

Supplementary materials

Table 1. Distribution of gram-negative organisms isolated from cattle

Isolated microorganisms	Number of isolates	%
<i>Escherichia coli</i>	48	21%
<i>Salmonella</i> spp	35	15%
<i>Pseudomonas aeruginosa</i>	30	13%
<i>Klebsiella</i> spp	40	18%
<i>Shigella</i> spp	28	12%
<i>Proteus</i> spp	25	11%
Positive sample	206	93%
Total sample number	220	100

Table -2 Frequencies of antibiotics resistance of *Escherichia coli* and *Klebsiella* spp isolates

Class Antibiotics	<i>Escherichia coli</i> (n=48)			<i>Klebsiella</i> spp (40)		
	R%	IM%	S%	R%	IM%	S%
Ampicillin	95	16	--	85	12	--
Amoxicillin	54	33	--	62	50	--
Amoxicillin+ clavulant	58	25	--	57	37	--
Augmentin	91	56	45	---	70	37
Ceftazidime	--	72	41	--	71	62
Cefuroxime	85	20	10	80	28	14
Ciprofloxacin	--	--	18	--	17	25
Cefixime	--	31	10	--	42	14
Cefpodoxime	--	27	20	--	42	28
Ofloxacin	--	6	20	25	8	14
Imipenem	--	12	----	--	17	--
Tetracycline	72	37	--	95	51	--
Gentamicin	66	--	45	62	34	85
Streptomycin	39	25	--	50	34	--
Erythromycin	45	18	62	50	25	71
Chloramphenicol		22	41	--	31	100
Cloxacillin	--	--	52	--	37	--
Nitrofurantoin	--	10	62	--	14	68

S- Sensitivity, IM- Intermediate, R- Resistant, n- number of bacteria strains

Table-3 Frequencies of antibiotics resistance of *Pseudomonas* spp and *Salmonella* spp isolates

Class Antibiotics	<i>Pseudomonas aeruginosa</i> (n=30)			<i>Salmonella</i> spp (35)		
	R%	IM%	S%	R%	IM%	S%
Ampicillin	90	11	--	85	14	--
Amoxicillin	60	60	--	46	64	--
Amoxicillin+ clavulant	80	40	--	--	42	--
Augmentin	30	26	43	32	--	46
Ceftazidime	--	13	66	--	14	78
Cefuroxime	--	33	16	--	35	17
Ciprofloxacin	--	20	30	--	--	32
Cefixime	80	50	16	90	53	17
Cefpodoxime	--	50	33	--	53	53
Ofloxacin	--	10	63	--	10	67
Imipenem	--	20	--	--	21	--
Tetracycline	50	60	--	35	64	--
Gentamicin	--	40	66	--	42	53
Streptomycin	--	40	--	--	42	--
Erythromycin	80	--	83	26	--	71
Chloramphenicol	--	36	50	--	39	78
Cloxacillin	--	--	43	--	--	46
Nitrofurantoin	--	16	80	--	17	53

S- Sensitivity, IM- Intermediate, R- Resistant, n- number of bacteria strains

Table 4 Frequencies of antibiotics resistance of *Shigella* spp and *Protus* spp isolates

Class Antibiotics	<i>Shigella</i> spp (n=28)			<i>protus</i> spp (n=25)		
	R%	IM%	S%	R%	IM%	S%
Ampicillin	42	16	--	30	--	--
Amoxicillin	60	72	--	30	53	--
Amoxicillin+ clavulant	40	48	--	50	80	--
Augmentin	36	32	52	60	53	86
Ceftazidime	60	16	80	50	26	13
Cefuroxime	--	40	20	--	66	33
Ciprofloxacin	--	24	36	--	40	60
Cefixime	40	60	20	30	100	33
Cefpodoxime	--	60	40	--	100	66
Ofloxacin	--	12	76	--	20	66
Imipenem	--	24	--	--	40	--
Tetracycline	36	72	--	25	53	--
Gentamicin	--	48	80	--	80	20
Streptomycin	--	48	--	--	80	--
Erythromycin	20	--	100	38	--	33
Chloramphenicol	---	44	60	---	73	33
Cloxacillin	---	---	52	--	--	86
Nitrofurantoin	---	20	80	---	33	26

S- Sensitivity, IM- Intermediate, R- Resistant, n- number of bacteria strains

Table 5. Multiple drug resistance indexes (MARI) of the isolates

Isolates	List of antibiotics	Number of antibiotics	MARI
<i>E.coli</i>	AMP, AML, AMC, AUG, CPX, TE, GEN, STR, ERY	9	0.9
<i>Klebsiella spp</i>	AMP, AML, AMC, CPX, OFX, TE, GEN, STR, ERY	9	0.9
<i>Pseudomonas spp</i>	AMP, AML, AMC, AUG, AXM, TE, ERY	7	0.7
<i>Salmonella spp</i>	AMP, AMI, AUG, CXM, TE, ERY	6	.6
<i>Shigella spp</i>	AMP, AML, AMC, AUG, CXM, TE, ERY	7	0.7
<i>Proteus spp</i>	AMP, AML, AMC, AUG, CXM, TE, ERY	7	0.7

AMC= Ampicillin, AMX= Amoxicillin, AMC=Amoxicillin + Clavulanate, AUG = Augmentin, CTX = Cefotaxime, CAZ= Ceftazidime, CXM= Cefuroxime, CPX= Ciprofloxacin, CXM= Cefxime, CP= Cefpodoxime, OFX=Ofloxacin, IPM= Imipenem, TE= Tetracycline, GEN= Gentamicin, STR= Streptomycin, ERY= Erythromycin, CHL= Chloramphenicol, NIT= Nitrofurantoin, STX= Cotrimoxazole