

PORK SAFETY

Title: Antimicrobial use and antimicrobial resistance of *Salmonella* isolated from nursery and finishing pigs. - **NPB #99-114**

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Note: The original Principal Investigator was Peter Davies, now of Massey University, Palmerston North, New Zealand.

Abstract

Salmonella is an important foodborne pathogen that can exhibit resistance to multiple antimicrobial agents. We evaluated antimicrobial resistance of 1314 *Salmonella* isolates obtained from 47 groups of pigs raised in multiple-site production systems in two different companies. We found most of the isolates (85%) to be resistant to tetracycline, with less frequent resistance to other antimicrobials such as ampicillin (47%), amoxicillin/clavulanic acid (23%), and chloramphenicol (22%). We further found that specific *Salmonella* serovars commonly exhibited certain single and multiple resistance patterns. For example, over three-quarters of chloramphenicol resistant isolates were of the serovar Typhimurium var. Copenhagen, and most isolates of this serovar (54%) were resistant to the combination of ampicillin, amoxicillin/clavulanic acid, chloramphenicol, piperacillin, and tetracycline. These patterns were found in isolates obtained from several farms of both companies and at different farm visits. This suggests that resistance patterns in *Salmonella* obtained from swine depend upon the serovar rather than the site of origin.

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