Antimicrobial Resistance Surveillance in Food Animals

Pigs

	2019	2020
Number of samples[1] collected	68	152
Samples positive for suspected extended spectrum beta-lactamase (ESBL)-producing[2] Enterobacteriaceae[3]	1 (1.5%)	6 (3.9%)
Samples positive for carbapenem-resistant[4] Enterobacteriaceae[3]	0 (0%)	0 (0%)
Samples positive for vancomycin-resistant Enterococcus (VRE)	0 (0%)	0 (0%)

[1]Samples collected were faecal samples and cultured on non-selective media

[2]Suspected ESBL is determined by resistance to ceftiofur (3rd generation cephalosporin)

[3]Enterobacteriaceae includes *Escherichia coli* and *Salmonella enterica*

[4]Carbapenem-resistance is determined by resistance to meropenem

Breakdown of antimicrobial resistance

Type of resistant organism isolated		2019	2020
Suspected ESBL-producing Enterobacteriaceae	Escherichia coli	1	4
	Salmonella enterica	0	2
	Total	1	6
Carbapenem-resistant Enterobacteriaceae	Escherichia coli	0	0
	Salmonella enterica	0	0
	Total	0	0
Vancomycin-resistant Enterococcus (VRE)		0	0

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Chickens

	2019	2020
Number of samples[1] collected	52	61
Samples positive for suspected extended spectrum beta-lactamase (ESBL)-producing[2] Enterobacteriaceae[3]	12 (23.1%)	19 (31.1%)
Samples positive for carbapenem-resistant[4] Enterobacteriaceae[3]	0 (0%)	0 (0%)
Samples positive for vancomycin-resistant Enterococcus (VRE)	0 (0%)	0 (0%)

[1]Samples collected were cloacal swabs and environmental samples, and cultured on non-selective media

[2]Suspected ESBL is determined by resistance to ceftiofur (3rd generation cephalosporin)

[3]Enterobacteriaceae includes *Escherichia coli* and *Salmonella enterica*

[4]Carbapenem-resistance is determined by resistance to meropenem

Breakdown of antimicrobial resistance

Type of resistant organism isolated		2019	2020
Suspected ESBL-producing Enterobacteriaceae	Escherichia coli	11	9
	Salmonella enterica	1	10
	Total	12	19
Carbapenem-resistant Enterobacteriaceae	Escherichia coli	0	0
	Salmonella enterica	0	0
	Total	0	0
Vancomycin-resistant Enterococcus (VRE)		0	0

Antimicrobial Resistance Surveillance in Food Animals

Marine Fish

	2019	2020
Number of samples[1] collected	112	63
Samples positive for suspected extended spectrum beta-lactamase (ESBL)-producing[2] *Vibrio* spp.[3]	0 (0%)	0 (0%)
Samples positive for carbapenem-resistant *Vibrio* spp.[3]	0 (0%)	0 (0%)

[1]Samples collected were fish slime samples and cultured on non-selective media

[2]Suspected ESBL is determined by resistance to ceftazidime (3rd generation cephalosporin)

[3]Only *Vibrio* spp. is shown as there are no available breakpoints to determine susceptibility of *Photobacterium* spp.

Pond Fish

	2019	2020
Number of samples[1] collected	20	16
Samples positive for suspected extended spectrum beta-lactamase (ESBL)-producing[2] *Aeromonas* spp.	0 (0%)	0 (0%)
Samples positive for carbapenem-resistant *Aeromonas* spp.	0 (0%)	1 (6.3%)

[1]Samples collected were fish slime samples and cultured on non-selective media

[2]Suspected ESBL is determined by resistance to ceftazidime (3rd generation cephalosporin)

Breakdown of antimicrobial resistance

Type of resistant organism isolated		2019	2020
Suspected ESBL-producing bacteria	*Vibrio* spp.	0	0
	Aeromonas spp.	0	0
	Total	0	0
Carbapenem-resistant bacteria	*Vibrio* spp.	0	0
	Aeromonas spp.	0	1
	Total	0	1