of status, trends and relevance as a source for humans

Spread of *M. tuberculosis* is mainly via the air, while transmission from *M. bovis* to humans usually takes place via contaminated, unpasteurized milk or raw cheese (enteral route). Humans are rarely infected by animals with *M. bovis* via the air, for example through aerosol formation during slaughter. Pulmonary tuberculosis caused by *M. bovis* is therefore much less common in humans. Transmission from such cases is almost never observed in the structural DNA fingerprint surveillance.

In 2020 there were 6 reports of tuberculosis caused by *M. bovis*. There were no reports where the disease was caused by any of the other zoonotic *Mycobacterium* species. Five patients (83%) were born abroad. Without exception, this concerned tuberculosis outside the lungs (extrapulmonary tuberculosis).

In the period 2010-2020, a total of 105 reports of tuberculosis caused by *M. bovis* were made, an average of 10 per year. Of 105 patients, 26 (25%) were born in the Netherlands and 79 (75%) were born abroad, 50 of whom were in Morocco. The age distribution of patients with tuberculosis caused by *M. bovis* differs greatly by country of origin; 55% (14 of 26) of the patients born in the Netherlands were older than 65 years (endogenous reactivation), while only 18% (14 of 79) of the patients born abroad belonged to that age category. Since *M. bovis* patients born outside the Netherlands are generally younger, many sources of infection must still be present in the country of origin.

In the period 2010-2020, 23% of patients had pulmonary tuberculosis and 77% had extrapulmonary tuberculosis.

3. Any recent specific action in the Member State or suggested for the European Union^(b)

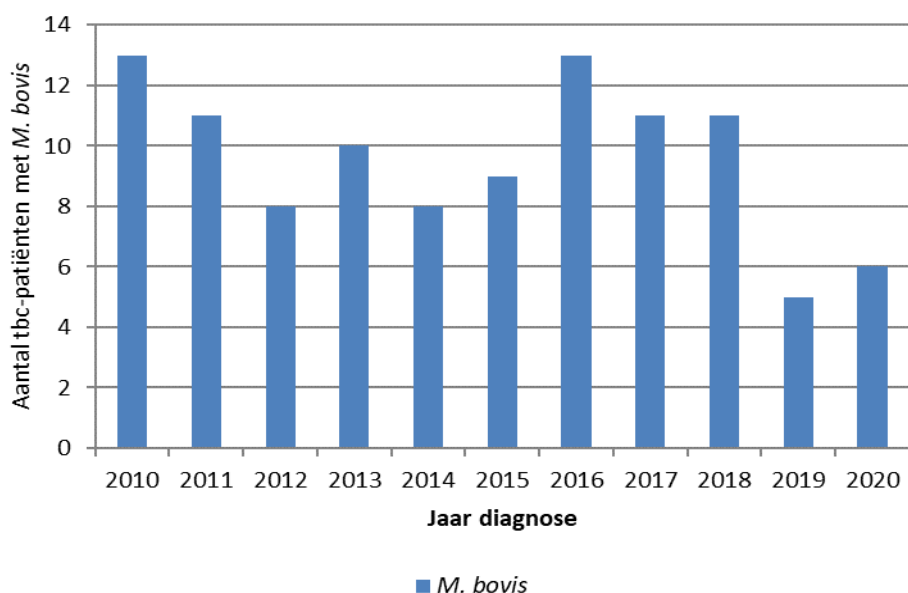
None

4. Additional information

<https://www.rivm.nl/tuberculose/surveillance>

Tuberculosis reports *M. bovis* per year:²⁵

²⁵ Source: Staat van Zoonosen 2020



* For each zoonotic agent

(a): Epidemiological evaluation (trends and sources) over time until recent/current situation for the different relevant matrixes (food, feed, animal). If relevant: the official “disease status” to be specified for the whole country and/or specific regions within the country

(b): If applicable

Description of Monitoring/Surveillance/Control programmes system*: tuberculosis due to *M. bovis*

1. Monitoring/Surveillance/Control programmes system^(a)

Tuberculosis (TB) monitoring in farm animals in the Netherlands is mainly based on slaughterhouse surveillance (post-slaughter inspection). In addition, tuberculin test takes place at export of animals to third countries (countries outside the EU), in breeding animals for artificial insemination and in clinical suspicions, especially in zoos. Tuberculin testing takes place also for imported animals after report of an infection of the (abroad) farm of the origin.

OIE status: free in domestic and wild animals since 1999

2. Measures in place^(b)

Test and cull.

3. Notification system in place to the national competent authority^(c)

Yes, for all animal species

4. Results of investigations and national evaluation of the situation, the trends ^(d) and sources of infection^(e)

There is a risk of introduction of bovine tuberculosis if animals are brought in the Netherlands from free farms abroad in a non-free area because the TB status of an exporting farm can change after animals have been traded (at a low control frequency). The NVWA receives such reports from foreign veterinary services several times every year.

In 2020, a total of 6 samples were examined by means of bacterial isolation in the context of slaughterhouse findings, positive tuberculin tests, suspicious section images / organs, diagnostics and / or tracing of animals from abroad, whereby tuberculosis was diagnosed at the farm of origin. These samples were from cattle.

No tuberculosis pathogens were found in these samples, nor in 35 samples submitted for screening of other animals (including elephants, squirrel and a wallaby from zoos).

54 other entries were received (including feed/bedding material and from various (zoo) animals) for PCR testing for the presence of mycobacteria. All submitted materials were found to be negative for PCR based detection of tuberculosis complex bacteria.

5. Additional information

* For all combinations of zoonotic agents and matrix (Food, Feed and Animals) for 'Prevalence' and 'Disease Status': one text form reported per each combination of matrix/zoonoses or zoonotic agent

(a): Sampling scheme (sampling strategy, frequency of the sampling, type of specimen taken, methods of sampling (description of sampling techniques) + testing scheme (case definition, diagnostic/analytical methods used, diagnostic flow (parallel testing, serial testing) to assign and define cases. If programme approved by the EC, please provide link to the specific programme in the Commission's website.

(b): The control program/strategies in place, including vaccination if relevant. If applicable a description of how eradication measures are/were implemented, measures in case of the positive findings or single cases; any specific action decided in the Member State or suggested for the European Union as a whole on the basis of the recent/current situation, if applicable. If programme approved by the EC, please provide link to the specific programme in the Commission's website.

(c): Mandatory: Yes/No.

(d): Minimum five years.

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

General evaluation*: VTEC

1. History of the disease and/or infection in the country^(a)

Since January 1999 there is humane surveillance of STEC O157 infections in the Netherlands. That same year is STEC O157 also (human) reportable by law. In 2007 STEC non-O157 was included in surveillance. The reporting criteria for STEC are in 2016 changed, with the specification of the reporting obligation to acute infections with minimal symptoms of diarrhea, blood in the stool and / or vomiting. These changes cause that long-term or mild symptoms infections are no longer subject to notification. Besides the obliged notification the RIVM conducts a laboratory surveillance where isolates from medical labs are sent to RIVM where they are being subjected to whole-genome-sequencing which facilitates outbreak/cluster detection and source matching. . Evaluation of status, trends and relevance as a source for humans

The change to reporting acute, more severe infections appears to be a good compromise between workload, redundancy, and public health relevance, provided isolates remain available for typing and sequencing.²⁶ In 2020 a significant lower number of STEC was reported (-30% relative to 2019) which is probably related to the COVID19 measures.

3. Any recent specific action in the Member State or suggested for the European Union^(b)

None

4. Additional information

Recently²⁷, a Dutch attribution study was conducted with data and isolates of patients and cattle, sheep and goats, pigs and poultry from the surveillance data 2010 to 2014. This shows that approximately half of the patients can be attributed to bovine animals as reservoir and O-types O157, O26, O91 and O103 were the most found (61-75%). About a quarter of the infections can be attributed to sheep and goats, where STEC O146 was the most found infection (71-77%). Pigs and poultry are smaller STEC reservoirs. Children under five and men had an increased risk of STEC infection. In the summer and fall, and in the countryside, there is the risk of infection the highest. Further risk factors were consumption of beef, raw or undercooked meat and salami.

* For each zoonotic agent

(a): Epidemiological evaluation (trends and sources) over time until recent/current situation for the different relevant matrixes (food, feed, animal). If relevant: the official “disease status” to be specified for the whole country and/or specific regions within the country

(b): If applicable

²⁶ See recent paper at https://wwwnc.cdc.gov/eid/article/27/1/20-0339_article

²⁷ Mughini-Gras L., et al. (2018) Attribution of human. infections with Shiga toxin-producing *Escherichia coli* to livestock sources and identification of the source-specific risk factors, The Netherlands (2010-2014). Zoonoses Public Health 65: e8-e22.

Description of Monitoring/Surveillance/Control programmes system*: VTEC

1. Monitoring/Surveillance/Control programmes system^(a)

There is a monitoring system in place for mussels, oysters and imported food (i.e. farmed fish and poultry meat) as well as incidental monitoring projects (i.e. on broilers in 2018).

2. Measures in place^(b)

Conform EU Food Law

3. Notification system in place to the national competent authority^(c)

No (animals), yes (food)

4. Results of investigations and national evaluation of the situation, the trends ^(d) and sources of infection^(e)

The monitoring system and projects results in the last year are comparable with the previous years.

5. Additional information

<https://www.nvwa.nl/onderwerpen/e-coli-bacterien-stec-ehec/documenten>

* For all combinations of zoonotic agents and matrix (Food, Feed and Animals) for 'Prevalence' and 'Disease Status': one text form reported per each combination of matrix/zoonoses or zoonotic agent

(a): Sampling scheme (sampling strategy, frequency of the sampling, type of specimen taken, methods of sampling (description of sampling techniques) + testing scheme (case definition, diagnostic/analytical methods used, diagnostic flow (parallel testing, serial testing) to assign and define cases. If programme approved by the EC, please provide link to the specific programme in the Commission's website.

(b): The control program/strategies in place, including vaccination if relevant. If applicable a description of how eradication measures are/were implemented, measures in case of the positive findings or single cases; any specific action decided in the Member State or suggested for the European Union as a whole on the basis of the recent/current situation, if applicable. If programme approved by the EC, please provide link to the specific programme in the Commission's website.

(c): Mandatory: Yes/No.

(d): Minimum five years.

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

General evaluation*: yersiniosis
1. History of the disease and/or infection in the country^(a)
Comparable at EU level.
2. Evaluation of status, trends and relevance as a source for humans
Incidental cases of human yersiniosis are not anymore subject to a notification obligation (except for <i>Y. pestis</i>) in the Netherlands. Yersiniosis is only required to report if it concerns a human cluster of two or more related cases with a probable origin in consumption of contaminated food or drinking water.
3. Any recent specific action in the Member State or suggested for the European Union^(b)
None
4. Additional information
None
<p>* For each zoonotic agent</p> <p>(a): Epidemiological evaluation (trends and sources) over time until recent/current situation for the different relevant matrixes (food, feed, animal). If relevant: the official “disease status” to be specified for the whole country and/or specific regions within the country</p> <p>(b): If applicable</p>

Description of Monitoring/Surveillance/Control programmes system*: yersiniosis
1. Monitoring/Surveillance/Control programmes system^(a)
Passive surveillance in animals (i.e. small ruminants and hares) submitted for post mortem examination to the GD and DWHC
2. Measures in place^(b)
See hereunder
3. Notification system in place to the national competent authority^(c)
Yersiniosis is in all animal species reportable but not notifiable ²⁸ .
4. Results of investigations and national evaluation of the situation, the trends ^(d) and sources of infection^(e)

²⁸ By animals no imposing measures are in place but only an obligation to report the cases at regular time intervals for trend estimations. By positive findings by animals hold in locations with a public function such as pet farms the report interval is mostly very short and measures are advised to minimize the risk. For direct consumption or commercialization of food product at the farm compulsory measures can be taken conform the EU Food Law.

Per year a few cases are demonstrated.
5. Additional information
None
<p>* For all combinations of zoonotic agents and matrix (Food, Feed and Animals) for 'Prevalence' and 'Disease Status': one text form reported per each combination of matrix/zoonoses or zoonotic agent</p> <p>(a): Sampling scheme (sampling strategy, frequency of the sampling, type of specimen taken, methods of sampling (description of sampling techniques) + testing scheme (case definition, diagnostic/analytical methods used, diagnostic flow (parallel testing, serial testing) to assign and define cases. If programme approved by the EC, please provide link to the specific programme in the Commission`s website.</p> <p>(b): The control program/strategies in place, including vaccination if relevant. If applicable a description of how eradication measures are/were implemented, measures in case of the positive findings or single cases; any specific action decided in the Member State or suggested for the European Union as a whole on the basis of the recent/current situation, if applicable. If programme approved by the EC, please provide link to the specific programme in the Commission`s website.</p> <p>(c): Mandatory: Yes/No.</p> <p>(d): Minimum five years.</p> <p>(e): Relevance of the findings in animals to findings in foodstuffs and for human cases (as a source of infection).</p>

Food-borne Outbreaks

1. System in place for identification, epidemiological investigations and reporting of food-borne outbreaks

Identification of food-borne outbreaks happens on various levels and ways. People can report a (possible) outbreak to the Food Safety Authority (NVWA); laboratories and physicians report (possible) outbreaks to the regional Public Health Services (PHS); PHS can observe (possible) outbreaks in the reports of diseases they receive; the National Institute for Public Health and the Environment (RIVM) can observe (possible) outbreaks in the reports of notifiable diseases or in the laboratory surveillance of *Salmonella*, *Shigella*, *STEC*, *Listeria* or *Hepatitis A*.

Epidemiological investigations are mainly done by the PHS, with involvement of the RIVM for coordination and analysing the data when cases live in more than 1 PHS-area. Food investigations are done by the NVWA. Where needed and/or possible PHS, RIVM, and NVWA work together in solving the outbreak.

The PHS report their outbreaks to the RIVM as soon as they are aware of it, as they have to do by law. The NVWA record the reports they receive, which is analysed once a year by the RIVM together with the mandatory reports sent by the PHS.

2. Description of the types of outbreaks covered by the reporting

In the outbreaks reported by citizens at the NVWA, it often remains unclear what the agent and/or the vehicle was.

3. National evaluation of the reported outbreaks in the country^(a)

The number of reported outbreaks increased since 2015 (n=406), although 2018 (n=756) and 2019 (n=735) were comparable. However, the number of outbreaks decreased in 2020 (n=559). Most likely cause of the decrease is the corona pandemic in which lockdowns and measures diminished visits to eating places, parties, and other events.

In 3.9% of the outbreaks a pathogen was found in cases and/or food or environmental swaps. Food tested positive in only 5 outbreaks (*Listeria*-fish (2), *Listeria*-cheese, *Bacillus cereus*-fish, neurotoxins-fish). Especially the number of norovirus-outbreaks dropped, from around 20 outbreaks a year to only 3. *Campylobacter* remained stable with 8 outbreaks, *Salmonella* dropped to 5 outbreaks.

4. Descriptions of single outbreaks of special interest

The combined *Listeria*-database with sequence data of human and food isolates, which is a collaboration between food safety and RIVM, helped identifying and solving 3 outbreaks in 2020.

A *Salmonella* Enteritidis outbreaks started with cases within one institution with Turkish pizza from one selling location as most likely source. Comparison of these case isolates with the database of the Salmonella laboratory surveillance revealed a broader outbreak. Further investigation showed that also a large part of those cases could be assigned to Turkish pizza/selling location.

5. Control measures or other actions taken to improve the situation

-

6. Any specific action decided in the Member State or suggested for the European Union as a whole on the basis of the recent/current situation

-

7. Additional information

-

(a): Trends in numbers of outbreaks and numbers of human cases involved, relevance of the different causative agents, food categories and the agent/food category combinations, relevance of the different type of places of food production and preparation in outbreaks, evaluation of the severity of the human cases.

Institutions and laboratories involved in antimicrobial resistance monitoring and reporting

- **The Netherlands Food and Consumer Product Safety Authority (NVWA)**

The NVWA is the CA on, a.o., food safety and AMR. NVWA performs all the sampling of caeca at slaughter and meat samples from retail for the mandatory AMR monitoring (2013/652/EU). More, voluntary, AMR work is done by analysing faecal or caecal samples from other animal species, meat from different animal species and other food products.

Together both institutes, NVWA/WBVR, coordinate the monitoring (AMR), both mandatory and voluntary, and publish a national report on use of antibiotics and resistance data in livestock. This is combined in the same report with data on antibiotic use and resistance in humans ([Nethmap - MARAN](#))

- **Wageningen BioVeterinary Research (WBVR)**

WBVR is the National Reference Laboratory for AMR. WBVR analyses most of the animal samples, caeca and faeces and performs sensitivity test on isolates. Molecular screening, e.g. colistin and CP, and typing of isolates, ESBL/AmpC/CP suspected isolates is performed by WBVR.

- **Wageningen Food Safety Research (WFSR)**

The former NVWA laboratory is, from 1st of June 2019 part of Wageningen University & Research. The new laboratory is called Wageningen Food Safety Research (WFSR). WFSR analyses meat and other food samples and tests isolates on sensitivity to antibiotic substances.

Short description of the institutions and laboratories involved in data collection and reporting

General Antimicrobial Resistance Evaluation

1. Situation and epidemiological evolution (trends and sources) regarding AMR to critically important antimicrobials^(a) (CIAs) over time until recent situation

For an overview of the trends see [Nethmap - MARAN](#)

2. Public health relevance of the findings on food-borne AMR in animals and foodstuffs

Antibiotic Usage

In 2020 in total 154 tonnes of Antimicrobial Veterinary Medicinal Products (AVMPs) were sold, which is an increase of 2% compared to 2019 and which resulted in a slight relapse in attaining the governmental 70% reduction goal. A decrease in sales by 69.0 % over the years 2009-2020 is attained (with 2009 considered a reference year by the Dutch Government). Antimicrobial use (AMU) based on prescription data stabilised in most animal sectors in 2020 except in veal calves in which the use continued to decrease. In rabbits (included for the first time) in 2020 an increase in use was observed, while in turkeys in 2020 use decreased substantially. Finally, use in dairy cattle was traditionally the lowest of all sectors monitored.

The small increase in sales of AVMPs in the Netherlands in 2020 is contradicted by an overall decrease in AMU as observed in the prescription monitoring data. Actual use in animal husbandries can be somewhat different from the quantities sold due to stock piling and cross border use.

The use of antibiotics of critical importance to human health care (especially cephalosporins of 3rd and 4th generation) is reduced to an absolute minimum, even in the unmonitored sectors. Use of polymyxins slightly increased in 2020. More efforts to reduce colistin use are warranted, especially in the pig sector and some poultry sectors, not shown here.

Antimicrobial resistance

In 2020, *S. Enteritidis* (25%) followed by *S. Typhimurium* (15%) together with the monophasic variant of *S. 1,4,[5],12:i:-* (9%) and the *S. Typhimurium* variant *S. 4,12:i:-* (11%) were most frequently isolated from humans suffering from clinical salmonellosis. In pigs, the monophasic variant of *S. Typhimurium* (25%) dominated. In cattle, *S. Typhimurium* (32%) and *S. Dublin* (27%) were most commonly isolated, followed by *S. Enteritidis* (21%). In broilers *S. Infantis* dominated (48%, which is an increase from 38% in 2019) while in layers *S. Enteritidis* dominated (63%). Overall, the highest resistance proportions in *Salmonella* were again observed for (in decreasing order) sulfamethoxazole (24.4% in 2019 to 26.3% in 2020), tetracycline (25.5% in 2019 to 25.4% in 2020), ampicillin (24.8% in 2019 to 21.7% in 2020), nalidixic acid (16.7% in 2019 to 16.4% in 2020), ciprofloxacin (17.0% in 2019 to 16.0% in 2020), trimethoprim (10.7% in 2019 to 12% in 2020) and chloramphenicol (7.1% in 2019 to 6.7% in 2020). Among the most frequently isolated serovars, those showing the highest resistance levels, were *S. Infantis*, *S. Paratyphi B* var. Java, the (monophasic) *S. Typhimurium* variants 4,12:i:- and 1,4,[5],12:i:-, and *S. Typhimurium*. Resistance to fluoroquinolone increased significantly among *S. Infantis* (to 63%) but decreased for *S. Typhimurium* and *S. Enteritidis*. In total, 6 (0.5%) ESBL suspected isolates were detected among six different serovars, with 4 isolates from humans and 2 non-human isolates of unknown origin. In 2020, no carbapenemase-producing *Salmonella* were found.

In 2020, resistance proportions in *C. jejuni* isolates from caecal samples of broilers and meat thereof stabilized at a high level for quinolones and tetracycline. In laying hens, resistance proportions were much lower than in broilers, especially for *C. jejuni*. Resistance to macrolides was not detected in *C. jejuni* isolates from broilers and poultry meat, and was at low levels in *C. coli* isolates from broilers and poultry meat. In humans, resistance proportions were higher in *C. coli* than in *C. jejuni* isolates, but were overall lower in 2020 compared to previous years. This is most likely due to a substantial reduction of travel-related campylobacteriosis as a result of the COVID-19 lockdown, which is associated with higher resistance proportions than domestically acquired campylobacteriosis. Ciprofloxacin resistance in *Campylobacter* isolates from humans was high again in 2020, which is a concern for public health. It was, however, lower compared to 2017-2019. Resistance to erythromycin, first choice antibiotic in human medicine for campylobacteriosis, remained low.

In STEC O157 a tendency of increasing resistance was observed until 2017 and fluctuates on a lower level since 2018. Resistance to the quinolones (ciprofloxacin and nalidixic acid) was very low in both STEC O157 and STEC/aEPEC non-O157 human isolates in 2020. Proportions of resistance were higher in human STEC/aEPEC non-O157 than in STEC O157. No ESBL-producing isolates were detected in STEC O157, but one O104 isolate was confirmed as ESBL-producer carrying blaCTX-M-15. Almost all STEC O146 isolates- mostly associated with human infections linked to consumption of raw milk products from small ruminants - were pan-susceptible.

Indicator *E. coli* isolated from randomly collected caecal samples of food animals at slaughter and meat thereof are most suited to study the effects of any interventions on antibiotic use. Among these indicator *E. coli* from animals and meat, resistance levels to ampicillin, tetracycline, sulfamethoxazole and trimethoprim were still relatively high in broilers, pigs, (white) veal calves and chicken and turkey meat. In slaughter pigs and dairy cattle, resistance in indicator *E. coli* decreased to the lowest levels in fifteen years. In contrast, in broilers and veal calves a tendency of increasing resistance was observed compared to 2019. Levels of resistance in indicator *E. coli* increased in laying hens since 2016, but was considerably lower than in broilers reflecting the difference in antibiotic use between these poultry sectors. Resistance proportions in *E. coli* from turkey meat were substantially higher than in *E. coli* from broiler meat, while resistance proportions in *E. coli* from pork and beef were lower than from broiler meat. Resistance to fluoroquinolones was still commonly present in indicator *E. coli* from broilers and meat thereof. For almost all antibiotics tested, levels of resistance in *E. coli* from rosé veal calves were substantially lower than

those from white veal calves and differences in resistance between the two veal calf sectors increased in 2020.

Low levels of ESBL/AmpC-production were detected in randomly isolated *E. coli* from pigs, poultry and veal calves in 2020, while all of these populations were negative in 2019. Selective isolation of ESBL/AmpC-producing *E. coli* from broilers and chicken meat shows that prevalence has reduced below 10% in 2020 which reflects the long-term successful effects of the measures on antimicrobials initiated since 2011. Selective isolation of ESBL/AmpC-producing *E. coli* from laying hens also showed a significant reduction of ESBLs since 2016. The prevalence of ESBL/AmpC-producing *E. coli* remains highest in both white and rosé veal calves. In 2020, no carbapenemase-producing Enterobacteriaceae were detected in livestock and companion animals. As in former years, prevalence of *mcr-1* was low in livestock and meat. Other *mcr* variants were not detected in 2020.

Prevalence of LA-MRSA was high in dust samples from pig farms (76%), but could not be detected in dust samples from broiler farms. At retail, MRSA was detected in < 10% of the pork and bovine meat, but in almost 20% of the poultry meat (both chicken and turkey). The first cfr-positive LA-MRSA isolates were detected in dust samples from one pig farm obtained in 2019 as well as in five human LA-MRSA isolates in 2018 – 2020. The first findings of this multi-resistance encoding gene in MRSA from humans and pigs demonstrated the importance of AMR monitoring from a One Health perspective.

It can be concluded that more than ten years of antibiotic reduction policies in the Netherlands has resulted in almost 70 % reduction of sales of AVMPs for veterinary use. Antimicrobial resistance has decreased simultaneously in isolates from most livestock species. In spite of AMU reduction prevalence of LA-MRSA is still substantial. ESBL and colistin-resistance remain present at low levels, while no CPE was detected in samples from livestock or meat.

3. Recent actions taken to control AMR in food producing animals and food

There has been a significant reduction in the use of antibiotics in animals in the Netherlands in recent years. Since prudent use policies have been enacted there has been a clear and associated decrease seen in levels of antimicrobial resistance in broilers, veal calves and pigs in the Netherlands. Good practices applied include transparency as regards recording and benchmarking of antibiotic use on farms, strengthening the role of veterinarians, taking measures to improve animal health and promoting prudent use in line with official reduction targets. Promotion of the prudent use of antibiotics in animals has also been achieved by implementing policies based on expert scientific advice, monitoring antimicrobial resistance and promoting research and specific initiatives by producer organisations, with the support of government. These initiatives have been backed up with official supervision and controls in an overall One Health context. The findings, reported in MARAN and by SDa, highlight the progress that can be achieved in a relatively short time period to reduce the use of antibiotics in animals, and associated antimicrobial resistance, while safeguarding animal health and welfare, the economic viability of producers and avoiding an excessively legislative approach.

4. Any specific action decided in the Member State or suggestions to the European Union for actions to be taken against food-borne AMR threat

Discussions on the future of antimicrobial use in animals between government and stakeholders of the livestock industry resulted in 2008 in the setup of the Taskforce Antibiotic Resistance in Animal Husbandry. This taskforce comprised representatives from all parties within the animal production chain (advocacy organizations of farmers, meat processing industries, feed suppliers), the Royal Dutch Veterinary Association (KNMvD), the Ministry of Agriculture and the Ministry of Health). This Taskforce developed action plans per animal production sector (cattle, veal calves, poultry and pigs) as part of a Memorandum of Understanding (MoU), with the aim to control antimicrobial resistance in livestock. This MoU was assigned in 2008 by mentioned stakeholders involved in animal production and supported by the government (Anonymous, 2008). The action plans aimed at detailed monitoring of antimicrobial use at herd level, the monitoring of

antimicrobial resistance, a clear separation of responsibilities for veterinarians and farmers in antibiotic prescriptions and the introduction of Farm Treatment Plans and Farm Health Plans. However, no strict targets or regulations for antimicrobial use were formulated yet. A debate in parliament followed where the public health concerns of extensive use of antimicrobials in farm animals were discussed. Subsequently, the government introduced a compulsory 50% reduction target in anti-microbial use in farm animals in 2013 compared to 2009. The target was set at -70% in 2015 by government decree.

5. Additional information

(a): The CIAs depends on the bacterial species considered and the harmonised set of substances tested within the framework of the harmonised monitoring:

- For *Campylobacter* spp., macrolides (erythromycin) and fluoroquinolones (ciprofloxacin);
- For *Salmonella* and *E. coli*, 3rd and 4th generation cephalosporins (cefotaxime) and fluoroquinolones (ciprofloxacin) and colistin (polymyxin);

General Description of Antimicrobial Resistance Monitoring*; Salmonella spp. Broiler holdings, boot swab

1. General description of sampling design and strategy^(a)

Sampling of 1 flock at 10% of all holdings with > 5000 broilers with boot swabs

2. Stratification procedure per animal population and food category

Sampling of 1 flock randomly selected from all broiler holdings not visited for this specific monitoring in the last ? years

85 holdings were visited and 1 flock per holding was sampled in 2020

3. Randomisation procedure per animal population and food category

Holdings are visited year round and samples can be taken on every working weekday.

Quarter 1-4 5,9%, 30,6%, 22,4%, 41,2% resp.

weekdays mo-fri 1,2% 0,0% 10,6% 12,9% 75,3% resp.

4. Analytical method used for detection and confirmation^(b)

Detection ISO 6579-1:2017, Serotyping ISO/TR 6579-3 or validate alternative method

5. Laboratory methodology used for detection of antimicrobial resistance^(c)

Micro Broth Dilution (MBD) with panels of antimicrobials (TREK) are used for sensitivity testing on all isolates, compliant with EU/652/2013 for all species tested

6. Results of investigation

3 positive flocks (S. Agona 1x, S. Infantis 1x; S. Paratyphi B 1x)

7. Additional information

*** to be filled in per combination of bacterial species/matrix**

(a): Method of sampling (description of sampling technique: stage of sampling, type of sample, sampler), Frequency of sampling, Procedure of selection of isolates for susceptibility testing, Method used for collecting data.

(b): Analytical method used for detection and confirmation: according to the legislation, the protocols developed by the EURL-AR should be used and reported here. In the case of the voluntary specific monitoring on Carbapenemase-producers, the selective media used (commercial plates, 'in house' media) should be also reported here. In general, any variation with regard to the EURL-AR protocols should be stated here, number of isolates isolated per sample, in particular for *Campylobacter* spp..

(c): Antimicrobials included, Cut-off values

General Description of Antimicrobial Resistance Monitoring*; Salmonella spp., Turkey, boot swabs

1. General description of sampling design and strategy^(a)

Sampling of 1 flock at 10% of all holdings with > 500 turkeys with 1 boot swab.

2. Stratification procedure per animal population and food category

43 holdings with more than 500 fattening turkeys in 92 housings. Nearly all Dutch turkeys are slaughtered in another Member State.

5 farms sampled in 2020, (June 3x, July 1x, august 1x)

3. Randomisation procedure per animal population and food category

Quarter 1-4 : 0,0%, 60,0%, 40,0%, 0,0% resp.

weekdays mo-fri : 0,0%, 0,0%, 0,0%, 0,0%, 100,0% resp.

4. Analytical method used for detection and confirmation^(b)

Detection ISO 6579-1:2017, Serotyping ISO/TR 6579-3 or validate alternative method,

5. Laboratory methodology used for detection of antimicrobial resistance^(c)

Micro Broth Dilution (MBD) with panels of antimicrobials (TREK) are used for sensitivity testing on all isolates, compliant with EU/652/2013 for all species tested

6. Results of investigation

No positive samplings in 2020

7. Additional information

* to be filled in per combination of bacterial species/matrix

(a): Method of sampling (description of sampling technique: stage of sampling, type of sample, sampler), Frequency of sampling, Procedure of selection of isolates for susceptibility testing, Method used for collecting data.

(b): Analytical method used for detection and confirmation: according to the legislation, the protocols developed by the EURL-AR should be used and reported here. In the case of the voluntary specific monitoring on Carbapenemase-producers, the selective media used (commercial plates, 'in house' media) should be also reported here. In general, any variation with regard to the EURL-AR protocols should be stated here, number of isolates isolated per sample, in particular for *Campylobacter* spp..

(c): Antimicrobials included, Cut-off values

General Description of Antimicrobial Resistance Monitoring*; Salmonella spp., laying hens, bootswabs/faeces

1. General description of sampling design and strategy^(a)

An official sample is taken every year at farms with at least 1,000 adult laying hens. The oldest flock that is present at the farm is sampled with 3 boot swabs/faeces samples

2. Stratification procedure per animal population and food category

818 holdings 2547 flocks (est. 2019)

757 holdings sampled in 2020

3. Randomisation procedure per animal population and food category

757 flocks sampled, Q1 14,9%; Q2 36,5%; Q3 26,0% Q4 22,6%

sampling days mo-fri 2,9%; 10,4%; 37,6%; 29,6%; 19,4% resp.

4. Analytical method used for detection and confirmation^(b)

Detection ISO 6579-1:2017, Serotyping ISO/TR 6579-3 or validate alternative method

5. Laboratory methodology used for detection of antimicrobial resistance^(c)

Micro Broth Dilution (MBD) with panels of antimicrobials (TREK) are used for sensitivity testing on all isolates, compliant with EU/652/2013 for all species tested

6. Results of investigation

4 positive flocks (3 isolates received and tested for sensitivity)

(S. Enteritidis 2x; S. Infantis 1x)

7. Additional information

*** to be filled in per combination of bacterial species/matrix**

(a): Method of sampling (description of sampling technique: stage of sampling, type of sample, sampler), Frequency of sampling, Procedure of selection of isolates for susceptibility testing, Method used for collecting data.

(b): Analytical method used for detection and confirmation: according to the legislation, the protocols developed by the EURL-AR should be used and reported here. In the case of the voluntary specific monitoring on Carbapenemase-producers, the selective media used (commercial plates, 'in house' media) should be also reported here. In general, any variation with regard to the EURL-AR protocols should be stated here, number of isolates isolated per sample, in particular for *Campylobacter* spp..

(c): Antimicrobials included, Cut-off values

General Description of Antimicrobial Resistance Monitoring*; Salmonella spp., broiler slaughter, neckskin

1. General description of sampling design and strategy^(a)

Verification slaughter. 3-4 pooled neckskin samples from 1 (dutch) flock

2. Stratification procedure per animal population and food category

At 16 slaughterhouses with the biggest slaughter volumes samples were collected

3. Randomisation procedure per animal population and food category

The samples were to be taken evenly during all quarters of the year on all working days.

4. Analytical method used for detection and confirmation^(b)

Detection equivalent to ISO 6579-1:2017, Serotyping of Salmonella – Check&Trace- (commercial system), if necessary serotyping by RIVM (EURL-Salmonella)

5. Laboratory methodology used for detection of antimicrobial resistance^(c)

Micro Broth Dilution (MBD) with panels of antimicrobials (TREK) are used for sensitivity testing on all isolates, compliant with EU/652/2013 for all species tested.

6. Results of investigation

285 flocks form, Dutch origin were sampled, 41 positive

Sampling/quarter 1-4 : 26,0%, 2,5%, 35,1%, 36,5% resp.

Weekdays mo-fri : 13,0%, 19,6%, 28,1%, 25,3%, 14,0% resp.

7. Additional information

Due to COVID-19 sampling was low in 2nd quarter and higher in 3th and 4th quarter.

*** to be filled in per combination of bacterial species/matrix**

(a): Method of sampling (description of sampling technique: stage of sampling, type of sample, sampler), Frequency of sampling, Procedure of selection of isolates for susceptibility testing, Method used for collecting data.

(b): Analytical method used for detection and confirmation: according to the legislation, the protocols developed by the EURL-AR should be used and reported here. In the case of the voluntary specific monitoring on Carbapenemase-producers, the selective media used (commercial plates, 'in house' media) should be also reported here. In general, any variation with regard to the EURL-AR protocols should be stated here, number of isolates isolated per sample, in particular for *Campylobacter* spp..

(c): Antimicrobials included, Cut-off values

General Description of Antimicrobial Resistance Monitoring*; *Campylobacter jejuni*, (*coli*) broiler, caecal samples

1. General description of sampling design and strategy^(a)

samples from 683 broiler caeca from slaughter batches reared in the Netherlands are sampled throughout the year. Sampling was conducted at all weekdays.

2. Stratification procedure per animal population and food category

Sampling at the 15 slaughterhouses with the largest slaughter volume in 2019, The amount of sample per slaughterhouse proportional to the slaughter volume (2019)

3. Randomisation procedure per animal population and food category

Samples were taken throughout the year: Q1 24.0%; Q2 21.8%; Q3 27.8 Q4 26.4%
sampling days mo-fri 12,0%, 24,0%, 26,2%, 28,8%, 8,9% resp.

4. Analytical method used for detection and confirmation^(b)

Isolation of *Campylobacter* – CCDA agar
Identification of *Campylobacter* species - MALDI

5. Laboratory methodology used for detection of antimicrobial resistance^(c)

Micro Broth Dilution (MBD) with panels of antimicrobials (TREK) are used for sensitivity testing on all isolates, compliant with EU/652/2013 for all species tested

6. Results of investigation

167 isolates (1/sample) *C. jejuni*, 60 isolates (1/sample) *C. coli* were tested for sensitivity

7. Additional information

*** to be filled in per combination of bacterial species/matrix**

- (a): Method of sampling (description of sampling technique: stage of sampling, type of sample, sampler), Frequency of sampling, Procedure of selection of isolates for susceptibility testing, Method used for collecting data.
- (b): Analytical method used for detection and confirmation: according to the legislation, the protocols developed by the EURL-AR should be used and reported here. In the case of the voluntary specific monitoring on Carbapenemase-producers, the selective media used (commercial plates, 'in house' media) should be also reported here. In general, any variation with regard to the EURL-AR protocols should be stated here, number of isolates isolated per sample, in particular for *Campylobacter* spp..
- (c): Antimicrobials included, Cut-off values

General Description of Antimicrobial Resistance Monitoring*; E. coli (indicator), Broiler at slaughter, ceecal samples

1. General description of sampling design and strategy^(a)

samples from 683 broiler ceaca from slaughter batches reared in the Netherlands are sampled throughout the year. Sampling was conducted at all weekdays.
To reach the required amount of *C. jejuni* isolates (170) ca. 700 samples are taken.
305 samples, the samples of every 2nd week, were examined for *E. coli* and ESBL- or AmpC- or carbapenemase-producing *E. coli*, if required more were examined in the last quarter.,

2. Stratification procedure per animal population and food category

Sampling at the 15 slaughterhouses with the largest slaughter volume in 2019, The amount of sample per slaughterhouse proportional to the slaughter volume (2019)

3. Randomisation procedure per animal population and food category

Samples were takes throughout the year: Q1 24.0%; Q2 21.8%; Q3 27.8 Q4 26.4%
sampling days mo-fri 12,0%, 24,0%, 26,2%, 28,8%, 8,9% resp.

4. Analytical method used for detection and confirmation^(b)

Isolation of *E.coli* - MacConkey agar – identification by MALDI

5. Laboratory methodology used for detection of antimicrobial resistance^(c)

Micro Broth Dilution (MBD) with panels of antimicrobials (TREK) are used for sensitivity testing on all isolates, compliant with EU/652/2013 for all species tested

6. Results of investigation

305 isolates recovered from 305 tested samples and sensitivity tested. 1 isolate confirmed ESBL/ampC (SHV-2)

7. Additional information

*** to be filled in per combination of bacterial species/matrix**

- (a): Method of sampling (description of sampling technique: stage of sampling, type of sample, sampler), Frequency of sampling, Procedure of selection of isolates for susceptibility testing, Method used for collecting data.
(b): Analytical method used for detection and confirmation: according to the legislation, the protocols developed by the EURL-AR should be used and reported here. In the case of the voluntary specific monitoring on Carbapenemase-producers, the selective media used (commercial plates, 'in house' media) should be also reported here. In general, any variation with regard to the EURL-AR protocols should be stated here, number of isolates isolated per sample, in particular for *Campylobacter* spp..
(c): Antimicrobials included, Cut-off values

Voluntary *E. coli* (indicator) isolates from slaughter and farm sampling tested and reported:

caecal samples from	n (isolates)
layers (slaughter)	200
dairy cows (faeces)	196
pigs (slaughter)	302
calf (production -white meat) (slaughter)	210
calf (production -rose meat) (slaughter)	90
broiler (see table above)	305
Total	1303

General Description of Antimicrobial Resistance Monitoring*; ESBL- or AmpC- or carbapenemase-producing E. coli, Broiler at slaughter, ceecal samples

1. General description of sampling design and strategy^(a)

samples from 683 broiler ceaca from slaughter batches reared in the Netherlands are sampled throughout the year. Sampling was conducted at all weekdays.

2. Stratification procedure per animal population and food category

Sampling at the 15 slaughterhouses with the largest slaughter volume in 2019, The amount of sample per slaughterhouse proportional to the slaughter volume (2019)

3. Randomisation procedure per animal population and food category

Samples were taken throughout the year: Q1 24.0%; Q2 21.8%; Q3 27.8 Q4 26.4% sampling days mo-fri 12,0%, 24,0%, 26,2%, 28,8%, 8,9% resp.

4. Analytical method used for detection and confirmation^(b)

Isolation of ESBL, AmpC and carbapenemase producing E. coli from caecal samples - according to EURL-AR protocols for ESBL- or AmpC- or carbapenemase-producing E. coli- identification by MALDI

5. Laboratory methodology used for detection of antimicrobial resistance^(c)

Micro Broth Dilution (MBD) with panels of antimicrobials (TREK) are used for sensitivity testing on all isolates, compliant with EU/652/2013 for all species tested

6. Results of investigation

31 isolates recovered from 305 samples examined and sensitivity tested.

7. Additional information

Molecular confirmation of ESBL/ampC mechanism

*** to be filled in per combination of bacterial species/matrix**

(a): Method of sampling (description of sampling technique: stage of sampling, type of sample, sampler), Frequency of sampling, Procedure of selection of isolates for susceptibility testing, Method used for collecting data.

(b): Analytical method used for detection and confirmation: according to the legislation, the protocols developed by the EURL-AR should be used and reported here. In the case of the voluntary specific monitoring on Carbapenemase-producers, the selective media used (commercial plates, 'in house' media) should be also reported here. In general, any variation with regard to the EURL-AR protocols should be stated here, number of isolates isolated per sample, in particular for *Campylobacter* spp..

(c): Antimicrobials included, Cut-off values

Results of 'voluntary' analysis of ESBL- or AmpC- or carbapenemase-producing E. coli in ceecal samples (layers, pigs, veal calf) collected at slaughter and faeces (dairy cows) from farms samples

	N samples	N suspected ESBL	% ESBL suspected	N confirmed ESBL	Prevalence (%) ESBL confirmed
Broilers	305	31	10.2	30	9.8
Layers	200	28	14.0	28	14.0
Pigs	303	50	16.5	25	8.3
Veal calves					
white	210	84	40.0	80	38.1
rosé	93	18	19.4	18	19.4
Dairy cows	198	21	10.6	17	8.6
Total	1309	232	17.7	198	15.1

All samples in table above were tested for carbapenemase producing Enterobacteriaceae as well, no positive results were found.

method - commercial RT-PCR (Check-Points, CarbaCheck MDR RT followed by selective plates

(ChromID CARBA and ChromID OXA, Biomerieux, for Enterobacteriaceae) and on HIS plates with 0.125 mg/L ertapenem (for *Shewanella* spp) in case of positive screening.

Genes were identified with Sanger sequencing

General Description of Antimicrobial Resistance Monitoring*; ESBL- or AmpC- or carbapenemase-producing E. coli, Broiler meat, retail
Salmonella Campylobacter, E. coli indicator

1. General description of sampling design and strategy^(a)

Sampling of fresh chicken meat at retail. Samples are taken at supermarkets, butcher shops, markets etc.

2. Stratification procedure per animal population and food category

Sampling was performed throughout the year, geographical spread of sampled establishments is monitored (map below table), and 'blind spots' are communicated to samplers for improvement.

3. Randomisation procedure per animal population and food category

Quarter 1-4 18.8%, 29.9%, 26.6%, 24.7% resp.
weekdays mo-fri 20,7% 33,0% 30,9% 14,3% 1,2% resp.

4. Analytical method used for detection and confirmation^(b)

Isolation of ESBL, AmpC and carbapenemase producing E. coli from fresh meat - according to EURL-AR protocols for ESBL- or AmpC- or carbapenemase-producing E. coli.

5. Laboratory methodology used for detection of antimicrobial resistance^(c)

Micro Broth Dilution (MBD) with panels of antimicrobials (TREK) are used for sensitivity testing on all isolates, compliant with EU/652/2013 for all species tested

6. Results of investigation

238 samples of fresh chicken meat were examined and 15 suspected isolates were sensitivity tested and confirmed ESBL or ampC with molecular methods.

7. Additional information

Samples were also examined for Salmonella, E. coli (indicator), Listeria monocytogenes (detection and enumeration), Campylobacter spp., MRSA. Isolates Salmonella (11x), Campylobacter (21x C. jejuni, 12x C. coli) and E. coli indicator (187x) were sensitivity tested and reported. The total amount of samples was < 300 (238), but this monitoring, ESBL- or AmpC- or carbapenemase-producing E. coli in fresh broiler (chicken) meat is conducted and reported every year! (28/237 in 2019)

*** to be filled in per combination of bacterial species/matrix**

- (a): Method of sampling (description of sampling technique: stage of sampling, type of sample, sampler), Frequency of sampling, Procedure of selection of isolates for susceptibility testing, Method used for collecting data.
- (b): Analytical method used for detection and confirmation: according to the legislation, the protocols developed by the EURL-AR should be used and reported here. In the case of the voluntary specific monitoring on Carbapenemase-producers, the selective media used (commercial plates, 'in house' media) should be also reported here. In general, any variation with regard to the EURL-AR protocols should be stated here, number of isolates isolated per sample, in particular for *Campylobacter* spp..
- (c): Antimicrobials included, Cut-off values

More monitoring of ESBL- or AmpC- or carbapenemase-producing *E. coli* conducted in 2020:

Matrix	ESBL, ampC <i>E. coli</i>	
	n (samples)	% positive
fresh meat lamb, sheep, goat (retail)	46	0,0%
fresh meat calf (retail)	52	3,8%
fresh meat pig (retail)	241	1,7%
fresh meat (older) bovine (retail)	242	0,4%
bovine meat preparation eaten raw (filet american, roast beef etc. (retail)	249	0,4%
fresh poultry meat (chicken and turkey) (retail)	252	6,3%
Vegetables for raw consumption (retail)	991	0,2%
salads RTE (retail)	244	0,4%
vegetables mixed to be eaten cooked (retail)	257	0,0%
mushrooms (retail)	80	0,0%
faeces pigs (at farm) Varkens - totaal	62	11,3%
fresh broiler meat (industry)	25	36,0%
poultry meat (preparation at BIP)	55	43,6%

“null” projects and sensitivity tested isolates were reported.

Samples fresh chicken meat taken at retail in 2020



Monitoring carbapenemase-producing Enterobacteriaceae foods:

matrix	ESBL AmpC carbapenamase		
	n	%positive	
seaweed fresh (retail)	179	0,6%	Enterobacter cloacae , blaACT-2,blaIMI-3 (IL)
fresh herbs (retail)	60	0,0%	
seaweed frash (wholesale)	19	0,0%	
shrimp, tilapia, pangasius - aquaculture import	287	1,0%	tilapia 2x E. cloacae , blaIMI-3,blaACT-2 (CN) blaIMI-2,blaACT-6 (VN) shrimp 1x E. coli , blaCTX-M-15 (BA)

The method used for specific isolation of carbapenamase-producing Enterobacteriaceae:
BPW enrichment followed by isolation on 1) MacConkey with cefotaxime, 2) ChromID CARBA and
3) ChromID OXA-48.

Molecular confirmation of suspected isolates.

General Description of Antimicrobial Resistance Monitoring*; *Campylobacter jejuni*, and *C. coli* spent hens, caecal samples

1. General description of sampling design and strategy^(a)

samples from 200 broiler caeca from spent hens from Dutch holdings are sampled throughout the year. Sampling was conducted at all weekdays.

2. Stratification procedure per animal population and food category

Sampling at the 2 slaughterhouses processing spent hens,

3. Randomisation procedure per animal population and food category

Samples were taken throughout the year: Q1 24.0%; Q2 35.9%; Q3 26.0 Q4 10.5%
sampling days mo-fri 22,0% 24,0% 24,0% 15,0% 15,0% resp.

4. Analytical method used for detection and confirmation^(b)

Isolation of *Campylobacter* – CCDA agar

Identification of *Campylobacter* species - MALDI

5. Laboratory methodology used for detection of antimicrobial resistance^(c)

Micro Broth Dilution (MBD) with panels of antimicrobials (TREK) are used for sensitivity testing on all isolates, compliant with EU/652/2013 for all species tested

6. Results of investigation

78 isolates (1/sample) *C. jejuni*, 107 isolates (1/sample) *C. coli* were tested for sensitivity

7. Additional information

*** to be filled in per combination of bacterial species/matrix**

(a): Method of sampling (description of sampling technique: stage of sampling, type of sample, sampler), Frequency of sampling, Procedure of selection of isolates for susceptibility testing, Method used for collecting data.

(b): Analytical method used for detection and confirmation: according to the legislation, the protocols developed by the EURL-AR should be used and reported here. In the case of the voluntary specific monitoring on Carbapenemase-producers, the selective media used (commercial plates, 'in house' media) should be also reported here. In general, any variation with regard to the EURL-AR protocols should be stated here, number of isolates isolated per sample, in particular for *Campylobacter* spp..

(c): Antimicrobials included, Cut-off values

General Description of Antimicrobial Resistance Monitoring*; carbapenemase-producing *E. coli*, Broiler at slaughter, ceecal samples

1. General description of sampling design and strategy^(a)

samples from 683 broiler ceaca from slaughter batches reared in the Netherlands are sampled throughout the year. Sampling was conducted at all weekdays.

2. Stratification procedure per animal population and food category

Sampling at the 15 slaughterhouses with the largest slaughter volume in 2019, The amount of sample per slaughterhouse proportional to the slaughter volume (2019)

3. Randomisation procedure per animal population and food category

Samples were taken throughout the year: Q1 24.0%; Q2 21.8%; Q3 27.8 Q4 26.4%
sampling days mo-fri 12,0%, 24,0%, 26,2%, 28,8%, 8,9% resp.

4. Analytical method used for detection and confirmation^(b)

commercial RT-PCR (Check-Points, CarbaCheck MDR RT followed by selective plates (ChromID CARBA and ChromID OXA, Biomerieux, for Enterobacteriaceae) and on HIS plates with 0.125 mg/L ertapenem (for *Shewanella* spp) in case of positive screening.
Genes were identified with Sanger sequencing

5. Laboratory methodology used for detection of antimicrobial resistance^(c)

6. Results of investigation

No carbapenemase producing *E. coli* detected.

7. Additional information

Molecular confirmation of ESBL/ampC mechanism

*** to be filled in per combination of bacterial species/matrix**

- (a): Method of sampling (description of sampling technique: stage of sampling, type of sample, sampler), Frequency of sampling, Procedure of selection of isolates for susceptibility testing, Method used for collecting data.
- (b): Analytical method used for detection and confirmation: according to the legislation, the protocols developed by the EURL-AR should be used and reported here. In the case of the voluntary specific monitoring on Carbapenemase-producers, the selective media used (commercial plates, 'in house' media) should be also reported here. In general, any variation with regard to the EURL-AR protocols should be stated here, number of isolates isolated per sample, in particular for *Campylobacter* spp..
- (c): Antimicrobials included, Cut-off values

General Description of Antimicrobial Resistance Monitoring*; Salmonella spp., pigs slaughter, swab

1. General description of sampling design and strategy^(a)

Verification at slaughter (EG) 2073/2005 at 8 different slaughterhouses with biggest slaughter volumes. 4x 10x10 cm (total 400 cm²) from a random chosen carcass from Dutch origin

2. Stratification procedure per animal population and food category

Sampling to be performed at the 8 pig slaughterhouses with the biggest slaughter volume (2019)
1 sample per slaughterhouse per 2 weeks ca. 26/slaughterhouse yearly

3. Randomisation procedure per animal population and food category

Sampling/quarter 1-4 : 25,6%, 9,4%, 30,8%, 34,2% resp.
Weekdays mo-fri : 19,2%, 20,1%, 26,9%, 20,5%, 13,2% resp..

4. Analytical method used for detection and confirmation^(b)

Detection equivalent to ISO 6579-1:2017, Serotyping of Salmonella – Check&Trace- (commercial system), if necessary serotyping by RIVM (EURL-Salmonella)

5. Laboratory methodology used for detection of antimicrobial resistance^(c)

Micro Broth Dilution (MBD) with panels of antimicrobials (TREK) are used for sensitivity testing on all isolates, compliant with EU/652/2013 for all species tested.

6. Results of investigation

234 samples taken at 8 slaughterhouses. 12 positive for Salmonella

7. Additional information

Due to COVID-19 sampling was low in 2nd quarter and higher in 3th and 4th quarter.

*** to be filled in per combination of bacterial species/matrix**

- (a): Method of sampling (description of sampling technique: stage of sampling, type of sample, sampler), Frequency of sampling, Procedure of selection of isolates for susceptibility testing, Method used for collecting data.
- (b): Analytical method used for detection and confirmation: according to the legislation, the protocols developed by the EURL-AR should be used and reported here. In the case of the voluntary specific monitoring on Carbapenemase-producers, the selective media used (commercial plates, 'in house' media) should be also reported here. In general, any variation with regard to the EURL-AR protocols should be stated here, number of isolates isolated per sample, in particular for *Campylobacter* spp..
- (c): Antimicrobials included, Cut-off values

General Description of Antimicrobial Resistance Monitoring*; Salmonella / calves slaughter / swab	
1. General description of sampling design and strategy^(a)	Verification slaughter. 4x 10x10 cm (total 400 cm ²) from a random chosen carcass from Dutch origin. The 5 slaughterhouses for calves with the biggest slaughter volume are included.
2. Stratification procedure per animal population and food category	1 sample per slaughterhouse per 2 weeks ca. 26 yearly
3. Randomisation procedure per animal population and food category	Sampling/quarter 1-4 : 25,0%, 7,8%, 26,6%, 40,6% resp. Weekdays mo-fri : 17,2%, 21,1%, 27,6%, 21,8%, 12,3% resp.
4. Analytical method used for detection and confirmation^(b)	Detection equivalent to ISO 6579-1:2017, Serotyping of Salmonella – Check&Trace- (commercial system), if necessary serotyping by RIVM (EURL-Salmonella)
5. Laboratory methodology used for detection of antimicrobial resistance^(c)	Micro Broth Dilution (MBD) with panels of antimicrobials (TREK) are used for sensitivity testing on all isolates, compliant with EU/652/2013 for all species tested
6. Results of investigation	64 samples taken at 5 slaughterhouses. 7 positive for Salmonella
7. Additional information	Due to COVID-19 sampling was low in 2nd quarter and higher in 3th and 4th quarter.
* to be filled in per combination of bacterial species/matrix (a): Method of sampling (description of sampling technique: stage of sampling, type of sample, sampler), Frequency of sampling, Procedure of selection of isolates for susceptibility testing, Method used for collecting data. (b): Analytical method used for detection and confirmation: according to the legislation, the protocols developed by the EURL-AR should be used and reported here. In the case of the voluntary specific monitoring on Carbapenemase-producers, the selective media used (commercial plates, ‘in house’ media) should be also reported here. In general, any variation with regard to the EURL-AR protocols should be stated here, number of isolates isolated per sample, in particular for <i>Campylobacter</i> spp.. (c): Antimicrobials included, Cut-off values	

General Description of Antimicrobial Resistance Monitoring*; Salmonella / bovine > 1 year slaughter / swab

1. General description of sampling design and strategy^(a)

Verification slaughter. 4x 10x10 cm (total 400 cm²) from a random chosen carcass from Dutch origin. The 7 slaughterhouses for bovines with the biggest slaughter volume are included.

2. Stratification procedure per animal population and food category

1 sample per slaughterhouse per 2 weeks ca. 26 yearly

3. Randomisation procedure per animal population and food category

Sampling/quarter 1-4 : 25,7%, 5,0%, 32,7%, 36,6% resp.

Weekdays mo-fri : 24,8%, 20,8%, 10,9%, 27,7%, 15,8% resp.

4. Analytical method used for detection and confirmation^(b)

Detection equivalent to ISO 6579-1:2017, Serotyping of Salmonella – Check&Trace- (commercial system), if necessary serotyping by RIVM (EURL-Salmonella)

5. Laboratory methodology used for detection of antimicrobial resistance^(c)

Micro Broth Dilution (MBD) with panels of antimicrobials (TREK) are used for sensitivity testing on all isolates, compliant with EU/652/2013 for all species tested

6. Results of investigation

101 samples taken at 7 slaughterhouses. 2 positive

7. Additional information

Due to COVID-19 sampling was low in 2nd quarter and higher in 3th and 4th quarter.

*** to be filled in per combination of bacterial species/matrix**

- (a): Method of sampling (description of sampling technique: stage of sampling, type of sample, sampler), Frequency of sampling, Procedure of selection of isolates for susceptibility testing, Method used for collecting data.
- (b): Analytical method used for detection and confirmation: according to the legislation, the protocols developed by the EURL-AR should be used and reported here. In the case of the voluntary specific monitoring on Carbapenemase-producers, the selective media used (commercial plates, 'in house' media) should be also reported here. In general, any variation with regard to the EURL-AR protocols should be stated here, number of isolates isolated per sample, in particular for *Campylobacter* spp..
- (c): Antimicrobials included, Cut-off values

General Description of Antimicrobial Resistance Monitoring*; Salmonella / sheep slaughter / swab	
1. General description of sampling design and strategy^(a)	Verification slaughter. 4x 10x10 cm (total 400 cm ²) from a random chosen carcass from Dutch origin. 6 slaughterhouses are included.
2. Stratification procedure per animal population and food category	1 sample per slaughterhouse per 2 weeks ca. 26 yearly
3. Randomisation procedure per animal population and food category	Evenly spread over the year and randomly over weekdays
4. Analytical method used for detection and confirmation^(b)	Detection equivalent to ISO 6579-1:2017, Serotyping of Salmonella – Check&Trace- (commercial system), if necessary serotyping by RIVM (EURL-Salmonella)
5. Laboratory methodology used for detection of antimicrobial resistance^(c)	Micro Broth Dilution (MBD) with panels of antimicrobials (TREK) are used for sensitivity testing on all isolates, compliant with EU/652/2013 for all species tested
6. Results of investigation	86 samples taken at 6 slaughterhouses. 7 positive Sampling/quarter 1-4 : 30,2%,10,5%,18,6%, 40,7% resp. Weekdays mo-fri : 46,5%, 23,3%, 15,1%, 15,1%, 0,0% resp.
7. Additional information	The slaughterhouses do not slaughter sheep every weekday.
* to be filled in per combination of bacterial species/matrix	
(a): Method of sampling (description of sampling technique: stage of sampling, type of sample, sampler), Frequency of sampling, Procedure of selection of isolates for susceptibility testing, Method used for collecting data.	
(b): Analytical method used for detection and confirmation: according to the legislation, the protocols developed by the EURL-AR should be used and reported here. In the case of the voluntary specific monitoring on Carbapenemase-producers, the selective media used (commercial plates, 'in house' media) should be also reported here. In general, any variation with regard to the EURL-AR protocols should be stated here, number of isolates isolated per sample, in particular for <i>Campylobacter</i> spp..	
(c): Antimicrobials included, Cut-off values	

General Description of Antimicrobial Resistance Monitoring*; Salmonella / goat slaughter / swab	
1. General description of sampling design and strategy^(a)	Verification slaughter. 4x 10x10 cm (total 400 cm ²) from a random chosen carcass from Dutch origin. 3 slaughterhouses are included.
2. Stratification procedure per animal population and food category	1 sample per slaughterhouse per 2 weeks ca. 26 yearly
3. Randomisation procedure per animal population and food category	Evenly spread over the year and randomly over weekdays
4. Analytical method used for detection and confirmation^(b)	Detection equivalent to ISO 6579-1:2017, Serotyping of Salmonella – Check&Trace- (commercial system), if necessary serotyping by RIVM (EURL-Salmonella)
5. Laboratory methodology used for detection of antimicrobial resistance^(c)	Micro Broth Dilution (MBD) with panels of antimicrobials (TREK) are used for sensitivity testing on all isolates, compliant with EU/652/2013 for all species tested
6. Results of investigation	23 samples taken at 3 slaughterhouses. 1 positive Sampling/quarter 1-4 : 33,3%, 41,7%, 12,5%, 12,5% resp. Weekdays mo-fri : 0,0%, 0,0%, 20,8%, 79,2%, 0,0% resp.
7. Additional information	The slaughterhouses do not slaughter goats every weekday.
* to be filled in per combination of bacterial species/matrix (a): Method of sampling (description of sampling technique: stage of sampling, type of sample, sampler), Frequency of sampling, Procedure of selection of isolates for susceptibility testing, Method used for collecting data. (b): Analytical method used for detection and confirmation: according to the legislation, the protocols developed by the EURL-AR should be used and reported here. In the case of the voluntary specific monitoring on Carbapenemase-producers, the selective media used (commercial plates, 'in house' media) should be also reported here. In general, any variation with regard to the EURL-AR protocols should be stated here, number of isolates isolated per sample, in particular for <i>Campylobacter</i> spp.. (c): Antimicrobials included, Cut-off values	

More voluntary AMR work is being done in the Netherlands, but capacity to describe this completely is missing. We will try to improve this in the coming years.

For more information see [Nethmap - MARAN \(2020 data to be published in June 2021\)](#)