Table 8A. Distribution of MICs and Occurrence of Resistance for Top Serotypes Tested from Swine, 2009[1]

Antimicrobial	Serotype (# of Isolates)	%I[2]	%R[3]	95% CI[4]	Distribution (%) of MICs (µg/ml)[5] 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	Derby (24)	0.0	**0.0**	0.0-17.2						4.2	75.0	16.7	4.2								
	Typhimurium var. 5- (14)	0.0	**0.0**	0.0-26.8							92.9	7.1									
	Johannesburg (11)	0.0	**0.0**	0.0-32.1							90.9	9.1									
	Anatum (10)	0.0	**0.0**	0.0-34.5							100.0										
	Infantis (10)	0.0	**0.0**	0.0-34.5						20.0	80.0										
Gentamicin	Derby (24)	0.0	**0.0**	0.0-17.2					66.7	29.2	4.2										
	Typhimurium var. 5- (14)	0.0	**0.0**	0.0-26.8					57.1	42.9											
	Johannesburg (11)	0.0	**0.0**	0.0-32.1					54.5	45.5											
	Anatum (10)	0.0	**0.0**	0.0-34.5					90.0	10.0											
	Infantis (10)	0.0	**0.0**	0.0-34.5					90.0				10.0								
Kanamycin	Derby (24)	0.0	**0.0**	0.0-17.2										100.0							
	Typhimurium var. 5- (14)	0.0	**0.0**	0.0-26.8										100.0							
	Johannesburg (11)	0.0	**0.0**	0.0-32.1										100.0							
	Anatum (10)	0.0	**0.0**	0.0-34.5										100.0							
	Infantis (10)	0.0	**0.0**	0.0-34.5										100.0							
Streptomycin	Derby (24)	N/A	**58.3**	36.9-77.2												41.7	**4.2**	**54.2**			
	Typhimurium var. 5- (14)	N/A	**71.4**	42.0-90.4												28.6	**42.9**	**28.6**			
	Johannesburg (11)	N/A	**0.0**	0.0-32.1												100.0					
	Anatum (10)	N/A	**0.0**	0.0-34.5												100.0					
	Infantis (10)	N/A	**0.0**	0.0-34.5												100.0					
β-Lactam/β-Lactamase Inhibitor Combinations																					
Amoxicillin-Clavulanic Acid	Derby (24)	0.0	**4.2**	0.2-23.2							87.5	8.3					**4.2**				
	Typhimurium var. 5- (14)	57.1	**0.0**	0.0-26.8							28.6		7.1	7.1	57.1						
	Johannesburg (11)	0.0	**9.1**	0.5-42.9							90.9						**9.1**				
	Anatum (10)	0.0	**0.0**	0.0-34.5							100.0										
	Infantis (10)	0.0	**0.0**	0.0-34.5							90.0		10.0								

[1] Data is only presented for serotypes with at least 10 or more isolates

[2] Percent of isolates with intermediate susceptibility

[3] Percent of isolates that were resistant

[4] 95% confidence intervals for percent resistant (%R) were calculated using the Wilson interval with continuity correction method

[5] 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 8A (continued). Distribution of MICs and Occurrence of Resistance for Top Serotypes Tested from Swine, 2009[1]

Antimicrobial	Serotype (# of Isolates)	%I[2]	%R[3]	95% CI[4]	Distribution (%) of MICs (µg/ml)[5] 0.015	0.03	0.06	0.125	0.25	0.50	1	2	4	8	16	32	64	128	256	512	1024
Cephems																					
Cefoxitin	Derby (24)	0.0	**4.2**	0.2-23.2								16.7	70.8	8.3			**4.2**				
	Typhimurium var. 5- (14)	0.0	**0.0**	0.0-26.8							14.3	71.4	7.1	7.1							
	Johannesburg (11)	0.0	**9.1**	0.5-42.9								90.9				**9.1**					
	Anatum (10)	0.0	**0.0**	0.0-34.5								10.0	90.0								
	Infantis (10)	0.0	**0.0**	0.0-34.5								10.0	90.0								
Ceftiofur	Derby (24)	0.0	**4.2**	0.2-23.2						4.2	87.5	4.2			**4.2**						
	Typhimurium var. 5- (14)	0.0	**0.0**	0.0-26.8						14.3	85.7										
	Johannesburg (11)	0.0	**9.1**	0.5-42.9						81.8	9.1				**9.1**						
	Anatum (10)	0.0	**0.0**	0.0-34.5						10.0	90.0										
	Infantis (10)	0.0	**0.0**	0.0-34.5							100.0										
Ceftriaxone	Derby (24)	0.0	**4.2**	0.2-23.2					95.8							**4.2**					
	Typhimurium var. 5- (14)	0.0	**0.0**	0.0-26.8					100.0												
	Johannesburg (11)	0.0	**9.1**	0.5-42.9					90.9					**9.1**							
	Anatum (10)	0.0	**0.0**	0.0-34.5					100.0												
	Infantis (10)	0.0	**0.0**	0.0-34.5					100.0												
Folate Pathway Inhibitors																					
Sulfonamides	Derby (24)	N/A	**62.5**	40.8-80.5												29.2	8.3			**62.5**	
	Typhimurium var. 5- (14)	N/A	**85.7**	56.1-97.5												7.1	7.1			**85.7**	
	Johannesburg (11)	N/A	**0.0**	0.0-32.1											90.9	9.1					
	Anatum (10)	N/A	**0.0**	0.0-34.5											50.0	40.0	10.0				
	Infantis (10)	N/A	**10.0**	0.5-45.9											10.0	60.0	20.0			**10.0**	
Trimethoprim-Sulfamethoxazole	Derby (24)	N/A	**4.2**	0.2-23.2				45.8	50.0					**4.2**							
	Typhimurium var. 5- (14)	N/A	**7.1**	0.4-35.8				35.7	57.1					**7.1**							
	Johannesburg (11)	N/A	**0.0**	0.0-32.1				100.0													
	Anatum (10)	N/A	**0.0**	0.0-34.5				90.0	10.0												
	Infantis (10)	N/A	**0.0**	0.0-34.5				90.0	10.0												

[1] Data is only presented for serotypes with at least 10 or more isolates

[2] Percent of isolates with intermediate susceptibility

[3] Percent of isolates that were resistant

[4] 95% confidence intervals for percent resistant (%R) were calculated using the Wilson interval with continuity correction method

[5] 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 8A (continued). Distribution of MICs and Occurrence of Resistance for Top Serotypes Tested from Swine, 2009[1]

Antimicrobial	Serotype (# of Isolates)	%I[2]	%R[3]	95% CI[4]	Distribution (%) of MICs (µg/ml)[5]															
					0.015	0.03	0.06	0.125	0.25	0.50	1	2	4	8	16	32	64	128	256	512	1024
Penicillins																					
Ampicillin	Derby (24)	0.0	**4.2**	0.2-23.2							87.5	8.3					**4.2**				
	Typhimurium var. 5- (14)	0.0	**71.4**	42.0-90.4							21.4	7.1					**71.4**				
	Johannesburg (11)	0.0	**9.1**	0.5-42.9							90.9						**9.1**				
	Anatum (10)	0.0	**0.0**	0.0-34.5							90.0	10.0									
	Infantis (10)	0.0	**10.0**	0.5-45.9							80.0	10.0					**10.0**				
Phenicols																					
Chloramphenicol	Derby (24)	4.2	**4.2**	0.2-23.2									8.3	83.3	4.2		**4.2**				
	Typhimurium var. 5- (14)	0.0	**64.3**	35.6-86.0									14.3	21.4			**64.3**				
	Johannesburg (11)	0.0	**0.0**	0.0-32.1									27.3	72.7							
	Anatum (10)	0.0	**0.0**	0.0-34.5										100.0							
	Infantis (10)	0.0	**0.0**	0.0-34.5									20.0	80.0							
Quinolones																					
Ciprofloxacin	Derby (24)	0.0	**0.0**	0.0-17.2	91.7	8.3															
	Typhimurium var. 5- (14)	0.0	**0.0**	0.0-26.8	100.0																
	Johannesburg (11)	0.0	**0.0**	0.0-32.1	81.8	18.2															
	Anatum (10)	0.0	**0.0**	0.0-34.5	90.0	10.0															
	Infantis (10)	0.0	**0.0**	0.0-34.5	100.0																
Nalidixic Acid	Derby (24)	N/A	**0.0**	0.0-17.2								62.5	37.5								
	Typhimurium var. 5- (14)	N/A	**0.0**	0.0-26.8								35.7	64.3								
	Johannesburg (11)	N/A	**0.0**	0.0-32.1								36.4	63.6								
	Anatum (10)	N/A	**0.0**	0.0-34.5								10.0	90.0								
	Infantis (10)	N/A	**0.0**	0.0-34.5								70.0	30.0								
Tetracyclines																					
Tetracycline	Derby (24)	0.0	**83.3**	61.8-94.5									16.7				**83.3**				
	Typhimurium var. 5- (14)	0.0	**100.0**	73.2-100												**57.1**	**42.9**				
	Johannesburg (11)	0.0	**54.5**	24.5-81.8									45.5				**54.5**				
	Anatum (10)	0.0	**50.0**	20.1-79.9									50.0			**20.0**	**30.0**				
	Infantis (10)	0.0	**10.0**	0.5-45.9									90.0				**10.0**				

[1] Data is only presented for serotypes with at least 10 or more isolates

[2] Percent of isolates with intermediate susceptibility

[3] Percent of isolates that were resistant

[4] 95% confidence intervals for percent resistant (%R) were calculated using the Wilson interval with continuity correction method