

Table 9a. Distribution of MICs and Occurrence of Resistance by Animal Source among all *S. Typhimurium* Isolates from Food Animals, 2005

Antimicrobial	Isolate Source (# of Isolates)	%I ¹	%R ²	95% CI ³	Distribution (%) of MICs (µg/ml) ⁴																	
					0.015	0.03	0.06	0.125	0.25	0.50	1	2	4	8	16	32	64	128	256	512	1024	
Aminoglycosides																						
Amikacin	Chickens (183)	0.0	0.0	0.0-2.6						20.8	64.5	13.7	1.1									
	Turkeys (7)	0.0	0.0	0.0-43.9							100.0											
	Cattle (34)	0.0	0.0	0.0-12.6						8.8	70.6	20.6										
	Swine (42)	0.0	0.0	0.0-10.4						4.8	76.2	14.3	4.8									
Gentamicin	Chickens (183)	1.1	4.4	2.1-8.8					66.1	26.8	1.1		0.5	1.1	3.3	1.1						
	Turkeys (7)	0.0	14.3	0.8-58.0					42.9	42.9					14.3							
	Cattle (34)	0.0	0.0	0.0-12.6					64.7	32.4	2.9											
	Swine (42)	0.0	7.1	1.8-20.5					69.0	23.8					7.1							
Kanamycin	Chickens (183)	0.0	7.7	4.4-12.8											92.3						7.7	
	Turkeys (7)	0.0	0.0	0.0-43.9											100.0							
	Cattle (34)	0.0	38.2	22.7-56.3											61.8						38.2	
	Swine (42)	0.0	7.1	1.8-20.5											92.9						7.1	
Streptomycin	Chickens (183)	0.0	13.7	9.2-19.7													86.3	9.8	3.8			
	Turkeys (7)	0.0	57.1	20.2-88.2													42.9	28.6	28.6			
	Cattle (34)	0.0	55.9	38.1-72.4													44.1	11.8	44.1			
	Swine (42)	0.0	69.0	52.7-81.8													31.0	45.2	23.8			
Aminopenicillins																						
Ampicillin	Chickens (183)	0.0	26.8	20.7-33.9						59.6	13.1	0.5									26.8	
	Turkeys (7)	0.0	57.1	20.2-88.2						42.9												57.1
	Cattle (34)	0.0	73.5	55.3-86.5						17.6	8.8											73.5
	Swine (42)	0.0	66.7	50.4-80.0						14.3	16.7	2.4										66.7
β-Lactam/β-Lactamase Inhibitor Combinations																						
Amoxicillin-Clavulanic Acid	Chickens (183)	6.0	19.7	14.3-26.4						71.0	2.2		1.1	6.0							19.7	
	Turkeys (7)	42.9	0.0	0.0-43.9						42.9			14.3	42.9								
	Cattle (34)	11.8	35.3	20.3-53.5						26.5			26.5	11.8								35.3
	Swine (42)	47.6	9.5	3.1-23.5						21.4	11.9	2.4	7.1	47.6	2.4							7.1
Cephalosporins																						
Ceftiofur	Chickens (183)	0.0	19.7	14.3-26.4					1.1	71.0	8.2			1.1	18.6							
	Turkeys (7)	0.0	0.0	0.0-43.9						71.4	28.6											
	Cattle (34)	0.0	35.3	20.3-53.5						52.9	11.8				35.3							
	Swine (42)	0.0	4.8	0.8-17.5						64.3	31.0				4.8							
Ceftriaxone	Chickens (183)	18.6	0.0	0.0-2.6					79.8	0.5			1.1	16.4	2.2							
	Turkeys (7)	0.0	0.0	0.0-43.9					100.0													
	Cattle (34)	32.4	0.0	0.0-12.6					64.7				2.9	20.6	11.8							
	Swine (42)	2.4	0.0	0.0-10.4					95.2				2.4	2.4								

¹ Percent of isolates with intermediate susceptibility

² Percent of isolates that were resistant

³ 95% confidence intervals for percent resistant (%R) were calculated using the Clopper-Pearson exact method

⁴ The unshaded areas indicate the range of dilutions tested for each antimicrobial. Single vertical bars indicate the breakpoints for susceptibility, while double vertical bars indicate the breakpoints for resistance. Numbers in the greater than the highest tested concentrations. Numbers listed for the lowest tested concentrations represent the percentages of isolates with MICs equal to or less than the lowest tested concentration. CLSI breakpoints were streptomycin.

Table 9b. Distribution of MICs and Occurrence of Resistance by Animal Source among all *S. Typhimurium* Isolates from Food Animals, 2005

Antimicrobial	Isolate Source (# of Isolates)	%I ¹	%R ²	[95% CI] ³	Distribution (%) of MICs (µg/ml) ⁴																							
					0.015	0.03	0.06	0.125	0.25	0.50	1	2	4	8	16	32	64	128	256	512	1024							
Cephamycins																												
Cefoxitin	Chickens (183)	0.0	19.7	14.3-26.4												1.6	63.9	14.2	0.5			10.9	8.7					
	Turkeys (7)	0.0	0.0	0.0-43.9														100.0										
	Cattle (34)	0.0	35.3	20.3-53.5												50.0	14.7			14.7	20.6							
	Swine (42)	2.4	4.8	0.8-17.5												69.0	19.0	4.8	2.4	2.4	2.4							
Folate Pathway Inhibitors																												
Sulfonamides	Chickens (183)	0.0	37.2	30.3-44.7															26.8	32.2	3.8				37.2			
	Turkeys (7)	0.0	57.1	20.2-88.2															14.3	14.3	14.3				57.1			
	Cattle (34)	0.0	73.5	55.3-86.5															11.8	14.7				73.5				
	Swine (42)	0.0	69.0	52.7-81.8															16.7	11.9	2.4				69.0			
Trimethoprim-Sulfamethoxazole	Chickens (183)	0.0	0.0	0.0-2.6	61.2	35.5	2.7	0.5																				
	Turkeys (7)	0.0	0.0	0.0-43.9	71.4	28.6																						
	Cattle (34)	0.0	5.9	1.0-21.1	32.4	47.1	11.8	2.9														5.9						
	Swine (42)	0.0	9.5	3.1-23.5	31.0	50.0	7.1	2.4														9.5						
Phenicol																												
Chloramphenicol	Chickens (183)	0.0	8.2	4.8-13.4												1.1	33.3	57.4						8.2				
	Turkeys (7)	0.0	57.1	20.2-88.2														14.3	28.6				57.1					
	Cattle (34)	0.0	47.1	30.2-64.6														26.5	26.5				47.1					
	Swine (42)	4.8	54.8	38.9-69.9												9.5	31.0	4.8				54.8						
Quinolones																												
Ciprofloxacin	Chickens (183)	0.0	0.0	0.0-2.6	94.5	4.4	0.5	0.5																				
	Turkeys (7)	0.0	0.0	0.0-43.9	100.0																							
	Cattle (34)	0.0	0.0	0.0-12.6	94.1	5.9																						
	Swine (42)	0.0	0.0	0.0-10.4	81.0	19.0																						
Nalidixic Acid	Chickens (183)	0.0	1.1	0.2-4.3												10.4	88.0	0.5			1.1							
	Turkeys (7)	0.0	0.0	0.0-43.9														100.0										
	Cattle (34)	0.0	0.0	0.0-12.6												14.7	82.4	2.9										
	Swine (42)	0.0	0.0	0.0-10.4												4.8	81.0	14.3										
Tetracyclines																												
Tetracycline	Chickens (183)	0.0	34.4	27.6-41.8												65.6			1.1	6.0	27.3							
	Turkeys (7)	0.0	57.1	20.2-88.2														42.9				42.9	14.3					
	Cattle (34)	0.0	67.6	49.3-82.0														32.4				17.6	50.0					
	Swine (42)	0.0	83.3	68.0-92.5														16.7				47.6	35.7					

¹ Percent of isolates with intermediate susceptibility

² Percent of isolates that were resistant

³ 95% confidence intervals for percent resistant (%R) were calculated using the Clopper-Pearson exact method

⁴ The unshaded areas indicate the range of dilutions tested for each antimicrobial. Single vertical bars indicate the breakpoints for susceptibility, while double vertical bars indicate the breakpoints for resistance. Numbers in the greater than the highest tested concentrations. Numbers listed for the lowest tested concentrations represent the percentages of isolates with MICs equal to or less than the lowest tested concentration. CLSI breakpoints were streptomycin.