

Table 21. Resistance Patterns of *Salmonella* from Chickens, by Year, 1997-2005

| Year | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|
| Number of Isolates Tested | 214 | 561 | 1438 | 1173 | 1307 | 1500 | 1158 | 1280 | 1989 |
| Resistance Pattern | | | | | | | | | |
| No Resistance detected | 52.8% 113 | 58.6% 329 | 58.8% 846 | 56.9% 667 | 66.5% 869 | 62.0% 930 | 61.1% 708 | 62.7% 803 | 61.2% 1217 |
| Resistance ≥ 1 CLSI subclass ¹ | 47.2% 101 | 41.4% 232 | 41.2% 592 | 43.1% 506 | 33.5% 438 | 38.0% 570 | 38.9% 450 | 37.3% 477 | 38.8% 772 |
| Resistance ≥ 2 CLSI subclasses ¹ | 28.0% 60 | 32.3% 181 | 32.3% 465 | 32.5% 381 | 25.6% 334 | 28.7% 430 | 27.6% 320 | 31.2% 399 | 31.3% 622 |
| Resistance ≥ 3 CLSI subclasses ¹ | 10.3% 22 | 13.7% 77 | 12.4% 178 | 15.1% 177 | 10.5% 137 | 14.2% 213 | 13.6% 157 | 15.8% 202 | 15.1% 301 |
| Resistance ≥ 4 CLSI subclasses ¹ | 3.3% 7 | 4.5% 25 | 5.2% 75 | 10.0% 117 | 5.7% 74 | 11.5% 172 | 10.0% 116 | 13.2% 169 | 13.1% 261 |
| Resistance ≥ 5 CLSI subclasses ¹ | 1.9% 4 | 3.0% 17 | 3.3% 47 | 5.9% 69 | 3.4% 45 | 7.0% 105 | 6.1% 71 | 9.6% 123 | 8.1% 162 |
| At least ACSSuT ² | 1.4% 3 | 2.7% 15 | 1.7% 24 | 4.3% 50 | 2.4% 32 | 1.9% 29 | 1.5% 17 | 0.9% 12 | 1.6% 31 |
| At Least ACT/S ³ | 0.0% 0 | 0.2% 1 | 0.1% 2 | 0.0% 0 | 0.1% 1 | 0.0% 0 | 0.0% 0 | 0.1% 1 | 0.1% 2 |
| At Least ACSSuTAuCf ⁴ | 0.0% 0 | 0.5% 3 | 0.3% 5 | 2.7% 32 | 1.1% 14 | 0.9% 13 | 1.0% 12 | 0.4% 5 | 0.9% 18 |
| At Least Ceftiofur and Nalidixic Acid Resistant | 1.9% 2 | 0.0% 0 | 2.7% 19 | 1.2% 6 | 1.5% 8 | 1.2% 3 | 0.4% 1 | 0.8% 2 | 0.0% 0 |

Table 22. Resistance Patterns of *Salmonella* from Turkeys, by Year, 1997-2005

| Year | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|--|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Number of Isolates Tested | 107 | 240 | 713 | 518 | 550 | 244 | 262 | 236 | 227 |
| Resistance Pattern | | | | | | | | | |
| No Resistance detected | 32.7% 35 | 41.3% 99 | 32.5% 232 | 33.4% 173 | 31.6% 174 | 30.7% 75 | 24.0% 63 | 33.5% 79 | 27.8% 63 |
| Resistance ≥ 1 CLSI subclass ¹ | 67.3% 72 | 58.8% 141 | 67.5% 481 | 66.6% 345 | 68.4% 376 | 70.1% 171 | 76.0% 199 | 66.5% 157 | 72.2% 164 |
| Resistance ≥ 2 CLSI subclasses ¹ | 49.5% 53 | 45.4% 109 | 53.7% 383 | 51.4% 266 | 56.4% 310 | 46.3% 113 | 43.5% 114 | 50.0% 118 | 53.3% 121 |
| Resistance ≥ 3 CLSI subclasses ¹ | 25.2% 27 | 24.2% 58 | 27.1% 193 | 22.4% 116 | 31.3% 172 | 24.6% 60 | 24.8% 65 | 27.1% 64 | 28.2% 64 |
| Resistance ≥ 4 CLSI subclasses ¹ | 6.5% 7 | 6.7% 16 | 13.2% 94 | 11.8% 61 | 16.7% 92 | 14.8% 36 | 12.2% 32 | 11.9% 28 | 11.5% 26 |
| Resistance ≥ 5 CLSI subclasses ¹ | 4.7% 5 | 4.6% 11 | 7.6% 54 | 7.1% 37 | 11.1% 61 | 9.0% 22 | 6.5% 17 | 5.5% 13 | 6.2% 14 |
| At least ACSSuT ² | 3.7% 4 | 0.8% 2 | 3.8% 27 | 3.3% 17 | 3.6% 20 | 4.5% 11 | 2.3% 6 | 4.7% 11 | 4.0% 9 |
| At Least ACT/S ³ | 0.0% 0 | 0.4% 1 | 0.4% 3 | 0.8% 4 | 0.7% 4 | 0.8% 2 | 0.0% 0 | 0.4% 1 | 0.0% 0 |
| At Least ACSSuTAuCf ⁴ | 3.7% 4 | 0.4% 1 | 3.4% 24 | 1.9% 10 | 2.9% 16 | 1.6% 4 | 0.8% 2 | 2.1% 5 | 1.8% 4 |
| At Least Ceftiofur and Nalidixic Acid Resistant | 1.9% 2 | 0.0% 0 | 2.7% 19 | 1.2% 6 | 1.5% 8 | 1.2% 3 | 0.4% 1 | 0.8% 2 | 0.9% 2 |

Table 23. Resistance Patterns of *Salmonella* from Cattle, by Year, 1997-2005

| Year | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|--|----------------|--------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Number of Isolates Tested | 24 | 284 | 1610 | 1388 | 893 | 1008 | 670 | 607 | 329 |
| Resistance Pattern | | | | | | | | | |
| No Resistance detected | 66.7% 16 | 73.2% 208 | 74.5% 1199 | 70.0% 972 | 69.9% 624 | 64.3% 648 | 61.0% 409 | 65.6% 398 | 63.2% 208 |
| Resistance \geq 1 CLSI subclass ¹ | 33.3% 8 | 26.8% 76 | 25.5% 411 | 30.0% 416 | 30.1% 269 | 35.9% 362 | 39.0% 261 | 34.4% 209 | 36.8% 121 |
| Resistance \geq 2 CLSI subclasses ¹ | 20.8% 5 | 17.3% 49 | 15.8% 254 | 21.8% 303 | 21.8% 195 | 28.0% 282 | 31.8% 213 | 23.9% 145 | 28.6% 94 |
| Resistance \geq 3 CLSI subclasses ¹ | 12.5% 3 | 13.7% 39 | 13.4% 215 | 19.8% 275 | 18.9% 169 | 24.6% 248 | 29.7% 199 | 21.1% 128 | 27.7% 91 |
| Resistance \geq 4 CLSI subclasses ¹ | 8.3% 2 | 9.2% 26 | 11.0% 177 | 17.5% 243 | 17.0% 152 | 22.9% 231 | 27.6% 185 | 18.9% 115 | 25.5% 84 |
| Resistance \geq 5 CLSI subclasses ¹ | 8.3% 2 | 4.6% 13 | 8.0% 129 | 14.2% 197 | 15.1% 135 | 19.3% 195 | 23.6% 158 | 18.0% 109 | 23.1% 76 |
| At least ACSSuT ² | 4.2% 100.0% | 4.2% 12 | 7.6% 123 | 13.1% 182 | 14.6% 130 | 17.1% 172 | 18.1% 121 | 16.3% 99 | 20.4% 67 |
| At Least ACT/S ³ | 0.0% 0 | 2.1% 6 | 2.2% 35 | 1.7% 23 | 2.4% 21 | 2.4% 24 | 2.7% 18 | 1.2% 7 | 4.3% 14 |
| At Least ACSSuTAuCf ⁴ | 0.0% 0 | 2.1% 6 | 3.7% 59 | 8.9% 124 | 11.0% 98 | 14.6% 147 | 15.1% 101 | 11.9% 72 | 17.6% 58 |
| At Least Ceftiofur and Nalidixic Acid Resistant | 0.0% 0 | 0.0% 0 | 0.1% 1 | 0.1% 1 | 0.3% 3 | 0.2% 2 | 0.4% 3 | 1.0% 6 | 0.9% 3 |

Table 24. Resistance Patterns of *Salmonella* from Swine, by Year, 1997-2005

| Year | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|--|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Number of Isolates Tested | 111 | 793 | 876 | 451 | 418 | 379 | 211 | 308 | 301 |
| Resistance Pattern | | | | | | | | | |
| No Resistance detected | 44.1% 49 | 49.2% 390 | 48.9% 428 | 43.2% 195 | 43.3% 181 | 40.1% 152 | 53.6% 113 | 37.3% 115 | 44.5% 134 |
| Resistance \geq 1 CLSI subclass ¹ | 55.9% 62 | 50.8% 403 | 51.1% 448 | 56.8% 256 | 56.7% 237 | 59.9% 227 | 46.4% 98 | 62.7% 193 | 55.5% 167 |
| Resistance \geq 2 CLSI subclasses ¹ | 43.2% 48 | 34.4% 273 | 35.3% 309 | 44.6% 201 | 40.2% 168 | 43.3% 164 | 34.1% 72 | 41.2% 127 | 40.5% 122 |
| Resistance \geq 3 CLSI subclasses ¹ | 26.1% 29 | 24.0% 190 | 26.4% 231 | 34.8% 157 | 30.6% 128 | 34.0% 129 | 23.7% 50 | 33.4% 103 | 31.9% 96 |
| Resistance \geq 4 CLSI subclasses ¹ | 15.3% 17 | 11.3% 90 | 9.8% 86 | 17.3% 78 | 9.1% 38 | 12.7% 48 | 10.9% 23 | 15.9% 49 | 13.3% 40 |
| Resistance \geq 5 CLSI subclasses ¹ | 4.5% 5 | 8.1% 64 | 7.3% 64 | 9.8% 44 | 7.2% 30 | 9.0% 34 | 10.0% 21 | 12.3% 38 | 11.0% 33 |
| At least ACSSuT ² | 4.5% 5 | 7.8% 62 | 7.1% 62 | 8.6% 39 | 7.2% 30 | 7.7% 29 | 7.6% 16 | 12.0% 37 | 9.6% 29 |
| At Least ACT/S ³ | 0.0% 0 | 0.5% 4 | 0.5% 4 | 0.0% 0 | 1.0% 4 | 0.5% 2 | 0.9% 2 | 0.6% 2 | 1.7% 5 |
| At Least ACSSuTAuCf ⁴ | 0.0% 0 | 0.1% 1 | 0.6% 5 | 1.3% 6 | 2.2% 9 | 1.8% 7 | 1.9% 4 | 1.0% 3 | 2.7% 8 |
| At Least Ceftiofur and Nalidixic Acid Resistant | 0.0% 0 | 0.0% 0 | 0.0% 0 | 0.0% 0 | 0.0% 0 | 0.3% 1 | 0.0% 0 | 0.0% 0 | 0.0% 0 |

¹CLSI: Clinical and Laboratory Standards Institute M100 Document

²ACSSuT: resistance to at least ampicillin, chloramphenicol, streptomycin, sulfamethoxazole/sulfisoxazole, and tetracycline

³ACT/S: resistance to at least ampicillin, chloramphenicol, and trimethoprim-sulfamethoxazole

⁴ACSSuTAuCf: resistance to at least ACSSuT, amoxicillin-clavulanic acid, and ceftiofur