Surveillance of Salmonella Prevalence in Animal Feeds and Characterisation of the Salmonella Isolates

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Twelve per cent of more than 2,000 samples of feeds, feed ingredients and pet products tested by USDA between 2002 and 2009 were positive for Salmonella, with Senftenberg and Montevideo being the most common serotypes.

The journal, *Foodborne Pathogens and Disease*, includes a paper by Dr Xin Li of the USDA Center for Veterinary Medicine and co-authors at the Cummings School of Veterinary Medicine at Tufts University and the USDA Center for Drug Evaluation and Research.

The article presents the surveillance data from the Feed Contaminants Program (2002–2009) and Salmonella Assignment (2007–2009) of the US Food and Drug Administration (FDA), which monitor the trend of Salmonella contamination in animal feeds.

A total of 2,058 samples were collected from complete animal feeds, feed ingredients, pet foods, pet treats and supplements for pets in 2002–2009.

These samples were tested for the presence of Salmonella. Those that were positive for Salmonella underwent serotyping and testing for antimicrobial susceptibility.

Of the 2,058 samples, 257 were positive for Salmonella (12.5 per cent). The results indicate a significant overall Salmonella reduction (p=0.05) in animal feeds from 18.2 per cent (187 samples tested) in 2002 to 8.0 per cent (584 samples tested) in 2009. Among these samples, feed ingredients and pet foods/treats had the most significant reduction (p=0.05).

Of the 45 Salmonella serotypes identified, *Salmonella* Senftenberg and *Salmonella* Montevideo were the top two common serotypes (8.9 per cent).

Of the 257 Salmonella isolates obtained, 54 isolates (21 per cent) were resistant to at least one antimicrobial.

Li and co-authors conclude that their findings provide the animal feed industries with Salmonella prevalence information that can be used to address Salmonella contamination problems. They add that their findings can also be used to educate pet owners when handling pet foods and treats at home to prevent salmonellosis.

Reference

X. Li, L.A. Bethune, Y. Jia, R.A. Lovell, T.A. Proescholdt, S.A. Benz, T.C. Schell, G. Kaplan and D.G. McChesney. 2012. Surveillance of Salmonella prevalence in animal feeds and characterization of the Salmonella isolates by serotyping and antimicrobial susceptibility. Foodborne Pathogens and Disease, 9(8):692-698. doi:10.1089/fpd.2011.1083