

Table 3a. Distribution of MICs and Occurrence of Resistance by Animal Source among all *Salmonella* 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
Aminoglycosides																				
Amikacin	Chickens (1989)	0.0	0.0	0.0-0.2							20.8	63.2	14.2	1.7						
	Turkeys (227)	0.0	0.0	0.0-2.1							13.2	68.7	15.9	1.8	0.4					
	Cattle (329)	0.0	0.0	0.0-1.4							12.8	61.1	23.1	2.1	0.9					
	Swine (301)	0.0	0.0	0.0-1.6							14.0	68.1	16.3	1.7						
Gentamicin	Chickens (1989)	0.4	4.3	3.5-5.3							71.3	23.1	0.8	0.1	0.2	0.4	2.7	1.6		
	Turkeys (227)	4.0	22.9	17.7-29.0							48.5	22.9	0.9	0.4	0.4	4.0	16.7	6.2		
	Cattle (329)	0.3	2.4	1.1-4.9							60.8	34.3	1.2	0.6	0.3	0.3	0.6	1.8		
	Swine (301)	0.0	2.7	1.3-5.4							67.8	27.2	2.0	0.3			2.3	0.3		
Kanamycin	Chickens (1989)	0.0	2.5	1.9-3.3											97.2	0.3		0.5	2.0	
	Turkeys (227)	0.0	19.8	14.9-25.7											80.2			2.2	17.6	
	Cattle (329)	0.0	13.1	9.7-17.3											86.0	0.9		0.6	12.5	
	Swine (301)	0.0	5.0	2.9-8.3											95.0				5.0	
Streptomycin	Chickens (1989)	0.0	23.3	21.5-25.2												76.7		17.7	5.6	
	Turkeys (227)	0.0	40.1	33.7-46.8												59.9		25.6	14.5	
	Cattle (329)	0.0	24.3	19.8-29.4												75.7		2.1	22.2	
	Swine (301)	0.0	36.5	31.1-42.2												63.5		11.6	24.9	
Aminopenicillins																				
Ampicillin	Chickens (1989)	0.2	14.0	12.5-15.6							69.0	16.2	0.4	0.2	0.2		0.1	13.9		
	Turkeys (227)	0.0	22.9	17.7-29.0							62.6	13.2	0.9	0.4				22.9		
	Cattle (329)	0.0	26.7	22.1-31.9							60.8	11.6	0.9					26.7		
	Swine (301)	0.0	13.6	10.0-18.1							69.4	16.6	0.3					13.6		
β-Lactam/β-Lactamase Inhibitor Combinations																				
Amoxicillin-Clavulanic Acid	Chickens (1989)	1.2	12.1	10.7-13.6							83.2	2.5	0.3	0.8	1.2		0.3	11.8		
	Turkeys (227)	12.3	3.5	1.6-7.1							70.5	6.6	7.0	12.3				3.5		
	Cattle (329)	1.8	21.0	16.8-25.9							69.9	3.3	4.0	1.8		1.8		19.1		
	Swine (301)	7.0	4.3	2.4-7.4							83.1	3.3	0.7	1.7	7.0		0.7	3.7		
Cephalosporins																				
Ceftiofur	Chickens (1989)	0.2	12.2	10.8-13.7							0.2	1.9	74.5	10.9	0.2	0.2		0.5	11.7	
	Turkeys (227)	0.0	3.5	1.6-7.1									63.4	32.6	0.4				3.5	
	Cattle (329)	0.0	21.6	17.4-26.5							0.3	0.3	53.8	23.1	0.9			1.5	20.1	
	Swine (301)	0.0	3.7	2.0-6.7							0.3		62.8	33.2					3.7	
Ceftriaxone	Chickens (1989)	10.4	0.3	0.1-0.7							87.5	0.3	0.1	0.1	1.4	8.9	1.5		0.3	
	Turkeys (227)	2.6	0.9	0.2-3.5							96.5					0.4	2.2		0.9	
	Cattle (329)	14.6	2.1	0.9-4.5							79.0		0.3	0.3	3.6	8.2	6.4		1.2	0.9
	Swine (301)	3.0	0.0	0.0-1.6							96.3					1.7	1.3			

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 shaded area indicate the percentages of isolates with MICs 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 used when available. There are no CLSI breakpoints for streptomycin.

Table 3b. Distribution of MICs and Occurrence of Resistance by Animal Source among all *Salmonella* 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 (1989)	0.4	12.0	10.6-13.5						5.5	66.7	14.2	1.3	0.4	9.6	2.4							
	Turkeys (227)	0.0	3.5	1.6-7.1						1.3	56.8	34.4	4.0		0.9	2.6							
	Cattle (329)	2.1	19.8	15.7-24.6						3.0	32.8	39.2	3.0	2.1	8.5	11.2							
	Swine (301)	0.7	3.7	2.0-6.7						0.3	2.3	33.6	56.1	3.3	0.7	2.0	1.7						
Folate Pathway Inhibitors																							
Sulfonamides	Chickens (1989)	0.0	8.5	7.3-9.8											44.0	38.9	7.6	0.9	0.2	8.5			
	Turkeys (227)	0.0	37.0	30.8-43.7											19.4	32.6	9.7	1.3		37.0			
	Cattle (329)	0.0	27.4	22.7-32.6											17.3	33.1	17.3	4.9		27.4			
	Swine (301)	0.0	32.9	27.7-38.6											33.6	23.9	8.3	1.0	0.3	32.9			
Trimethoprim-Sulfamethoxazole	Chickens (1989)	0.0	0.2	0.1-0.6	77.8	21.3	0.5	0.2	0.1				0.2										
	Turkeys (227)	0.0	1.8	0.6-4.8	67.4	29.5	1.3				1.8												
	Cattle (329)	0.0	4.9	2.9-8.0	64.1	24.6	5.5	0.9				4.9											
	Swine (301)	0.0	2.3	1.0-4.9	62.1	30.2	5.0	0.3				2.3											
Phenicols																							
Chloramphenicol	Chickens (1989)	0.6	1.8	1.3-2.5						4.0	53.5	40.1	0.6	0.2	1.7								
	Turkeys (227)	2.6	4.8	2.5-8.7								37.9	54.6	2.6	4.8								
	Cattle (329)	2.4	21.9	17.6-26.8						0.9	23.1	51.7	2.4	0.3	21.6								
	Swine (301)	3.7	10.6	7.5-14.8						0.7	21.6	63.5	3.7	10.6									
Quinolones																							
Ciprofloxacin	Chickens (1989)	0.0	0.0	0.0-0.2	96.2	3.5	0.1	0.2	0.1														
	Turkeys (227)	0.0	0.0	0.0-2.1	91.2	6.6			1.8	0.4													
	Cattle (329)	0.0	0.0	0.0-1.4	92.1	6.4		0.3	0.9	0.3													
	Swine (301)	0.0	0.0	0.0-1.6	92.0	7.6			0.3														
Nalidixic Acid	Chickens (1989)	0.0	0.3	0.1-0.7						0.2	39.7	58.5	1.3	0.1	0.3								
	Turkeys (227)	0.0	2.2	0.8-5.3						0.4	17.2	77.5	2.6		2.2								
	Cattle (329)	0.0	1.5	0.5-3.7						0.3	14.9	82.4	0.6	0.3	1.5								
	Swine (301)	0.0	0.3	0-2.1						0.3	16.6	80.4	2.3		0.3								
Tetracyclines																							
Tetracycline	Chickens (1989)	0.4	28.3	26.3-30.3								71.3	0.4	0.2	1.2	26.9							
	Turkeys (227)	0.4	54.6	47.9-61.2								44.9	0.4	4.4	50.2								
	Cattle (329)	0.9	34.0	28.9-39.4								65.0	0.9	1.2	5.5	27.4							
	Swine (301)	1.0	54.8	49.0-60.5								44.2	1.0	11.3	43.5								

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 shaded area indicate the percentages of isolates with MICs 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 used when available. There are no CLSI breakpoints for streptomycin.