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Antibiotics Policy of the Australian Chicken Meat Industry

Bibliography

I Phillips et al. Does the Use of Antibiotics in Food Animals Pose a Risk to Human Health? Journal of Antimicrobial Chemotherapy. January 2004.

This peer-reviewed article critically reviews published data and concludes that while a theoretical hazard to human health arises from the use of antibiotics in food animals, the actual risk is "extremely small and may be zero in many cases". It examines literature and data on the potential transfer of bacteria from animal-derived food to humans and finds little data to suggest a significant adverse effect on human or animal health.

The article argues for sound, data-driven risk assessment as a necessary basis for decision making. It says that the benefits of using antibiotics to keep animals healthy outweigh the small risk of the products.

T. Shryock. The Future of Anti-Infective Products in Animal Health. Nature Reviews/Microbiology Vol 2. May 2004.

The discovery, development and marketing of animal health anti-infective products including antibiotics are at an important crossroads. The convergence of market conditions, new regulatory guidance, political decisions and food safety concerns has led to a redirection of research away from traditional antibiotics and towards other products that have an increased probability of acceptance in the marketplace and shareholder return.

H Scott Hurd. Public Health Consequences of Macrolide Use in Food Animals: A Deterministic Risk Assessment. Journal of Food Protection Vol 67, No 5 2004.

This unique farm-to-patient risk assessment demonstrated that use of two macrolide antibiotics, tylosin and tilmicosin, in food animals presents a very low risk of human treatment failure, with an approximate annual probability of less than 1 in 10 million Campylobacter-derived and approximately 1 in 3 billion E. faecium-derived risk. This indicated that current uses appear to create a much lower risk than the potential benefit to food safety, animal welfare and public health.

M Casewell. The European ban on Growth-promoting antibiotics and emerging consequences for human and animal health. Journal of Antimicrobial Chemotherapy. Vol 52, 2003.

Following the ban of all food animal growth-promoting antibiotics by Sweden in 1986, the European Union banned avoparcin in 1997 and bacitracin, spiramycin, tylosin and virginiamycin in 1999. Three years later, the only attributable effect in humans was a diminution in acquired resistance in enterococci isolated from human faecal carriers. There was also increased human infection from vancomycin-resistant enterococci in Europe, probably related to the increased use of vancomycin to treat methicillin-resistant staphylococci.

The ban on growth promotants revealed their importance in disease prevention, with a deterioration in animal health, including increased diarrhoea, weight loss and mortality. This resulted in increased use of therapeutic antibiotics in food animals, including a number of direct importance in human medicine.

The Use of Antibiotics in Food-Producing Animals: Antibiotic-Resistant Bacteria in Animals and Humans, Report of the Joint Expert Technical Advisory Committee on Antibiotic Resistance (JETACAR), October 1999.

JETACAR was established in 1998 by the then Australian Ministers for Health and Aged Care and Agriculture, Fisheries and Forestry. It comprised experts from the areas of human health, veterinary medicine and primary industry. It assessed the scientific evidence of a link between the use of antibiotics in food-producing animals and the emergence and selection of antibiotic-resistant bacteria and their spread to humans.

Australian National Residue Survey, Department of Health.

The National Residue Survey (NRS) monitors and reports on the levels of residues and contaminants in food, animal and plant products, production inputs and the environment. They provide independent, authoritative and scientifically based evidence of the chemical residue and contaminant status of a range of products including chicken meat. They also provide scientific advice on residues.

Collignon, P J, Antibiotic resistance, Medical Journal of Australia, Vol 177 16 September 2002.

Prudent antibiotic use includes not using antibiotics when benefit is minimal, using narrow-spectrum antibiotics whenever possible and using optimal dosages and regimens. The need for antibiotic therapy can be reduced by preventing infections through vaccination, infection control measures and improved sanitation. Some simple changes to practice could reduce development and spread of antibiotic resistance