

Table S1. Primers used for DNA amplification

Gene	Primer	Sequence (5'- 3')	[Primer]	Product (bp)	Annealing Temp.	References
CTX-M-1	MultiCTXMGP1_F MultiCTXMGP1-2_R	TTAGGAARTGTGCCGCTGYA CGATATCGTTGGTGGTRCCAT	0.4 μ M	688	60°C	Dallenne et al, 2010
CTX-M-2	MultiCTXMGP2_F MultiCTXMGP1-2_R	CGTTAACGGCACGATGAC CGATATCGTTGGTGGTRCCAT	0.2 μ M 0.4 μ M	404	60°C	Dallenne et al, 2010
CTX-M-9	MultiCTXMGP_F MultiCTXMGP_R	TCAAGCCTGCCGATCTGGT TGATTCTCGCCGCTGAAG	0.4 μ M	561	60°C	Dallenne et al, 2010
CTX-M-8/25	CTX-Mg8/25_F CTX-Mg8/25_R	AACRCRCAGACGCTCTAC TCGAGCCGGAASGTGTAT	0.4 μ M	326	60°C	Dallenne et al, 2010
TEM	Primer TEM_F Primer TEM_R	CATTTCCGTGTCGCCCTTATTC CGTTCATCCATAGTTGCCTGAC	0.4 μ M	800	60°C	Dallenne et al, 2010
SHV	Primer SHV_F Primer SHV_R	AGCCGCTTGAGCAAATTAAAC ATCCCGCAGATAAATCACCAC	0.4 μ M	713	60°C	Dallenne et al, 2010
OXA	Primer OXA_F Primer OXA_R	GGCACCAGATTCAACTTTCAAG GACCCCAAGTTTCCTGTAAGTG	0.4 μ M	564	60°C	Dallenne et al, 2010
ACC	MultiCaseACC_F MultiCaseACC_R	CACCTCCAGCGACTTGTTAC GTTAGCCAGCATCACGATCC	0.2 μ M	346	60°C	Dallenne et al, 2010
FOX	MultiCaseFOX_F MultiCaseFOX_R	CTACAGTGCGGGTGGTTT CTATTTGCGGCCAGGTGA	0.5 μ M	162	60°C	Dallenne et al, 2010
MOX; CMY-1, -8, -11; -19	MultiCaseMOX_F MultiCaseMOX_R	GCAACAACGACAATCCATCCT GGGATAGGCGTAACTCTCCCAA	0.2 μ M	895	60°C	Dallenne et al, 2010
DHA	MultiCaseDHA_F MultiCaseDHA_R	TGATGGCACAGCAGGATATTC GCTTTGACTCTTTCGGTATTCG	0.5 μ M	997	60°C	Dallenne et al, 2010
LAT-1; -3, BIL-1, CMY-2 to -7, -12 to - 18, -21 to -23	MultiCaseCIT_F MultiCaseCIT_R	CGAAGAGGCAATGACCAGAC ACGGACAGGGTTAGGATAGY	0.2 μ M	538	60°C	Dallenne et al, 2010
ACT-1; MIR-1	MultiCaseEBC_F MultiCaseEBC_R	CGGTAAAGCCGATGTTGCG AGCCTAACCCCTGATACA	0.2 μ M	683	60°C	Dallenne et al, 2010

MCR-1	MCR1_F MCR1_R	AGTCCGTTTGTCTTGTGGC AGATCCTTGGTCTCGGCTTG	0.5 µM	320	58°C	Rebelo et al, 2018
MCR-2	MCR2_F MCR2_R	CAAGTGTGTTGGTCGCAGTT TCTAGCCCGACAAGCATACC	0.5 µM	715	58°C	Rebelo et al, 2019
MCR-3	MCR3_F MCR3_R	AAATAAAAATTGTTCCGCTTATG AATGGAGATCCCCGTTTTT	0.5 µM	929	58°C	Rebelo et al, 2020
MCR-4	MCR4_F MCR4_R	TCACTTTCATCACTGCGTTG TTGGTCCATGACTACCAATG	0.5 µM	1116	58°C	Rebelo et al, 2021
MCR-5	MCR5_F MCR5_R	ATGCGGTTGTCTGCATTTATC TCATTGTGGTTGTCCTTTTCTG	0.5 µM	1644	58°C	Lu X et al, 2017
Int1	IntI1_F IntI1_R	GGTCAAGGATCTGGATTTCG ACATGCGTGTAATCATCGTC	0.4 µM	436	60°C	Kargar et al, 2014
Int2	IntI2_F IntI2_R	CACGGATATGCGACAAAAGG TGTAGCAAACGAGTGACGAAATG	0.4 µM	788	60°C	Kargar et al, 2014
Int3	IntI3_F IntI3_R	AGTGGGTGGCGAATGAGTG AGTGGGTGGCGAATGAGTG	0.4 µM	600	60°C	Kargar et al, 2014

Table S2. Primers for Sanger sequencing.

Gene	Primer	Sequence	[Primer]	Product (bp)	Annealing Temp.	Reference
TEM	FIN DEB	ATTCTTGAAGACGAAAGGGC ATGAGTAAACTTGGTCTGAC	0.4 μ M	1091	54°C	Caniça et al, 1997
SHV	SHVF149P SHVR1059	CGCTTCITTA CTG CCTT TA TTAGCGTTGCCAGTGCTC	0.5 μ M	911	56°C	Rasheed et al, 1997
CMY	CMYG2F CMYG2R	TTACGGA ACTGATTT CATG TCGTCAGTTATTGCAGC	0.5 μ M	1143	56°C	Manageiro, 2011
AmpC	Int-B2 Int-HN	TTCCTGATGATCGTTCTGCC AAAAGCGGAGAAAAGGTCCG	0.5 μ M	1315	57°C	Mammeri et al, 2006
CTX-M-1	CTXM15F CTXM1R	AGAATAAGGAATCCCATGGTT CCGTTTCCGCTATTACAA	0.5 μ M	903	53°C	Mendonça et al, 2007
CTX-M-9	CTXM9F CTXMG9R2	ATGGTGACAAAGAGAGTGCAAC AGTTACAGCCCTTCGGCGAT	0.5 μ M	878	55°C	Cottel et al, 2012
CTX-M-8/25	CTXM8/25F CTXM8/25R	GATRYTAATGACRACRGCTT TGGGTGAAGTAAGTSACCAG	0.5 μ M	777	57°C	This study

^a **Y**=T or C; **R**=A or G; **S**=G or C; **D**=A or G or T

F, forward; **R**, reverse

Table S3. Prevalence of multidrug resistance patterns observed in *E. coli* isolates from broilers raised under intensive (n=77) and extensive production systems (n=42).

Multidrug resistance patterns	Extensive system		Intensive system		Total	
	N	%	N	%	N	%
AMP-CIP-NAL-TET	7	16.6	2	2.6	9	7.6
AMP-CIP-SMX-TMP	1	2.4	0	0	1	0.8
AMP-CIP-NAL-SMX	1	2.4	1	1.3	2	1.7
AMP-SMX-TET-TMP	2	4.8	2	2.6	4	3.4
AMP-CIP-GEN-NAL	1	2.4	0	0	1	0.8
AMP-CHL-CIP-NAL	0	0	1	1.3	1	0.8
CIP-GEN-NAL-SMX	1	2.4	0	0	1	0.8
CIP-NAL-SMX-TET	2	4.8	1	1.3	3	2.5
GEN-SMX-TET-TMP	0	0	1	1.3	1	0.8
AMP-CIP-NAL-SMX-TET	2	4.8	1	1.3	3	2.5
AMP-CIP-NAL-SMX-TMP	1	2.4	1	1.3	2	1.7
AMP-CHL-CIP-NAL-SMX	0	0	2	2.6	2	1.7
AMP-CIP-NAL TET-TMP	1	2.4	3	3.9	4	3.4
AMP-CIP-SMX-TET-TMP	0	0	1	1.3	1	0.8
AMP-CHL-CIP-NAL-TET	0	0	1	1.3	1	0.8
AMP-AZI-CIP-NAL-TMP	0	0	1	1.3	1	0.8
AMP-CIP-NAL-SMX-TET-TMP	8	19	7	9.1	15	12.6
AMP-CHL-CIP-NAL-SMX-TMP	1	2.4	0	0	1	0.8
AMP-CHL-CIP-GEN-NAL-SMX	0	0	1	1.3	1	0.8
AMP-CHL-CIP-NAL-SMX-TET	0	0	1	1.3	1	0.8
AMP-AZI-CHL-NAL-SMX-TMP	0	0	1	1.3	1	0.8
AMP-AZI-CIP-NAL-SMX-TET-TMP	0	0	1	1.3	1	0.8
AMP-CHL-CIP-NAL-SMX-TET-TMP	2	4.8	9	11.7	11	9.2
AMP-AZI-CIP-GEN-NAL-SMX-TET-TMP	1	2.4	4	5.2	5	4.2
AMP-FOT-TAZ-CIP-SMX-FEP	0	0	1	1.3	1	0.8
AMP-FOT-TAZ-CHL-GEN-SMX-FEP	0	0	1	1.3	1	0.8
AMP-FOT-TAZ-CHL-CIP-NAL-SMX-FEP	0	0	1	1.3	1	0.8
AMP-FOT-TAZ-CHL-CIP-SMX-TET-FEP	0	0	2	2.6	2	1.7
AMP-FOT-TAZ-CIP-SMX-TMP-FEP-FOX	0	0	1	1.3	1	0.8
AMP-FOT-TAZ-CHL-SMX-TET-FEP-FOX	0	0	1	1.3	1	0.8
AMP-FOT-TAZ-CIP-NAL-SMX-TMP-FEP	1	2.4	1	1.3	2	1.7

AMP-FOT-TAZ-CIP-NAL-SMX-TET-FEP	2	4.8	2	2.6	4	3.4
AMP-FOT-TAZ-CIP-NAL-SMX-TET-FEP-FOX	0	0	1	1.3	1	0.8
AMP-FOT-TAZ-CIP-NAL-SMX-TMP-FEP-FOX	0	0	1	1.3	1	0.8
AMP-FOT-TAZ-CIP-NAL-SMX-TET-TMP-FEP	3	7.1	1	1.3	4	3.4
AMP-FOT-TAZ-CHL-CIP-NAL-SMX-TET-FEP	1	2.4	10	13	11	9.2
AMP-AZI-FOT-TAZ-CHL-CIP-SMX-TET-TMP-FEP	0	0	1	1.3	1	0.8
AMP-FOT-TAZ-CHL-CIP-NAL-SMX-TET-FEP-FOX	0	0	1	1.3	1	0.8
AMP-FOT-TAZ-CIP-NAL-SMX-TMP-FEP-FOX-ETP	0	0	1	1.3	1	0.8
AMP-FOT-TAZ-CHL-CIP-NAL-SMX-TET-TMP-FEP	0	0	2	2.6	2	1.7
AMP-FOT-TAZ-CHL-CIP-COL-NAL-SMX-TET-FEP	0	0	1	1.3	1	0.8
AMP-AZI-FOT-TAZ-CIP-NAL-SMX-TET-TMP-FEP	1	2.4	0	0	1	0.8
AMP-AZI-FOT-TAZ-CHL-CIP-NAL-SMX-TET-TMP-FEP	2	4.8	0	0	2	1.7
AMP-AZI-FOT-TAZ-CHL-CIP-GEN-NAL-SMX-TET-TMP-FEP	1	2.4	5	6.5	6	5
AMP-FOT-TAZ-CHL-CIP-GEN-NAL-SMX-TET-TMP-FEP-FOX	0	0	1	1.3	1	0.8

AMP, Ampicilin; AZI, Azithromycin; FOT, Cefotaxime; TAZ, Ceftazidime; CHL, Chloramphenicol; CIP, Ciprofloxacin; GEN, Gentamicin; NAL, Nalidixic Acid; SMX, Sulphamethoxazole; TET, Tetracycline; TMP, Trimethoprim; FEP, Cefepime; FOX, Cefoxitin