European Food Safety Authority

ZOONOSES MONITORING

Iceland

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

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

IN 2018

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 Iceland during the year 2018.

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.

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

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ANIMAL POPULATION TABLES

Table Susceptible animal population

		Population			
Animal species	**Category of animals**	**holding**	**animal**	**slaughter animal (heads)**	**herd/flock**
Cattle (bovine animals)	Cattle (bovine animals) - calves (under 1 year) - dairy calves	654	11,850		654
	Cattle (bovine animals) - calves (under 1 year) - for slaughter	677	11,154		677
	Cattle (bovine animals) - dairy cows - adult	596	26,477		596
	Cattle (bovine animals) - dairy cows - young cattle (1-2 years)	558	6,034		558
	Cattle (bovine animals) - meat production animals - suckler cows	134	2,653		134
	Cattle (bovine animals) - unspecified			22,819	
	Cattle (bovine animals) - young cattle (1-2 years)	756	23,468		756
Gallus gallus (fowl)	Gallus gallus (fowl) - broilers	28	770,486	5,616,066	86
	Gallus gallus (fowl) - laying hens - adult	11	282,760		37
	Gallus gallus (fowl) - laying hens - during rearing period	8	100,214		13
	Gallus gallus (fowl) - parent breeding flocks for broiler production line - adult	4	61,582	24,476	18
	Gallus gallus (fowl) - parent breeding flocks for broiler production line - during rearing period	6	52,717		14
	Gallus gallus (fowl) - parent breeding flocks for egg production line - adult	2	6,587		3
	Gallus gallus (fowl) - parent breeding flocks for egg production line - during rearing period	1	5,092		1
Goats	Goats	118	1,491	473	118
Pigs	Pigs - breeding animals - raised under controlled housing conditions - boars	11	53	0	11
	Pigs - breeding animals - raised under controlled housing conditions - sows	14	3,270	0	14
	Pigs - fattening pigs - raised under controlled housing conditions	27	30,073	80,038	27
	Pigs - fattening pigs - raised under controlled housing conditions - piglets	10	7,096		10
Sheep	Sheep - animals over 1 year	2,253	345,010	58,395	2,253
	Sheep - animals under 1 year (lambs)	2,068	76,290	542,113	2,068
Solipeds, domestic	Solipeds, domestic - horses		73,000	7,614	
Turkeys	Turkeys - meat production flocks	5	15,306	41,650	9
	Turkeys - parent breeding flocks - adult	1	830		1
	Turkeys - parent breeding flocks - during rearing period	2	1,447		3

DISEASE STATUS TABLES

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

Region	Number of herds with status officially free	Number of infected herds	Total number of herds
ICELAND	784	0	784

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

Region	Number of herds with status officially free	Number of infected herds	Total number of herds
ICELAND	2,263	0	2,263

DISEASE STATUS TABLES

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

Region	Number of herds with status officially free	Number of infected herds	Total number of herds
ICELAND	784	0	784

PREVALENCE TABLES

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	Gallus gallus (fowl) - broilers - before slaughter - Farm - Iceland - animal sample - faeces - Control and eradication programmes - Industry sampling - Census	N_A	Not Available	herd/flock	718	16	thermotolerant Campylobacter, unspecified	16
	Gallus gallus (fowl) - broilers - Slaughterhouse - Iceland - animal sample - caecum - Control and eradication programmes - Industry sampling - Selective sampling	Sampling only during high risk summer months	Not Available	slaughter animal batch	463	7	thermotolerant Campylobacter, unspecified	7
	Turkeys - meat production flocks - before slaughter - Farm - Iceland - animal sample - faeces - Control and eradication programmes - Industry sampling - Census	N_A	Not Available	herd/flock	28	3	thermotolerant Campylobacter, unspecified	3
	Turkeys - meat production flocks - Slaughterhouse - Iceland - animal sample - caecum - Control and eradication programmes - Industry sampling - Selective sampling	Sampling only during high risk summer months	Not Available	slaughter animal batch	26	1	Campylobacter	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
ICELAND	Meat from broilers (Gallus gallus) - fresh - chilled - Retail - Iceland - food sample - meat - Surveillance - Official sampling - Objective sampling	batch (food/feed)	10	Gram	N_A	ISO 10272-2:2017 Campylobacter	163	0	Campylobacter	0
	Meat from broilers (Gallus gallus) - fresh - chilled - Retail - Unknown - food sample - meat - Surveillance - Official sampling - Objective sampling	batch (food/feed)	10	Gram	N_A	ISO 10272-2:2017 Campylobacter	13	0	Campylobacter	0

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) - dairy cows - adult - Farm - Iceland - animal sample - milk - Monitoring - Official sampling - Objective sampling	herd/flock	N_A	Enzyme-linked immunosorbent assay (ELISA)	75	0	0	Coxiella burnetii	0

Table Escherichia coli:ESCHERICHIA COLI 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	Pet food - final product - Border inspection activities - United States - Not Available - Surveillance - Official sampling - Objective sampling	batch (food/feed)	20	Gram	N_A	Not Available	10	0	Escherichia coli	0

Table HISTAMINE 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	Fish - Fishery products from fish species associated with a high amount of histidine - not enzyme maturated - Border inspection activities - Thailand - Not Available - Surveillance - Official sampling - Objective sampling	batch (food/feed)	5	Gram	N_A	9	0	<= 100	Histamine	0	0
								>100 TO <= 200	Histamine	0	0
								>200	Histamine	0	0
	Fish - Fishery products from fish species associated with a high amount of histidine - not enzyme maturated - Border inspection activities - Unknown - Not Available - Surveillance - Official sampling - Objective sampling	batch (food/feed)	5	Gram	N_A	9	0	<= 100	Histamine	0	0
								>100 TO <= 200	Histamine	0	0
								>200	Histamine	0	0

Table 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	Fish - smoked - Border inspection activities - Iceland - Not Available - Surveillance - Official sampling - Objective sampling	batch (food/feed)	25	Gram	N_A	5	0	detection	Listeria monocytogenes	5	0
	Roe - frozen - Border inspection activities - Peru - Not Available - Surveillance - Official sampling - Objective sampling	batch (food/feed)	25	Gram	N_A	5	0	detection	Listeria monocytogenes	5	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	Cattle (bovine animals) - dairy cows - adult - Farm - Iceland - animal sample - milk - Monitoring - Official sampling - Objective sampling	herd/flock		N_A	N_A	Enzyme-linked immunosorbent assay (ELISA)	75	0	Salmonella Dublin	0
	Gallus gallus (fowl) - broilers - before slaughter - Farm - Iceland - environmental sample - boot swabs - Control and eradication programmes - Official and industry sampling - Census	herd/flock	724	Y	N_A	Not Available	724	5	Salmonella Agona	5
	Gallus gallus (fowl) - laying hens - adult - Farm - Iceland - environmental sample - boot swabs - Control and eradication programmes - Official and industry sampling - Census	herd/flock	53	Y	From some flocks, feces (animal samples) are taken	Not Available	53	0	Salmonella	0
	Gallus gallus (fowl) - laying hens - day-old chicks - Farm - Iceland - environmental sample - delivery box liner - Control and eradication programmes - Industry sampling - Census	herd/flock		N_A	N_A	Not Available	43	0	Salmonella	0
	Gallus gallus (fowl) - laying hens - during rearing period - Farm - Iceland - environmental sample - boot swabs - Control and eradication programmes - Industry sampling - Census	herd/flock		N_A	From some flocks, feces (animal samples) are taken	Not Available	5	0	Salmonella	0
	Gallus gallus (fowl) - parent breeding flocks for broiler production line - adult - Farm - Iceland - environmental sample - boot swabs - Control and eradication programmes - Official and industry sampling - Census	herd/flock	38	Y	From some flocks, boot swabs and dust samples are taken	Not Available	38	0	Salmonella	0
	Gallus gallus (fowl) - parent breeding flocks for broiler production line - day-old chicks - Farm - Iceland - animal sample - eggshells - Control and eradication programmes - Industry sampling - Census	herd/flock		N_A	N_A	Not Available	7	0	Salmonella	0
	Gallus gallus (fowl) - parent breeding flocks for broiler production line - during rearing period - Farm - Iceland - environmental sample - boot swabs - Control and eradication programmes - Industry sampling - Census	herd/flock		N_A	N_A	Not Available	12	0	Salmonella	0
	Gallus gallus (fowl) - parent breeding flocks for egg production line - adult - Farm - Iceland - environmental sample - boot swabs - Control and eradication programmes - Official and industry sampling - Census	herd/flock	5	Y	N_A	Not Available	5	0	Salmonella	0
	Gallus gallus (fowl) - parent breeding flocks for egg production line - day-old chicks - Farm - Iceland - environmental sample - boot swabs - Control and eradication programmes - Industry sampling - Census	herd/flock		N_A	N_A	Not Available	2	0	Salmonella	0
	Gallus gallus (fowl) - parent breeding flocks for egg production line - during rearing period - Farm - Iceland - environmental sample - boot swabs - Control and eradication programmes - Industry sampling - Census	herd/flock		N_A	N_A	Not Available	3	0	Salmonella	0
	Pigs - fattening pigs - raised under controlled housing conditions - Slaughterhouse - Iceland - animal sample - meat juice - Control and eradication programmes - Official sampling - Objective sampling	slaughter animal batch		N_A	N_A	Not Available	998	201	Salmonella	201
	Turkeys - fattening flocks - before slaughter - Farm - Iceland - environmental sample - boot swabs - Control and eradication programmes - Official and industry sampling - Census	herd/flock	26	Y	N_A	Not Available	26	0	Salmonella	0
	Turkeys - parent breeding flocks - adult - Farm - Iceland - environmental sample - boot swabs and dust - Control and eradication programmes - Official and industry sampling - Census	herd/flock	3	Y	N_A	Not Available	3	0	Salmonella	0
	Turkeys - parent breeding flocks - day-old chicks - Farm - Iceland - environmental sample - boot swabs - Control and eradication programmes - Industry sampling - Census	herd/flock		N_A	N_A	Not Available	2	0	Salmonella	0
	Turkeys - parent breeding flocks - during rearing period - Farm - Iceland - environmental sample - boot swabs - Control and eradication programmes - Industry sampling - Census	herd/flock		N_A	N_A	Not Available	3	0	Salmonella	0

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	Dairy products (excluding cheeses) - milk powder and whey powder - Border inspection activities - United States - Not Available - Surveillance - Official sampling - Objective sampling	batch (food/feed)	25	Gram	N_A	Not Available	10	0	Salmonella	0
	Meat from broilers (Gallus gallus) - carcase - Slaughterhouse - Iceland - food sample - neck skin - Control and eradication programmes - Industry sampling - Census	batch (food/feed)	25	Gram	N_A	Not Available	834	1	Salmonella Infantis	1
	Meat from pig - carcase - Slaughterhouse - Iceland - food sample - carcase swabs - Control and eradication programmes - Official sampling - Census	slaughter animal batch	300	Square centimetre	N_A	Not Available	2137	21	Salmonella 1,4,12:d:-	2
									Salmonella Agona	5
									Salmonella Brandenburg	9
									Salmonella Kedougou	3
									Salmonella spp., unspecified	2
	Meat from poultry, unspecified - meat products - cooked, ready-to-eat - Border inspection activities - Thailand - Not Available - Surveillance - Official sampling - Objective sampling	batch (food/feed)	25	Gram	N_A	Not Available	10	0	Salmonella	0
	Meat from turkey - carcase - Slaughterhouse - Iceland - food sample - neck skin - Control and eradication programmes - Industry sampling - Census	batch (food/feed)	25	Gram	N_A	Not Available	55	0	Salmonella	0
ICELAND	Meat from broilers (Gallus gallus) - fresh - chilled - Retail - Iceland - food sample - meat - Surveillance - Official sampling - Objective sampling	batch (food/feed)	25	Gram	N_A	Not Available	158	0	Salmonella	0
	Meat from broilers (Gallus gallus) - fresh - chilled - Retail - Unknown - food sample - meat - Surveillance - Official sampling - Objective sampling	batch (food/feed)	25	Gram	N_A	Not Available	13	0	Salmonella	0
	Meat from pig - fresh - chilled - Retail - Denmark - food sample - meat - Surveillance - Official sampling - Objective sampling	batch (food/feed)	25	Gram	N_A	Not Available	2	0	Salmonella	0
	Meat from pig - fresh - chilled - Retail - Iceland - food sample - meat - Surveillance - Official sampling - Objective sampling	batch (food/feed)	25	Gram	N_A	Not Available	124	0	Salmonella	0
	Meat from pig - fresh - chilled - Retail - Spain - food sample - meat - Surveillance - Official sampling - Objective sampling	batch (food/feed)	25	Gram	N_A	Not Available	10	1	Salmonella	1
	Meat from pig - fresh - chilled - Retail - Unknown - food sample - meat - Surveillance - Official sampling - Objective sampling	batch (food/feed)	25	Gram	N_A	Not Available	15	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	All feedingstuffs - Feed mill - Not Available - environmental sample - dust - Surveillance - Industry sampling - Selective sampling	batch (food/feed)	25	Gram	N_A	Not Available	348	4	Salmonella Infantis	1
									Salmonella Mbandaka	1
									Salmonella Senftenberg	1
									Salmonella Typhimurium	1
	All feedingstuffs - Feed mill - Not Available - environmental sample - dust - Surveillance - Official sampling - Selective sampling	batch (food/feed)	25	Gram	N_A	Not Available	36	5	Salmonella Worthington	5
	Feed material of marine animal origin - fish meal - Feed mill - Not Available - environmental sample - dust - Surveillance - Industry sampling - Selective sampling	batch (food/feed)	25	Gram	N_A	Not Available	968	5	Salmonella	2
									Salmonella Montevideo	3
	Pet food - final product - Border inspection activities - United States - Not Available - Surveillance - Official sampling - Objective sampling	batch (food/feed)	25	Gram	N_A	Not Available	10	0	Salmonella	0

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 - Iceland - animal sample - organ/tissue - Monitoring - Official sampling - Census	N_A	Not Available	animal	76922	0	Trichinella	0
	Solipeds, domestic - horses - Slaughterhouse - Iceland - animal sample - organ/tissue - Monitoring - Official sampling - Census	N_A	Not Available	animal	7553	0	Trichinella	0

FOODBORNE OUTBREAKS TABLES

Foodborne Outbreaks: summarized data

		Outbreak strenght	Strong			Weak			
Causative agent	Food vehicle	N outbreaks	N human cases	N hospitalized	N deaths	N outbreaks	N human cases	N hospitalized	N deaths
Norovirus	Crustaceans, shellfish, molluscs and products thereof	1	54	0	0				
	Mixed food	1	7	0	0				
	Buffet meals	1	20	0	0				
Salmonella Typhimurium	Eggs and egg products	1	11	3	0				
Unknown	Mixed food					1	10	0	0

Strong Foodborne Outbreaks: detailed data

Causative agent	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
Norovirus	Not Available	N_A	General	Crustaceans, shellfish, molluscs and products thereof	Oysters	Detection of causative agent in food chain or its environment - Symptoms and onset of illness pathognomonic to causative agent;Analytical epidemiological evidence	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Unknown	Iceland	Unknown	Illness after eating in a Fish restaurant was discovered Nov 14th after a group of 18 doctors and mates that ate there November 9th became sick with diarrhea, vomiting and fever ca 36 hours after eating. Case control study revealed that oysters seemed to be the cause of the outbrake. After more information gathering the FBO seemed to have been going on from Oct 29th to November 16th. Oysters from the resturant were sent for investigation to a laboratory in England and yielded positive for Norovirus. Stool samples from three of those who became infected strongly yielded Norovirus. The local health authority inspected the restaurant and The Iclandic Food and Veterinary Authority inspected the oyster-farm in North-Iceland wich had permission to grow the oysters for several years after being imported from Spain. There are 54 people known to got infected in this outbrake.	1	54	0	0
				Mixed food	Colleagues buy food from an Asian restaurant. Seven out of thirteen people fell ill at the same time with the same symptoms.	Analytical epidemiological evidence	Take-away or fast-food outlet	Unknown	Unknown	Unknown	This insidence was reported 4 days after the meal. Thirteen coworkers in an officce bought lunch (several items from the menu) in an asian resturant and ate it together at work. Seven of them became sick 30-36 hours after the meal with similar symptoms	1	7	0	0
				Buffet meals	N_A	Descriptive environmental evidence	Temporary mass catering (fairs or festivals)	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Unknown	Infected food handler	Six days after a wedding party one of 100 guests at a wedding, held in a summer resturant in a botanic garden, found out that at least 20 guests had gotten sick 30-40 hours after the wedding party (diarrhea, vomiting, fever and body aces) and reported it to the chief epidemiologist. Information was gathered and two stool samples from sick guest were tested and yielded norovirus. Local health authority did an inspection at the site and found out that 2-3 employees had been sick (with diarrhea and vomiting) 1-3 days prior to the wedding party. It was concluded that that could have been the reason for the outbrake.	1	20	0	0

Causative agent	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 Typhimurium	Not Available	N_A	General	Eggs and egg products	N_A	Detection of causative agent in food chain or its environment - Symptoms and onset of illness pathognomonic to causative agent	Catering on aircraft or ship or train	Catering on aircraft or ship or train	Netherlands	Unknown	Cargo-ship with 11 persons in crew left Rotterdam June 30th. On the ships voyage to Iceland 5 of the crew became very ill and the rest of the crew became ill after the ship had bunkered in Reykjavik harbour. Tree were admitted to a hospital overnight. Stool samples from 5 of the crew yielded Salmonella Typhimurium. The ship was thourougly inspected. Samples taken from bernaise-sauce and ham in an open pack yielded the same type of Salmonella Typhimurium, but it was not considered to be the same bacterial strain as in Europe. The cause of the outbrake was not found but it was assumed it came from eggs that had been used to make the bernais-sauce previously, but those eggs had been bought in an earlier trip. Samples from eggs they had in the ship yielded negative.	1	11	3	0

Weak Foodborne Outbreaks: detailed data

Causative agent	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
Unknown	Not Available	N_A	Household	Mixed food	Lobster soup is suspected	Descriptive environmental evidence	Household	Unknown	Iceland	Unknown	On Dec 14th a man reports to the chief epiemiologist that he and his family, 11 persons, got sick after a family gathering, five days earlier, when they ate lobster soup (bought and reheated at home and additional lobster (bought seperatly) added to the soup), smoked lamb meat, flatbread and more traditional iclandic christmas food. Case control study reveald that those who ate the lobster soup, 10 out of 11, all became sick with dirarrhea, nausea and flatulence for 1-3 days. Stool sample from the man did not yieald any microbes and testing for Clostridium perfringens of the soup and the lobster was negative. The cause of the outbrake is unknown.	1	10	0	0

ANTIMICROBIAL RESISTANCE TABLES FOR CAMPYLOBACTER

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

Sampling Stage: Slaughterhouse | Sampling Type: food sample - neck skin | Sampling Context: Control and eradication programmes

Sampler: Industry sampling | Sampling Strategy: Selective sampling | Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Iceland

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	**1**	**1**	**1**	**1**	**1**	**1**
MIC	**N of resistant isolates**	**0**	**0**	**0**	**0**	**0**	**0**
<=0.12		1					
<=0.5							1
0.5				1			
<=1			1				
1						1	
4					1		

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

Sampling Stage: Farm

Sampling Type: animal sample - faeces

Sampling Context: Control and eradication programmes

Sampler: Industry sampling

Sampling Strategy: Census

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Iceland

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**	**0**	**0**	**0**	**0**	**0**	**0**
<=0.12		5		2			
<=0.25						1	
0.25				2			
<=0.5							5
0.5				1		1	
<=1			5		1		
1						3	
2					1		
4					2		
8					1		

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

Sampling Stage: Slaughterhouse

Sampling Type: animal sample - caecum

Sampling Context: Control and eradication programmes

Sampler: Industry sampling

Sampling Strategy: Selective sampling

Programme Code: AMR MON

Analytical Method:

Country of Origin: Iceland

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	**14**	**14**	**14**	**14**	**14**	**14**
MIC	**N of resistant isolates**	**1**	**0**	**0**	**1**	**0**	**0**
<=0.12		13		3			
<=0.25						1	
0.25				2			
<=0.5							14
0.5				8		2	
<=1			14				
1				1		6	
2					3	4	
4		1			9	1	
8					1		
64					1		

Table Antimicrobial susceptibility testing of Campylobacter jejuni in Turkeys - fattening flocks - before slaughter

Sampling Stage: Farm

Sampling Type: animal sample - faeces

Sampling Context: Control and eradication programmes

Sampler: Industry sampling

Sampling Strategy: Census

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Iceland

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	**2**	**2**	**2**	**2**	**2**	**2**
MIC	**N of resistant isolates**	**0**	**0**	**0**	**0**	**0**	**0**
<=0.12		2					
<=0.5							2
0.5				2			
<=1			2				
1						1	
2						1	
4					2		

ANTIMICROBIAL RESISTANCE TABLES FOR SALMONELLA

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

Sampling Stage: Slaughterhouse

Sampling Type: food sample - carcase swabs

Sampling Context: Control and eradication programmes

Sampler: Official sampling

Sampling Strategy: Census

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Iceland

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**	**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**
MIC	**N of resistant isolates**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
<=0.03										2					
0.03							2								
<=0.25				2										2	2
<=0.5					2				2						
<=1		2						2							
<=2													2		
<=4											2				
<=8						2									
8			2												
64												2			

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

Sampling Stage: Farm

Sampling Type: environmental sample - boot swabs

Sampling Context: Control and eradication programmes

Sampler: Industry sampling

Sampling Strategy: Census

Programme Code: AMR MON

Analytical Method:

Country of Origin: Iceland

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**	**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**
MIC	**N of resistant isolates**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
<=0.03										5					
0.03							4								
0.064							1								
<=0.25				5										5	5
<=0.5					5				5						
<=1		5						5							
<=2													1		
<=4											3				
4													4		
<=8						4									
8			3								2				
16			2			1									
64												3			
128												2			

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

Sampling Stage: Slaughterhouse

Sampling Type: food sample - carcase swabs

Sampling Context: Control and eradication programmes

Sampler: Official sampling

Sampling Strategy: Census

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Iceland

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**	**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**
MIC	**N of resistant isolates**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**
<=0.015							1								
<=0.03										2					
0.03							1								
<=0.25				2										2	1
<=0.5					2				2						
<=1		2						2							
<=2													2		
<=4											2				
<=8						2									
16			2												
>32															1
128												1			
>1024												1			

Table Antimicrobial susceptibility testing of Salmonella Goldcoast 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: Spain

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**	**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**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**1**	**1**	**1**	**0**	**0**
<=0.03										1					
<=0.25				1										1	1
<=0.5					1				1						
0.5							1								
<=1								1							
16			1												
>64	1												1		
>128						1					1				
>1024												1			

Table Antimicrobial susceptibility testing of Salmonella I 4,12:d:- in Meat from pig - carcase

Sampling Stage: Slaughterhouse

Sampling Type: food sample - carcase swabs

Sampling Context: Control and eradication programmes

Sampler: Official sampling

Sampling Strategy: Census

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Iceland

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**	**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**
MIC	**N of resistant isolates**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
<=0.03										2					
0.03							2								
<=0.25				2										2	2
<=0.5					2				2						
<=1		2						2							
<=2													2		
<=4											2				
<=8						2									
8			1												
16			1												
64												1			
128												1			

Table Antimicrobial susceptibility testing of Salmonella I 4,12:d:- in Meat from pig - minced meat - intended to be eaten cooked - chilled

Sampling Stage: Processing plant

Sampling Type: food sample - meat

Sampling Context: Surveillance - based on Regulation 2073

Sampler: HACCP and own check

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Iceland

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**	**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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
<=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												
64												1			

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

Sampling Stage: Slaughterhouse

Sampling Type: food sample - neck skin

Sampling Context: Control and eradication programmes

Sampler: Official and industry sampling

Sampling Strategy: Census

Programme Code: AMR MON

Analytical Method:

Country of Origin: Iceland

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**	**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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
<=0.03										1					
0.03							1								
<=0.25				1										1	1
<=0.5					1				1						
<=1		1						1							
<=2													1		
<=8						1									
8			1								1				
64												1			

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

Sampling Stage: Slaughterhouse

Sampling Type: food sample - carcase swabs

Sampling Context: Control and eradication programmes

Sampler: Official sampling

Sampling Strategy: Census

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Iceland

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	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	0	0	0	0	0	0	0	0	1	1	0	1
<=0.03										1					
0.03							1								
<=0.25				1										1	
<=0.5					1				1						
<=1								1							
<=4											1				
<=8						1									
8			1												
>32															1
>64		1											1		
>1024												1			

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

Sampling Stage: Retail

Sampling Type: food sample - meat

Sampling Context: Unspecified

Sampler: HACCP and own check

Sampling Strategy: Suspect sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Spain

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**	**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**	**1**	**0**	**0**	**1**	**1**	**0**	**1**	**0**	**0**	**1**	**1**	**1**	**1**
<=0.03										1					
0.12							1								
<=0.25				1											
<=0.5					1										
<=1								1							
2														1	
16											1				
32			1												
>32									1						1
>64		1											1		
>128						1									
>1024												1			

ANTIMICROBIAL RESISTANCE TABLES FOR INDICATOR ESCHERICHIA COLI

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Sheep - animals under 1 year (lambs)

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: Iceland

Sampling Details:

AM substance	Cefepime	Cefotaxim	Cefotaxime + Clavulanic acid	Cefoxitin	Ceftazidim	Ceftazidime + Clavulanic acid	Ertapenem	Imipenem	Meropenem	Temocillin
Cefotaxime synergy test	**Not Available**	**Not Available**	**Negative/Absent**	**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**	**Negative/Absent**	**Not Available**	**Not Available**	**Not Available**	**Not Available**
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**	**8**	**16**	**64**
N of tested isolates	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**
MIC **N of resistant isolates**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**0**	**0**	**0**
<=0.03									3	
0.12							3			
0.25	3							1		
0.5								2		
2		1	2							
4		2	1			1				
8					3	2				1
16										2
32				1						
64				2						

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Sheep - animals under 1 year (lambs)

Sampling Stage: Slaughterhouse

Sampling Type: animal sample - caecum

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER ESBL MON

Analytical Method:

Country of Origin: Iceland

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	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**
MIC	**N of resistant isolates**	**3**	**0**	**3**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**
<=0.015							3								
<=0.03										3					
<=0.25														3	1
<=0.5									2						
0.5															2
<=1								3							
1									1						
<=2			3												
2				1											
<=4											3				
4				2	1								3		
<=8						3						2			
8					2										
>64		3													
>1024												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: ESBL MON pnl2

Analytical Method:

Country of Origin: Iceland

Sampling Details:

AM substance	Cefepime	Cefotaxim	Cefotaxime + Clavulanic acid		Cefoxitin	Ceftazidim	Ceftazidime + Clavulanic acid	Ertapenem	Imipenem	Meropenem	Temocillin
Cefotaxime synergy test	**Not Available**	**Not Available**	**Positive/Present**	**Negative/Absent**	**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**	**Negative/Absent**	**Not Available**	**Not Available**	**Not Available**	**Not Available**
ECOFF	**0.125**	**0.25**	**0.25**	**0.25**	**8**	**0.5**	**0.5**	**0.06**	**0.5**	**0.125**	**32**
Lowest limit	**0.064**	**0.25**	**0.064**	**0.064**	**0.5**	**0.25**	**0.12**	**0.015**	**0.12**	**0.03**	**0.5**
Highest limit	**32**	**64**	**64**	**64**	**64**	**128**	**128**	**2**	**8**	**16**	**64**
N of tested isolates	**8**	**8**	**8**	**8**	**8**	**8**	**8**	**8**	**8**	**8**	**8**
MIC **N of resistant isolates**	**3**	**8**	**8**	**8**	**8**	**8**	**8**	**0**	**0**	**0**	**0**
<=0.015								4			
<=0.03										8	
0.03								2			
<=0.064	4										
0.064								2			
<=0.12									3		
0.12	1										
0.25	2								5		
1	1		1	2							
2		4		5			1				
4		3				1	5				2
8						5	1				3
16		1			1	2	1				2
32					6						1

	AM substance	Cefepime	Cefotaxim	Cefotaxime + Clavulanic acid		Cefoxitin	Ceftazidim	Ceftazidime + Clavulanic acid	Ertapenem	Imipenem	Meropenem	Temocillin
	Cefotaxime synergy test	Not Available	Not Available	Positive/Present	Negative/Absent	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	Negative/Absent	Not Available	Not Available	Not Available	Not Available
	ECOFF	0.125	0.25	0.25	0.25	8	0.5	0.5	0.06	0.5	0.125	32
	Lowest limit	0.064	0.25	0.064	0.064	0.5	0.25	0.12	0.015	0.12	0.03	0.5
	Highest limit	32	64	64	64	64	128	128	2	8	16	64
	N of tested isolates	8	8	8	8	8	8	8	8	8	8	8
MIC	N of resistant isolates	3	8	8	8	8	8	8	0	0	0	0
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: ESBL MON

Analytical Method:

Country of Origin: Iceland

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	**8**	**8**	**8**	**8**	**8**	**8**	**8**	**8**	**8**	**8**	**8**	**8**	**8**	**8**
MIC	**N of resistant isolates**	**8**	**0**	**8**	**8**	**0**	**1**	**0**	**0**	**0**	**0**	**2**	**3**	**0**	**2**
<=0.015							6								
<=0.03										8					
0.03							1								
<=0.25														8	1
0.25							1								
<=0.5									7						
0.5															4
<=1								8							
1															1
<=2			1										4		
2				5					1						
<=4											7				
4			6	2	3								1		
>4				1											
<=8						6						5			
8			1		4						1				
>8					1										
16						2						1			
32													1		
>32															2
>64		8											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	**8**	**8**	**8**	**8**	**8**	**8**	**8**	**8**	**8**	**8**	**8**	**8**	**8**	**8**
MIC	**N of resistant isolates**	**8**	**0**	**8**	**8**	**0**	**1**	**0**	**0**	**0**	**0**	**2**	**3**	**0**	**2**
>1024												2			

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

Sampling Stage: Retail

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: ESBL MON pnl2

Analytical Method:

Country of Origin: Iceland

Sampling Details:

	AM substance	Cefepime	Cefotaxim	Cefotaxime + Clavulanic acid	Cefoxitin	Ceftazidim	Ceftazidime + Clavulanic acid	Ertapenem	Imipenem	Meropenem	Temocillin
	Cefotaxime synergy test	**Not Available**	**Not Available**	**Negative/Absent**	**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**	**Negative/Absent**	**Not Available**	**Not Available**	**Not Available**	**Not Available**
	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**	**8**	**16**	**64**
	N of tested isolates	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**
MIC	**N of resistant isolates**	**2**	**2**	**2**	**2**	**2**	**2**	**0**	**0**	**0**	**0**
<=0.03										2	
0.064								2			
0.25		2									
0.5									2		
1				2							
2			2								
4						2	2				
8											2
32					2						

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

Sampling Stage: Retail

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: ESBL MON

Analytical Method:

Country of Origin: Iceland

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	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**
MIC	**N of resistant isolates**	**2**	**0**	**2**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
<=0.015							2								
<=0.03										2					
<=0.5									2						
0.5														2	2
<=1								2							
<=2			2												
2				1											
<=4											2				
4					1								2		
>4				1											
<=8						2						2			
8					1										
>64		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: AMR MON

Analytical Method:

Country of Origin: Iceland

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	**78**	**78**	**78**	**78**	**78**	**78**	**78**	**78**	**78**	**78**	**78**	**78**	**78**	**78**
MIC	**N of resistant isolates**	**17**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**4**	**4**	**0**	**5**
<=0.015							72								
<=0.03										78					
0.03							5								
<=0.25				78										56	39
0.25							1								
<=0.5					78				57						
0.5														22	25
<=1		7						77							
1									20						9
<=2			62										46		
2		20						1	1						
<=4											73				
4		25	11										25		
<=8						78						68			
8		9	2								4		3		
16		1	3									5			
32												1			1
>32															4
64											1		3		
>64		16											1		
256												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	**78**	**78**	**78**	**78**	**78**	**78**	**78**	**78**	**78**	**78**	**78**	**78**	**78**	**78**
MIC	**N of resistant isolates**	**17**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**4**	**4**	**0**	**5**
>1024												3			

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 pnl2

Analytical Method:

Country of Origin: Iceland

Sampling Details:

	AM substance	Cefepime	Cefotaxim	Cefotaxime + Clavulanic acid	Cefoxitin	Ceftazidim	Ceftazidime + Clavulanic acid	Ertapenem	Imipenem	Meropenem	Temocillin
	Cefotaxime synergy test	**Not Available**	**Not Available**	**Negative/Absent**	**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**	**Negative/Absent**	**Not Available**	**Not Available**	**Not Available**	**Not Available**
	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**	**8**	**16**	**64**
	N of tested isolates	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
MIC	**N of resistant isolates**	**1**	**1**	**1**	**1**	**1**	**1**	**0**	**0**	**0**	**0**
<=0.03										1	
0.064								1			
0.25		1							1		
8			1	1			1				1
16						1					
64					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: ESBL MON

Analytical Method:

Country of Origin: Iceland

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**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
<=0.015							1								
<=0.03										1					
<=0.25														1	
<=0.5									1						
0.5															1
<=1								1							
<=2			1										1		
<=4											1				
>4				1											
<=8						1						1			
>8					1										
>64		1													

OTHER ANTIMICROBIAL RESISTANCE TABLES

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
ESBL MON	Meat from pig - fresh - chilled	Escherichia coli, non-pathogenic, unspecified	Objective sampling	Retail	N_A	Monitoring	Official sampling	food sample - meat	batch (food/feed)	Iceland	N_A	124	0
OTHER ESBL MON	Meat from pig - fresh - chilled	Escherichia coli, non-pathogenic, unspecified	Objective sampling	Retail	N_A	Monitoring	Official sampling	food sample - meat	batch (food/feed)	Denmark	All fresh meat is frozen before importation and usually thawed before arriving at retail.	2	0
										Spain	All fresh meat is frozen before importation and usually thawed before arriving at retail.	10	0
										Unknown	N_A	15	0

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

Latest Transmission set

Table Name	Last submitted dataset transmission date
Antimicrobial Resistance	31-Jul-2019
Esbl	07-Jan-2020
Animal Population	23-Jul-2019
Disease Status	23-Jul-2019
Food Borne Outbreaks	23-Jul-2019
Prevalence	23-Jul-2019