European Food Safety Authority

ZOONOSES MONITORING

Hungary

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 2019

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 Hungary during the year 2019.

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

Animal species	Category of animals	Population animal
Cattle (bovine animals)	Cattle (bovine animals)	988,370
Goats	Goats	63,000
Pigs	Pigs	2,790,000
Rabbits	Rabbits - farmed	1,232,000
Sheep	Sheep	1,060,000
Solipeds, domestic	Solipeds, domestic	52,000

DISEASE STATUS TABLES

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

Region	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 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 by microbiology under investigations of suspect cases
HUNGARY	0	0	0	0	0	17,038	0	988,370	13,107	442,646	17,046	0	24	5,957	0	567	0	0	0

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

Region	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 by microbiology under investigations of suspect cases
HUNGARY	0	0	0	0	10,920	0	1,077,756	2,378	53,399	10,920	0	0

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 animals	Interval between routine tuberculin tests	Number of animals tested with tuberculin routine testing	Number of tuberculin tests carried out before the introduction into the herds	Number of animals with suspicious lesions of tuberculosis examined and submitted to histopathological and bacteriological examinations	Number of animals detected positive in bacteriological examination	Total number of herds
HUNGARY	17,034	4	988,370	12	811,627	38,731	426	45	17,046

PREVALENCE TABLES

Table Echinococcus:ECHINOCOCCUS 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
HUNGARY	Cattle (bovine animals) - Slaughterhouse - Not Available - Not Available - Surveillance - Official sampling - Suspect sampling	N_A	Not Available	animal	3	1	Echinococcus granulosus	1
	Foxes - Hunting - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	N_A	Not Available	animal	795	38	Echinococcus multilocularis	38
	Jackals - wild - Hunting - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	N_A	Not Available	animal	22	2	Echinococcus multilocularis	2
	Pigs - Slaughterhouse - Not Available - Not Available - Surveillance - Official sampling - Suspect sampling	N_A	Not Available	animal	84	35	Echinococcus granulosus	35
	Sheep - Slaughterhouse - Not Available - Not Available - Surveillance - Official sampling - Suspect sampling	N_A	Not Available	animal	1	0	Echinococcus granulosus	0

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 - Not Available - Clinical investigations - Industry sampling - Suspect sampling	animal	Unknown	N_A	PCR	2	0		West Nile virus	0
	Birds - wild - Natural habitat - Not Available - Not Available - Clinical investigations - Official sampling - Suspect sampling	animal	Unknown	N_A	PCR	16	1		West Nile virus	1
	Birds - wild - Zoo - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling	animal	Unknown	N_A	PCR	2	0		West Nile virus	0
	Poultry, unspecified - Farm - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling	animal	Unknown	N_A	PCR	7	1		West Nile virus	1
	Solipeds, domestic - Farm - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling	animal	Unknown	N_A	IgM-capture ELISA (MAC-ELISA)	283	20		West Nile virus	20
	Solipeds, domestic - Farm - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling	animal	Unknown	N_A	PCR	7	0		West Nile virus	0
	Solipeds, domestic - Farm - Not Available - Not Available - Clinical investigations - Official sampling - Suspect sampling	animal	Unknown	N_A	IgM-capture ELISA (MAC-ELISA)	3	0		West Nile virus	0
	Solipeds, domestic - Farm - Not Available - Not Available - Clinical investigations - Official sampling - Suspect sampling	animal	Unknown	N_A	PCR	1	0		West Nile virus	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	Bakery products - cakes - Catering - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	90	0	Salmonella	0
	Bakery products - cakes - Processing plant - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	28	0	Salmonella	0
	Bakery products - cakes - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	145	0	Salmonella	0
	Cereals and meals - flakes - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	42	0	Salmonella	0
	Cereals and meals - flour/meal or finely ground powder - Processing plant - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	22	0	Salmonella	0
	Cereals and meals - flour/meal or finely ground powder - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	105	0	Salmonella	0
	Chocolate - Processing plant - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	27	0	Salmonella	0
	Chocolate - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	59	0	Salmonella	0
	Dairy products (excluding cheeses) - fermented dairy products - Processing plant - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	4	0	Salmonella	0
	Dairy products (excluding cheeses) - fermented dairy products - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	10	0	Salmonella	0
	Fish - marinated - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	28	0	Salmonella	0
	Fish - raw - chilled - Farm - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	1	0	Salmonella	0
	Fish - raw - chilled - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	89	0	Salmonella	0
	Fish - smoked - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	104	0	Salmonella	0
	Fishery products, unspecified - cooked - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	12	0	Salmonella	0
	Fishery products, unspecified - non-ready-to-eat - frozen - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	6	0	Salmonella	0
	Fishery products, unspecified - non-ready-to-eat - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	8	0	Salmonella	0
	Fishery products, unspecified - ready-to-eat - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	39	0	Salmonella	0
	Foodstuffs intended for special nutritional uses - processed cereal-based food for infants and young children - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	70	0	Salmonella	0
	Foodstuffs intended for special nutritional uses - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	18	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	Fruits - non-pre-cut - Farm - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	43	0	Salmonella	0
	Fruits - non-pre-cut - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	64	0	Salmonella	0
	Fruits - pre-cut - frozen - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	4	0	Salmonella	0
	Meat from broilers (Gallus gallus) - carcase - Slaughterhouse - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	347	55	Salmonella Hadar	1
									Salmonella I, group O:7	4
									Salmonella Infantis	46
									Salmonella Kentucky	4
	Meat from broilers (Gallus gallus) - fresh - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	260	49	Salmonella Agona	1
									Salmonella I, group O:7	2
									Salmonella Infantis	43
									Salmonella Kentucky	1
									Salmonella Kottbus	1
									Salmonella Tennessee	1
	Meat from broilers (Gallus gallus) - fresh - Slaughterhouse - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	282	26	Salmonella I, group O:7	1
									Salmonella Infantis	25
	Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - Processing plant - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	8	0	Salmonella	0
	Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	59	9	Salmonella Infantis	9
	Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - Processing plant - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	16	0	Salmonella	0
	Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	86	0	Salmonella	0
	Meat from broilers (Gallus gallus) - meat products - raw but intended to be eaten cooked - frozen - Processing plant - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	18	0	Salmonella	0
	Meat from broilers (Gallus gallus) - meat products - raw but intended to be eaten cooked - frozen - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	95	0	Salmonella	0
	Meat from turkey - carcase - Slaughterhouse - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	367	10	Salmonella Agona	2
									Salmonella Anatum	1
									Salmonella Infantis	1
									Salmonella Kentucky	2
									Salmonella Newport	3
									Salmonella Stanley	1
	Meat from turkey - fresh - Processing plant - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	231	7	Salmonella Hadar	1
									Salmonella I, group O:7	2
									Salmonella Kentucky	1
									Salmonella Stanley	2
									Salmonella Tennessee	1
	Meat from turkey - fresh - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	194	14	Salmonella Agona	2
									Salmonella Bredeney	1
									Salmonella Hadar	2
									Salmonella Infantis	1
									Salmonella Kentucky	1
									Salmonella Newport	4

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 turkey - fresh - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	194	14	Salmonella Stanley	2
									Salmonella Typhimurium, monophasic	1
	Meat from turkey - meat products - raw and intended to be eaten raw - frozen - Processing plant - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	16	0	Salmonella	0
	Meat from turkey - meat products - raw and intended to be eaten raw - frozen - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	141	0	Salmonella	0
	Meat from turkey - meat products - raw and intended to be eaten raw - Processing plant - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	4	0	Salmonella	0
	Meat from turkey - meat products - raw and intended to be eaten raw - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	22	0	Salmonella	0
	Meat from turkey - meat products - raw but intended to be eaten cooked - Processing plant - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	3	0	Salmonella	0
	Meat from turkey - meat products - raw but intended to be eaten cooked - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	24	0	Salmonella	0
	Meat from turkey - minced meat - intended to be eaten cooked - Processing plant - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	12	2	Salmonella Kentucky	2
	Meat from turkey - minced meat - intended to be eaten cooked - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	38	5	Salmonella Bredeney	2
									Salmonella Infantis	2
									Salmonella Newport	1
	Other processed food products and prepared dishes - meat based dishes - Catering - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	48	0	Salmonella	0
	Other processed food products and prepared dishes - meat based dishes - Processing plant - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	3	0	Salmonella	0
	Other processed food products and prepared dishes - meat based dishes - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	62	0	Salmonella	0
	Seeds, sprouted - ready-to-eat - Processing plant - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	17	0	Salmonella	0
	Seeds, sprouted - ready-to-eat - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	48	0	Salmonella	0
	Spices and herbs - Processing plant - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	22	0	Salmonella	0
	Spices and herbs - Retail - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	207	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 - Feed mill - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	11	0	Salmonella	0
	Compound feedingstuffs for pigs - Feed mill - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	39	0	Salmonella	0
	Compound feedingstuffs for poultry (non specified) - Feed mill - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	30	1	Salmonella Tennessee	1
	Compound feedingstuffs for poultry, breeders - Feed mill - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	2	0	Salmonella	0
	Compound feedingstuffs for poultry, broilers - Feed mill - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	34	1	Salmonella I, group O:1,3,19	1
	Compound feedingstuffs for poultry, laying hens - Feed mill - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	40	0	Salmonella	0
	Feed material of cereal grain origin - maize derived - Feed mill - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	3	0	Salmonella	0
	Feed material of cereal grain origin - wheat derived - Feed mill - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	2	0	Salmonella	0
	Feed material of land animal origin - meat meal - Feed mill - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	5	3	Salmonella Senftenberg	3
	Feed material of marine animal origin - fish meal - Feed mill - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	2	0	Salmonella	0
	Feed material of oil seed or fruit origin - rape seed derived - Feed mill - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	4	0	Salmonella	0
	Feed material of oil seed or fruit origin - soya (bean) derived - Feed mill - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	9	0	Salmonella	0

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 - pet animals - Farm - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling	N_A	Immuno Histo Chemistry (IHC)	animal	2	0	Toxoplasma	0
	Goats - Farm - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling	N_A	Complement fixation test (CFT)	animal	2	1	Toxoplasma	1
	Goats - Farm - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling	N_A	Immuno Histo Chemistry (IHC)	animal	1	0	Toxoplasma	0
	Sheep - Farm - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling	N_A	Complement fixation test (CFT)	animal	9	1	Toxoplasma	1
	Sheep - Farm - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling	N_A	Immuno Histo Chemistry (IHC)	animal	2	0	Toxoplasma	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	Badgers - Unspecified - Not Available - Not Available - Unspecified - Official sampling - Convenient sampling	N_A	Not Available	animal	15	0	Trichinella	0
	Foxes - Hunting - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	N_A	Not Available	animal	820	15	Trichinella britovi	14
							Trichinella spiralis	1
	Jackals - Hunting - Not Available - Not Available - Monitoring - Official sampling - Objective sampling	N_A	Not Available	animal	30	3	Trichinella britovi	3
	Pigs - breeding animals - not raised under controlled housing conditions - Slaughterhouse - Not Available - animal sample - organ/tissue - Surveillance - Official sampling - Census	N_A	Not Available	animal	381249	0	Trichinella	0
	Pigs - fattening pigs - not raised under controlled housing conditions - Slaughterhouse - Not Available - animal sample - organ/tissue - Surveillance - Official sampling - Census	N_A	Not Available	animal	4040344	0	Trichinella	0
	Solipeds, domestic - Slaughterhouse - Not Available - animal sample - organ/tissue - Surveillance - Official sampling - Census	N_A	Not Available	animal	674	0	Trichinella	0
	Wild boars - Game handling establishment - Not Available - animal sample - organ/tissue - Surveillance - Official sampling - Census	N_A	Not Available	animal	71301	3	Trichinella britovi	1
							Trichinella spiralis	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

		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**
Bacillus cereus	Broiler meat (Gallus gallus) and products thereof						1	27	0	0
	Other foods		1	3	0	0				
	Mixed food		2	155	1	0	2	75	0	0
Calicivirus	Mixed food		1	80	1	0				
Campylobacter	Broiler meat (Gallus gallus) and products thereof						1	9	0	0
Clostridium perfringens	Broiler meat (Gallus gallus) and products thereof		1	21	0	0				
	Mixed food						1	15	0	0
Microorganisms	Pig meat and products thereof						2	6	0	0
	Other foods						1	27	0	0
Salmonella	Pig meat and products thereof		1	14	9	0	2	5	1	0
Salmonella Enteritidis	Eggs and egg products		2	13	6	0	1	16	3	0
	Broiler meat (Gallus gallus) and products thereof		1	29	7	0				
	Mixed food		2	711	109	0				
Salmonella I 4,5,12:a:-	Pig meat and products thereof		1	27	4	0				
Salmonella Infantis	Broiler meat (Gallus gallus) and products thereof		2	25	8	0				
Salmonella Typhimurium	Broiler meat (Gallus gallus) and products thereof		2	57	5	0				
Staphylococcus aureus	Mixed food						3	406	7	0
Unknown	Pig meat and products thereof						1	87	1	0
	Sweets and chocolate						1	15	0	0
	Other foods						2	161	0	0
	Mixed food						1	20	5	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	Étbi_12	General	Mixed food	N_A	Descriptive epidemiological evidence	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Hungary	Cross-contamination	N_A	1	14	0	0
					Étbi_28	General	Other foods	N_A	Descriptive epidemiological evidence	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Hungary	Cross-contamination	N_A	1	3	0	0
					Étbi_3	General	Mixed food	N_A	Descriptive epidemiological evidence	School or kindergarten	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Hungary	Inadequate heat treatment	N_A	1	141	1	0
Calicivirus	unk	Not Available	Not Available	Not Available	Étbi_13	General	Mixed food	N_A	Descriptive epidemiological evidence	Canteen or workplace catering	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Hungary	Infected food handler	N_A	1	80	1	0
Clostridium perfringens	unk	Not Available	Not Available	Not Available	Étbi_30	General	Broiler meat (Gallus gallus) and products thereof	N_A	Descriptive epidemiological evidence	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Hungary	Unprocessed contaminated ingredient	N_A	1	21	0	0
Salmonella	unk	Not Available	Not Available	Not Available	Étbi_32	General	Pig meat and products thereof	N_A	Descriptive epidemiological evidence	Household	Farm	Hungary	Unknown	N_A	1	14	9	0
Salmonella Enteritidis	unk	Not Available	Not Available	Not Available	Étbi_15	General	Broiler meat (Gallus gallus) and products thereof	N_A	Descriptive epidemiological evidence	Camp or picnic	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Hungary	Inadequate heat treatment	N_A	1	29	7	0
					Étbi_19	General	Mixed food	N_A	Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans	Household	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Hungary	Storage time/temperature abuse	N_A	1	136	29	0
					Étbi_24	General	Mixed food	N_A	Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans	School or kindergarten	School or kindergarten	Hungary	Cross-contamination	N_A	1	575	80	0
					Étbi_29	General	Eggs and egg products	N_A	Descriptive epidemiological evidence	Others	Others	Hungary	Inadequate heat treatment	N_A	1	7	1	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	Étbi_4	General	Eggs and egg products	N_A	Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Hungary	Inadequate heat treatment	N_A	1	6	5	0
Salmonella I 4,5,12:a:-	unk	Not Available	Not Available	Not Available	Étbi_8	General	Pig meat and products thereof	N_A	Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans	Household	Farm	Hungary	Unknown	N_A	1	27	4	0
Salmonella Infantis	unk	Not Available	Not Available	Not Available	Étbi_16	General	Broiler meat (Gallus gallus) and products thereof	N_A	Descriptive epidemiological evidence	Camp or picnic	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Hungary	Inadequate heat treatment	N_A	1	23	7	0
					Étbi_5	General	Broiler meat (Gallus gallus) and products thereof	N_A	Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Hungary	Cross-contamination	N_A	1	2	1	0
Salmonella Typhimurium	unk	Not Available	Not Available	Not Available	Étbi_21	General	Broiler meat (Gallus gallus) and products thereof	N_A	Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Hungary	Cross-contamination	N_A	2	57	5	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
Bacillus cereus	unk	Not Available	Not Available	Not Available	Étbi_17	General	Mixed food	N_A	Unknown	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Hungary	Unknown	N_A	1	8	0	0
					Étbi_23	General	Mixed food	N_A	Unknown	Residential institution (nursing home or prison or boarding school)	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Hungary	Cross-contamination	N_A	1	67	0	0
					Étbi_33	General	Broiler meat (Gallus gallus) and products thereof	N_A	Unknown	Residential institution (nursing home or prison or boarding school)	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Hungary	Unknown	N_A	1	27	0	0
Campylobacter	unk	Not Available	Not Available	Not Available	Étbi_14	General	Broiler meat (Gallus gallus) and products thereof	N_A	Unknown	Camp or picnic	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Hungary	Unprocessed contaminated ingredient	N_A	1	9	0	0
Clostridium perfringens	unk	Not Available	Not Available	Not Available	Étbi_6	General	Mixed food	N_A	Unknown	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Hungary	Unknown	N_A	1	15	0	0
Microorganisms	unk	Not Available	Not Available	Not Available	Étbi_10	General	Pig meat and products thereof	N_A	Unknown	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Hungary	Infected food handler	N_A	1	2	0	0
					Étbi_2	General	Other foods	N_A	Unknown	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Hungary	Unknown	N_A	1	27	0	0
					Étbi_7	General	Pig meat and products thereof	N_A	Unknown	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Hungary	Other contributory factor	N_A	1	4	0	0
Salmonella	unk	Not Available	Not Available	Not Available	Étbi_1	General	Pig meat and products thereof	N_A	Unknown	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Hungary	Unknown	N_A	1	3	0	0
					Étbi_9	General	Pig meat and products thereof	N_A	Unknown	Household	Farm	Hungary	Unknown	N_A	1	2	1	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	Étbi_26	General	Eggs and egg products	N_A	Unknown	Residential institution (nursing home or prison or boarding school)	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Hungary	Cross-contamination	N_A	1	16	3	0
Staphylococcus aureus	unk	Not Available	Not Available	Not Available	Étbi_20	General	Mixed food	N_A	Unknown	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Hungary	Infected food handler	N_A	1	9	7	0
					Étbi_27	General	Mixed food	N_A	Unknown	School or kindergarten	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Hungary	Infected food handler	N_A	1	17	0	0
					Étbi_31	General	Mixed food	N_A	Unknown	Temporary mass catering (fairs or festivals)	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Hungary	Unknown	N_A	1	380	0	0
Unknown	unk	Not Available	Not Available	Not Available	Étbi_11	General	Sweets and chocolate	N_A	Unknown	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Hungary	Unknown	N_A	1	15	0	0
					Étbi_18	General	Other foods	N_A	Unknown	Temporary mass catering (fairs or festivals)	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Hungary	Unknown	N_A	1	151	0	0
					Étbi_22	General	Pig meat and products thereof	N_A	Unknown	Temporary mass catering (fairs or festivals)	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Hungary	Unknown	N_A	1	87	1	0
					Étbi_25	General	Other foods	N_A	Unknown	Household	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Hungary	Unknown	N_A	1	10	0	0
					Étbi_34	General	Mixed food	N_A	Unknown	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Hungary	Unknown	N_A	1	20	5	0

ANTIMICROBIAL RESISTANCE TABLES FOR CAMPYLOBACTER

ANTIMICROBIAL RESISTANCE TABLES FOR SALMONELLA

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

Sampling Stage: Slaughterhouse

Sampling Type: food sample - carcase swabs

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: AMR MON

Analytical Method:

Country of Origin: Hungary

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**
MIC	**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										1		
2								1							
<=4											1				
<=8						1									
32												1			

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

Sampling Stage: Slaughterhouse

Sampling Type: food sample - carcase swabs

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: AMR MON

Analytical Method:

Country of Origin: Hungary

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**
MIC	**N of resistant isolates**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**0**
<=0.03										1					
0.12							1								
<=0.25				1											1
<=0.5					1				1						
0.5														1	
2								1							
4			1												
<=8						1						1			
>64		1											1		
>128											1				

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

Sampling Stage: Slaughterhouse

Sampling Type: food sample - carcase swabs

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: AMR MON

Analytical Method:

Country of Origin: Hungary

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

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

Sampling Stage: Slaughterhouse

Sampling Type: food sample - carcase swabs

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: AMR MON

Analytical Method:

Country of Origin: Hungary

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**
MIC	**N of resistant isolates**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**1**	**1**	**0**	**0**
<=0.03										1					
<=0.25				1											1
0.25							1								
<=0.5					1				1						
0.5														1	
<=1		1													
2								1							
<=8						1									
8			1												
>64													1		
>128											1				
>1024												1			

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

Sampling Stage: Slaughterhouse

Sampling Type: food sample - carcase swabs

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: AMR MON

Analytical Method:

Country of Origin: Hungary

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	**7**	**7**	**7**	**7**	**7**	**7**	**7**	**7**	**7**	**7**	**7**	**7**	**7**	**7**
MIC	**N of resistant isolates**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**1**	**1**	**0**	**0**
<=0.015							5								
<=0.03										7					
0.03							1								
<=0.25				7										7	7
0.25							1								
<=0.5					7				6						
<=1		7													
1									1						
<=2													6		
2								7							
<=4											6				
4			4												
<=8						7									
8			3												
16												3			
32												3			
64													1		
>128											1				
>1024												1			

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

Sampling Stage: Slaughterhouse

Sampling Type: food sample - carcase swabs

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: AMR MON

Analytical Method:

Country of Origin: Hungary

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**
MIC	**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		
2								1							
<=4											1				
4			1												
<=8						1									
16												1			

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

Sampling Stage: Slaughterhouse

Sampling Type: food sample - carcase swabs

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: AMR MON

Analytical Method:

Country of Origin: Hungary

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**
MIC	**N of resistant isolates**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
<=0.015							1								
<=0.03										3					
0.03							2								
<=0.25				3										3	1
<=0.5					3				3						
0.5															2
<=1		1													
<=2													3		
2		2						3							
<=4											3				
<=8						2									
8			1												
16			2			1						1			
32												2			

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

Sampling Stage: Slaughterhouse

Sampling Type: food sample - carcase swabs

Sampling Context: Monitoring

Sampler: HACCP and own check

Sampling Strategy: Objective sampling

Programme Code: AMR MON

Analytical Method:

Country of Origin: Hungary

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**
MIC	**N of resistant isolates**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**
<=0.03										1					
0.12							1								
<=0.25				1										1	1
<=0.5					1				1						
<=1		1													
<=2													1		
2								1							
4			1												
<=8						1									
16												1			
>128											1				

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

Sampling Stage: Slaughterhouse

Sampling Type: food sample - carcase swabs

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: AMR MON

Analytical Method:

Country of Origin: Hungary

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	**11**	**11**	**11**	**11**	**11**	**11**	**11**	**11**	**11**	**11**	**11**	**11**	**11**	**11**
MIC	**N of resistant isolates**	**11**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**10**	**10**	**0**	**1**
<=0.015							3								
<=0.03										11					
0.03							7								
0.064							1								
<=0.25				11										11	10
<=0.5					11				10						
<=1								2							
1									1						
<=2													1		
2								9							
<=4											11				
4			7												
<=8						10						1			
8			4												
32						1									
>32															1
>64		11											10		
>1024												10			

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: ESBL MON pnl2

Analytical Method:

Country of Origin: Austria

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**	**16**	**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		
4			1							
8		1				1				1
16					1					
64				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: ESBL MON

Analytical Method:

Country of Origin: Austria

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**	**1**	**1**	**0**	**0**
<=0.03										1					
0.03							1								
<=0.25														1	
<=0.5									1						
0.5															1
<=1								1							
<=4											1				
4			1												
>4				1											
<=8						1									
>8					1										
>64		1											1		
>1024												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: ESBL MON pnl2

Analytical Method:

Country of Origin: Poland

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**	**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**	**Positive/Present**	**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**	**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							
<=0.12							1		1		
2						1					
4		1			1						
8											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: ESBL MON

Analytical Method:

Country of Origin: Poland

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**	**1**	**0**	**1**
<=0.03										1					
<=0.25														1	
<=0.5									1						
<=1								1							
2					1										
>4				1											
<=8						1									
>8							1								
16			1												
>32															1
>64		1											1		
>128											1				
>1024												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: ESBL MON pnl2

Analytical Method:

Country of Origin: Germany

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**	**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**	**Positive/Present**	**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**	**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**
<=0.03										1	
0.03								1			
<=0.064				1							
<=0.12							1		1		
2		1									
4											1
8					1	1					
16			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: ESBL MON

Analytical Method:

Country of Origin: Germany

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**	**0**	**0**	**0**	**0**
<=0.03										1					
<=0.25														1	1
<=0.5									1						
<=1								1							
<=2			1										1		
4					1										
>4				1											
<=8						1						1			
>8							1								
>64		1													
>128											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: ESBL MON pnl2

Analytical Method:

Country of Origin: Hungary

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	Positive/Present	Negative/Absent	Not Available	Not Available	Not Available	Not Available
	ECOFF	0.125	0.25	0.25	0.25	8	0.5	0.5	0.5	0.06	0.5	0.125	32
	Lowest limit	0.064	0.25	0.064	0.064	0.5	0.25	0.12	0.12	0.015	0.12	0.03	0.5
	Highest limit	32	64	64	64	64	128	128	128	2	16	16	64
	N of tested isolates	24	24	24	24	24	24	24	24	24	24	24	24
MIC	N of resistant isolates	24	24	1	1	1	23	1	1	0	0	0	0
<=0.015										20			
<=0.03												23	
0.03										2			
<=0.064				22									
0.064										2		1	
<=0.12								19	1		22		
0.12				1									
0.25		1						3			2		
0.5							1						
1							8						1
2		1				1	10						3
4		12				14	2						10
8		8			1	8			1				8
16		1	3				3						2

	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	Positive/Present	Negative/Absent	Not Available	Not Available	Not Available	Not Available
	ECOFF	0.125	0.25	0.25	0.25	8	0.5	0.5	0.5	0.06	0.5	0.125	32
	Lowest limit	0.064	0.25	0.064	0.064	0.5	0.25	0.12	0.12	0.015	0.12	0.03	0.5
	Highest limit	32	64	64	64	64	128	128	128	2	16	16	64
	N of tested isolates	24	24	24	24	24	24	24	24	24	24	24	24
MIC	N of resistant isolates	24	24	1	1	1	23	1	1	0	0	0	0
32		1	4										
64			9										
>64			8			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: ESBL MON

Analytical Method:

Country of Origin: Hungary

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	**24**	**24**	**24**	**24**	**24**	**24**	**24**	**24**	**24**	**24**	**24**	**24**	**24**	**24**
MIC	**N of resistant isolates**	**24**	**0**	**24**	**23**	**12**	**7**	**0**	**4**	**0**	**4**	**21**	**19**	**0**	**9**
<=0.015							17								
<=0.03										24					
<=0.25														19	13
0.25							1								
<=0.5					1				19						
0.5							3							5	2
<=1								23							
1					11				1						
<=2			4										5		
2					7			1							
<=4											18				
4			8		2				1						
>4				24											
<=8						11						2			
8			10		1						1				
>8					2		3								
16			2			1			1		1	1			
>32									2						9
64						1							7		
>64		24											12		
128						3					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	**24**	**24**	**24**	**24**	**24**	**24**	**24**	**24**	**24**	**24**	**24**	**24**	**24**	**24**
MIC	**N of resistant isolates**	**24**	**0**	**24**	**23**	**12**	**7**	**0**	**4**	**0**	**4**	**21**	**19**	**0**	**9**
>128						8					3				
>1024												21			

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 pnl2

Analytical Method:

Country of Origin: Hungary

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**	**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**	**Positive/Present**	**Negative/Absent**	**Not Available**	**Not Available**	**Not Available**	**Not Available**
	ECOFF	**0.125**	**0.25**	**0.25**	**8**	**0.5**	**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**	**0.12**	**0.015**	**0.12**	**0.03**	**0.5**
	Highest limit	**32**	**64**	**64**	**64**	**128**	**128**	**128**	**2**	**16**	**16**	**64**
	N of tested isolates	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**
MIC	**N of resistant isolates**	**3**	**3**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**
<=0.015									3			
<=0.03											3	
<=0.064				3								
<=0.12							2	1		3		
0.5						1						
1						2						
4		3			2							3
8			1		1							
16			1									
32			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: Hungary

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	**170**	**170**	**170**	**170**	**170**	**170**	**170**	**170**	**170**	**170**	**170**	**170**	**170**	**170**
MIC	**N of resistant isolates**	**83**	**1**	**3**	**2**	**19**	**22**	**2**	**8**	**0**	**11**	**54**	**87**	**0**	**41**
<=0.015							140								
<=0.03										170					
0.03							8								
0.12							1								
<=0.25				167										169	108
0.25							13								
<=0.5					168				136						
0.5							3							1	21
<=1	7							164							
1					2				25						
<=2			20										79		
2	31							4	1						
<=4											152				
4	45	89											1		
>4				3											
<=8						151						95			
8	4	59					3	2			6		3		
>8							2								
16	1	1							4		1	17	2		
32						5						3	4		
>32									4						41

	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	**170**	**170**	**170**	**170**	**170**	**170**	**170**	**170**	**170**	**170**	**170**	**170**	**170**	**170**
MIC	**N of resistant isolates**	**83**	**1**	**3**	**2**	**19**	**22**	**2**	**8**	**0**	**11**	**54**	**87**	**0**	**41**
64		2				4					2	1	17		
>64		80	1										64		
128						5					3				
>128						5					6				
1024												2			
>1024												52			

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: Hungary

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	Positive/Present	Negative/Absent	Not Available	Not Available	Not Available	Not Available
	ECOFF	0.125	0.25	0.25	0.25	8	0.5	0.5	0.5	0.06	0.5	0.125	32
	Lowest limit	0.064	0.25	0.064	0.064	0.5	0.25	0.12	0.12	0.015	0.12	0.03	0.5
	Highest limit	32	64	64	64	64	128	128	128	2	16	16	64
	N of tested isolates	195	195	195	195	195	195	195	195	195	195	195	195
MIC	N of resistant isolates	189	195	13	13	19	189	14	14	1	0	0	0
<=0.015										134			
<=0.03												194	
0.03										47			
<=0.064				163									
0.064										13		1	
<=0.12								96	6		157		
0.12		6		17						1			
0.25		7		2				65	8		38		
0.5		3					6	5	1				
1		2	1		2		40	1					
2		13	3		1	8	59		1				5
4		81	5		7	98	29		5				85
8		62	9		3	70	40		7				89
16		19	41			8	18						15

	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	Positive/Present	Negative/Absent	Not Available	Not Available	Not Available	Not Available
	ECOFF	0.125	0.25	0.25	0.25	8	0.5	0.5	0.5	0.06	0.5	0.125	32
	Lowest limit	0.064	0.25	0.064	0.064	0.5	0.25	0.12	0.12	0.015	0.12	0.03	0.5
	Highest limit	32	64	64	64	64	128	128	128	2	16	16	64
	N of tested isolates	195	195	195	195	195	195	195	195	195	195	195	195
MIC	N of resistant isolates	189	195	13	13	19	189	14	14	1	0	0	0
32		2	53			4	3						1
64			50			5							
>64			33			2							

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: Hungary

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	**195**	**195**	**195**	**195**	**195**	**195**	**195**	**195**	**195**	**195**	**195**	**195**	**195**	**195**
MIC	**N of resistant isolates**	**195**	**11**	**195**	**190**	**42**	**70**	**4**	**27**	**0**	**27**	**117**	**134**	**0**	**103**
<=0.015							106								
<=0.03										195					
0.03							16								
0.064							3								
0.12							2								
<=0.25														186	66
0.25							24								
<=0.5					5				130						
0.5							27							9	24
<=1								188							
1				1	48				34						2
<=2			9										59		
2				3	58			3	4						
<=4											125				
4			92	8	26								2		
>4				183											
<=8						151						62			
8			83		34		8	4	1		30				
>8					24		9								
16						2			7		13	13			
32			1			4			11		1	3	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	**195**	**195**	**195**	**195**	**195**	**195**	**195**	**195**	**195**	**195**	**195**	**195**	**195**	**195**
MIC	**N of resistant isolates**	**195**	**11**	**195**	**190**	**42**	**70**	**4**	**27**	**0**	**27**	**117**	**134**	**0**	**103**
>32									8						103
64			2			8					4		17		
>64		195	8										115		
128						14					2				
>128						16					20				
>1024												117			

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified 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: ESBL MON pnl2

Analytical Method:

Country of Origin: Poland

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	Positive/Present	Negative/Absent	Not Available	Not Available	Not Available	Not Available
	ECOFF	0.125	0.25	0.25	0.25	8	0.5	0.5	0.5	0.06	0.5	0.125	32
	Lowest limit	0.064	0.25	0.064	0.064	0.5	0.25	0.12	0.12	0.015	0.12	0.03	0.5
	Highest limit	32	64	64	64	64	128	128	128	2	16	16	64
	N of tested isolates	2	2	2	2	2	2	2	2	2	2	2	2
MIC	N of resistant isolates	2	2	1	1	2	2	1	1	0	0	0	0
<=0.03												2	
0.03										1			
<=0.064				1									
0.064										1			
<=0.12								1					
0.25		1									2		
1							1						
4													2
8			1		1				1				
16		1	1			1	1						
64						1							

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified 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: ESBL MON

Analytical Method:

Country of Origin: Poland

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**	**1**	**1**	**0**	**0**	**1**	**1**	**1**	**0**	**0**
<=0.03										2					
0.064							1								
<=0.25														1	
0.25							1								
<=0.5									1						
0.5														1	2
<=1								1							
1									1						
<=2													1		
2					1										
<=4											1				
4			1												
>4				2											
<=8						2									
8			1		1			1							
16												1			
>64		2											1		
128											1				
>1024												1			

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified 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: ESBL MON pnl2

Analytical Method:

Country of Origin: Slovakia

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**	**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**	**Positive/Present**	**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**	**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**
<=0.03										1	
0.03								1			
<=0.064				1							
<=0.12									1		
0.25							1				
4						1					
8					1						1
16		1									
>64			1								

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified 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: ESBL MON

Analytical Method:

Country of Origin: Slovakia

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

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified 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: ESBL MON pnl2

Analytical Method:

Country of Origin: Germany

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	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	Positive/Present	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	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							
<=0.12									1		
0.25							1				
2						1					
4					1						1
8		1									
64			1								

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified 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: ESBL MON

Analytical Method:

Country of Origin: Germany

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	1
<=0.5									1						
<=1								1							
<=2													1		
2					1										
<=4											1				
>4				1											
<=8						1									
8			1												
16												1			
>64		1													

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified 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: ESBL MON pnl2

Analytical Method:

Country of Origin: Spain

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	Positive/Present	Negative/Absent	Not Available	Not Available	Not Available	Not Available
	ECOFF	0.125	0.25	0.25	0.25	8	0.5	0.5	0.5	0.06	0.5	0.125	32
	Lowest limit	0.064	0.25	0.064	0.064	0.5	0.25	0.12	0.12	0.015	0.12	0.03	0.5
	Highest limit	32	64	64	64	64	128	128	128	2	16	16	64
	N of tested isolates	2	2	2	2	2	2	2	2	2	2	2	2
MIC	N of resistant isolates	2	2	1	1	1	2	1	1	0	0	0	0
<=0.03												2	
0.03										2			
<=0.064				1									
<=0.12											2		
0.25		1						1					
4						1	1						
8		1	1		1								1
16									1				1
32			1				1						
>64						1							

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified 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: ESBL 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**	**0.25**	**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**	**2**	**2**	**0**	**0**	**0**	**2**	**2**	**1**	**0**	**2**
<=0.03										2					
<=0.25														2	
<=0.5									2						
<=1								2							
1							1								
4					1								1		
>4				2											
8			2												
>8					1		1								
>32															2
64						1									
>64		2											1		
>128						1					2				
>1024												2			

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified 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: ESBL MON pnl2

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
	Cefotaxime synergy test	Not Available	Not Available	Positive/Present	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	Positive/Present	Negative/Absent	Not Available	Not Available	Not Available	Not Available
	ECOFF	0.125	0.25	0.25	8	0.5	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	0.12	0.015	0.12	0.03	0.5
	Highest limit	32	64	64	64	128	128	128	2	16	16	64
	N of tested isolates	2	2	2	2	2	2	2	2	2	2	2
MIC	N of resistant isolates	2	2	0	0	2	0	0	0	0	0	0
<=0.015									1			
<=0.03											2	
0.03									1			
<=0.064				1								
<=0.12										2		
0.12				1								
0.25							1	1				
1						1						
2						1						
4		2			1							
8					1							1
16												1
64			2									

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified 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: ESBL 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**	**0.25**	**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**	**1**	**0**	**0**	**0**	**0**	**0**	**2**	**2**	**0**	**1**
<=0.015							1								
<=0.03										2					
0.03							1								
<=0.25														1	1
<=0.5									2						
0.5														1	
<=1								2							
1					1										
<=4											2				
4			1		1										
>4				2											
<=8						1									
16			1												
>32															1
>64		2											2		
>128						1									
>1024												2			

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified 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: ESBL MON pnl2

Analytical Method:

Country of Origin: Hungary

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**	**Positive/Present**	**Negative/Absent**	**Not Available**	**Not Available**	**Not Available**	**Not Available**
ECOFF	**0.125**	**0.25**	**0.25**	**0.25**	**8**	**0.5**	**0.5**	**0.5**	**0.06**	**0.5**	**0.125**	**32**
Lowest limit	**0.064**	**0.25**	**0.064**	**0.064**	**0.5**	**0.25**	**0.12**	**0.12**	**0.015**	**0.12**	**0.03**	**0.5**
Highest limit	**32**	**64**	**64**	**64**	**64**	**128**	**128**	**128**	**2**	**16**	**16**	**64**
N of tested isolates	**22**	**22**	**22**	**22**	**22**	**22**	**22**	**22**	**22**	**22**	**22**	**22**
MIC **N of resistant isolates**	**20**	**22**	**4**	**4**	**4**	**22**	**4**	**4**	**1**	**0**	**0**	**0**
<=0.015									17			
<=0.03											22	
0.03									3			
<=0.064			17									
0.064									1			
<=0.12							17			18		
0.12	2		1						1			
0.25	2						1			3		
0.5										1		
1	1					4						
2	1				1	9						1
4	10			3	16	2						17
8	5	5		1	1	4		4				4
16	1	2				3						

	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**	**Positive/Present**	**Negative/Absent**	**Not Available**	**Not Available**	**Not Available**	**Not Available**
	ECOFF	**0.125**	**0.25**	**0.25**	**0.25**	**8**	**0.5**	**0.5**	**0.5**	**0.06**	**0.5**	**0.125**	**32**
	Lowest limit	**0.064**	**0.25**	**0.064**	**0.064**	**0.5**	**0.25**	**0.12**	**0.12**	**0.015**	**0.12**	**0.03**	**0.5**
	Highest limit	**32**	**64**	**64**	**64**	**64**	**128**	**128**	**128**	**2**	**16**	**16**	**64**
	N of tested isolates	**22**	**22**	**22**	**22**	**22**	**22**	**22**	**22**	**22**	**22**	**22**	**22**
MIC	**N of resistant isolates**	**20**	**22**	**4**	**4**	**4**	**22**	**4**	**4**	**1**	**0**	**0**	**0**
32			6			2							
64			7			1							
>64			2			1							

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified 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: ESBL MON

Analytical Method:

Country of Origin: Hungary

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	**22**	**22**	**22**	**22**	**22**	**22**	**22**	**22**	**22**	**22**	**22**	**22**	**22**	**22**
MIC	**N of resistant isolates**	**22**	**1**	**22**	**22**	**2**	**8**	**0**	**3**	**0**	**4**	**15**	**17**	**0**	**11**
<=0.015							13								
<=0.03										22					
0.03							1								
<=0.25														17	10
0.25							3								
<=0.5									17						
0.5							1							4	1
<=1								21							
1					2		1		2					1	
<=2													4		
2					9			1							
<=4											15				
4			16	1	5								1		
>4				21											
<=8						20						6			
8			4		3		1				3				
>8					3		2								
16			1									1			
32									2						
>32									1						11
64		1				1							5		

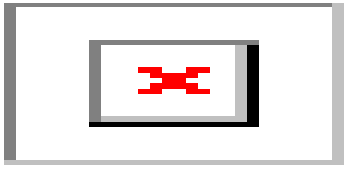
	AM substance	Ampicillin	Azithromycin	Cefotaxim	Ceftazidim	Chloramphenicol	Ciprofloxacin	Colistin	Gentamicin	Meropenem	Nalidixic acid	Sulfamethoxazole	Tetracycline	Tigecycline	Trimethoprim
	ECOFF	**8**	**16**	**0.25**	**0.5**	**16**	**0.064**	**2**	**2**	**0.125**	**16**	**64**	**8**	**1**	**2**
	Lowest 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	**22**	**22**	**22**	**22**	**22**	**22**	**22**	**22**	**22**	**22**	**22**	**22**	**22**	**22**
MIC	**N of resistant isolates**	**22**	**1**	**22**	**22**	**2**	**8**	**0**	**3**	**0**	**4**	**15**	**17**	**0**	**11**
>64		21	1										12		
128						1									
>128											4				
>1024												15			

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
CARBAMON	Meat from bovine animals - fresh	Escherichia coli, non-pathogenic, unspecified	Objective sampling	Retail	sampOrigs are variable	Monitoring	Official sampling	food sample - meat	batch (food/feed)	Unknown	N_A	175	0
	Meat from pig - fresh	Escherichia coli, non-pathogenic, unspecified	Objective sampling	Retail	sampOrigs are variable	Monitoring	Official sampling	food sample - meat	batch (food/feed)	Unknown	N_A	279	0
	Pigs - fattening pigs	Escherichia coli, non-pathogenic, unspecified	Objective sampling	Slaughterhouse	N_A	Monitoring	Official sampling	animal sample - caecum	slaughter animal batch	Hungary	N_A	295	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	17-Sep-2020
Esbl	17-Sep-2020
Animal Population	06-Sep-2020
Disease Status	06-Sep-2020
Food Borne Outbreaks	09-Sep-2020
Prevalence	11-Sep-2020

Institutions and laboratories involved in antimicrobial resistance monitoring and reporting

- National Food Chain Safety Office Directorate of Veterinary Diagnostic NRL for AMR
- National Food Chain Safety Office Directorate of Food Chain Safety Laboratory of NRL for *Salmonella*

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

General Description of Antimicrobial Resistance Monitoring*; Indicator *E. coli* from fattening pig - caecal samples

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

The number of samples per animal population was planned for the specific ESBL/AmpC monitoring (300).

Sampling technique: Caecum should be cut out and placed into a plastic bag, closed properly and cooled +2 ─ +8 °C, transported within 48h.

- stage of sampling: Samples were taken at slaughterhouses.
- type of sample: Caecal samples taken from fattening pigs
- sampler: competent authorities

Frequency of sampling: Every month, evenly distributed over the whole year.
Procedure of selection of isolates for susceptibility testing: In ESBL/AmpC/Carbapenemase monitoring program: *E. coli* isolates growing on Cefotaxim-McConkey plates were submitted to MIC-determination.
Randomized selection of 200 commensal *E. coli* isolations for general susceptibility tests.

Method used for collecting data: Along with the samples, a paper form submitted containing the data regarding sampling and origin of sample.

2. Stratification procedure per animal population and food category

The sampling was stratified at slaughterhouse level based on the annual production data of year 2017. Selection of slaughterhouses was made according to their production starting with higher throughput. So, bigger slaughterhouses produced together above the 60% of the total national production were involved into sampling. The number of samples had distributed per slaughterhouse proportionally to the annual throughput of the slaughterhouse.

3. Randomisation procedure per animal population and food category

Sampling days were definied for the availability of courier service by authority. After exclusion of epidemiological units already sampled in that year, samples were randomly collected at slaughterhouses on the day suitable for submission of samples in required time frame with even distribution by date. Samples were randomly collected from different suitable epidemiological units manually.

The random sampling was stratified at one level. The central authority (NFCSO) had distributed the sample numbers based on the annual slaughter capacity per slaughterhouses proportionally to the annual throughput of the slaughterhouse starting with the higher producer.

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

Identification of bacterial isolates is performed by chromogenic media (Coliform agar purchased from Bakteszt), indole and oxidase tests and when necessary additional API ID32E biochemical tests.

Selective isolation of ESBL/AmpC/Carbapenemase-producing *E. coli* is performed by ‘in house made’ selective MacConkey agar plates supplemented with 1 mg/L cefotaxime.

Selective isolation of Carbapenemase-producing *E. coli* is performed by chromID CarbaSmart (purchased from bioMerieux)

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

Broth microdilution using the Sensititre system.
Antimicrobials were ampicillin, azithromycin, cefotaxime, ceftazidime, chloramphenicol, ciprofloxacin, colistin, gentamicin, meropenem, nalidixic acid, sulphamethoxazole, tetracycline, tigecycline and trimethoprim (first panel) and cefepime, cefotaxime, cefotaxime+clavulanic acid, cefoxitin, ceftazidime, ceftazidime+clavulanic acid, ertapenem, imipenem, meropenem and temocillin for extended susceptibility testing (second panel).

Results were interpreted using the EFSA published epidemiological cut-off (ECOFF) values.

6. Results of investigation

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*; specific ESBL/AmpC producing Indicator *E. coli* – meat from pig

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

The number of samples per animal population was planned for the specific ESBL/AmpC monitoring (300).

Sampling technique:
Manual pick up of samples from the refrigerator in the shop.

- stage of sampling: Samples were taken at retail outlets.
- type of sample: Fresh meat from pigs
- sampler: competent authorities

Frequency of sampling: Every month
Procedure of selection of isolates for susceptibility testing: *E. coli* isolates growing on Cefotaxim-McConkey plate were submitted to MIC-determination.

Method used for collecting data: Along with the samples, a paper form submitted containing the data regarding sampling and origin of sample.

2. Stratification procedure per animal population and food category

The random sampling was stratified geographically by counties based on the human population according to NUTS3 level.

3. Randomisation procedure per animal population and food category

Samples were randomly collected at retail with even distribution of the date. Retail shops were chosen randomly excluding the shops visited earlier.

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

Identification of bacterial isolates is performed by chromogenic media (Coliform agar purchased from Bakteszt), indole and oxidase tests and when necessary additional API ID32E biochemical tests.

Selective isolation of ESBL/AmpC/Carbapenemase-producing *E. coli* is performed by 'in house made' selective MacConkey agar plates supplemented with 1 mg/L cefotaxime.

Selective isolation of Carbapenemase-producing *E. coli* is performed by chromID CarbaSmart (purchased from bioMerieux)

5. Laboratory methodology used for detection of antimicrobial resistance[(C)]

Broth microdilution using the Sensititre system.
Antimicrobials were ampicillin, azithromycin, cefotaxime, ceftazidime, chloramphenicol, ciprofloxacin, colistin, gentamicin, meropenem, nalidixic acid, sulphamethoxazole, tetracycline, tigecycline and trimethoprim (first panel) and cefepime, cefotaxime, cefotaxime+clavulanic acid, cefoxitin, ceftazidime, ceftazidime+clavulanic acid, ertapenem, imipenem, meropenem and temocillin for extended susceptibility testing (second panel).

Results were interpreted using the EFSA published epidemiological cut-off (ECOFF) values.

6. Results of investigation

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*; specific ESBL/AmpC producing Indicator *E. coli* – meat from bovine animal

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

The number of samples per animal population was planned for the specific ESBL/AmpC monitoring (300).

Sampling technique:
Manual pick up of samples from the refrigerator in the shop.

- stage of sampling: Samples were taken at retail outlets.
- type of sample: Fresh meat from bovine animals
- sampler: competent authorities

Frequency of sampling: Every month
Procedure of selection of isolates for susceptibility testing: *E. coli* isolates growing on Cefotaxim-McConkey plate were submitted to MIC-determination

Method used for collecting data: Along with the samples, a paper form submitted containing the data regarding sampling and origin of sample.

2. Stratification procedure per animal population and food category

The random sampling was stratified geographically by counties based on the human population according to NUTS3 level.

3. Randomisation procedure per animal population and food category

Samples were randomly collected at retail with even distribution of the date. Retail shops were chosen randomly excluding the shops visited earlier.

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

Identification of bacterial isolates is performed by chromogenic media (Coliform agar purchased from Bakteszt), indole and oxidase tests and when necessary additional API ID32E biochemical tests.

Selective isolation of ESBL/AmpC/Carbapenemase-producing *E. coli* is performed by 'in house made' selective MacConkey agar plates supplemented with 1 mg/L cefotaxime.

Selective isolation of Carbapenemase-producing *E. coli* is performed by chromID CarbaSmart (purchased from bioMerieux)

5. Laboratory methodology used for detection of antimicrobial resistance[(C)]

Broth microdilution using the Sensititre system.
Antimicrobials were ampicillin, azithromycin, cefotaxime, ceftazidime, chloramphenicol, ciprofloxacin, colistin, gentamicin, meropenem, nalidixic acid, sulphamethoxazole, tetracycline, tigecycline and trimethoprim (first panel) and cefepime, cefotaxime, cefotaxime+clavulanic acid, cefoxitin, ceftazidime, ceftazidime+clavulanic acid, ertapenem, imipenem, meropenem and temocillin for extended susceptibility testing (second panel).

Results were interpreted using the EFSA published epidemiological cut-off (ECOFF) values.

6. Results of investigation

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* - carcase of fattening pig

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

Sampling technique:

- stage- and frequency of sampling, type of sample: according to regulations
- sampler: competent authorities

Procedure of selection of isolates for susceptibility testing: Randomized

Method used for collecting data: electronic datasheets

2. Stratification procedure per animal population and food category

All of the available *Salmonella* isolates were involved into antimicrobial susceptibility testing.

3. Randomisation procedure per animal population and food category

All of the available *Salmonella* isolates were involved into antimicrobial susceptibility testing.

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

Collected and serotyped at the NRL for *Salmonella* under the Directorate of Food Chain Safety Laboratory. These isolates are confirmed with culturing on selective Rambach agar plates (purchased from VWR) and with agglutination tests by the NRL-AR.

5. Laboratory methodology used for detection of antimicrobial resistance[(C)]

Antimicrobials included in monitoring for *Salmonella sp*. were ampicillin, azithromycin, cefotaxime, ceftazidime, chloramphenicol, ciprofloxacin, colistin, gentamicin, meropenem, nalidixic acid, sulphamethoxazole, tetracycline, tigecycline and trimethoprim (first panel).

6. Results of investigation

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