

Inforum

June 1997

Volume 1, Number 3

Managing the risks of antibiotic use in food animal production

Antibiotics have been used in veterinary medicine and agriculture for over four decades. The benefit achieved from their use is threefold; to the producer through production efficiencies, to consumers in a more affordable, high quality protein source and ultimately, to animals through improved health. There is no question, use of antibiotics is not without risk. The question becomes -- can the risk be managed?

Why are antibiotics used?

Overall, antibiotics are given to farm animals for three reasons:

1. to treat animals that are sick,
2. to prevent and control the spread of harmful diseases,
3. to improve the overall well-being of animals.

It has been estimated that the loss of antibiotic use to animal agriculture would result in a loss of about 10 to 15 percent in production efficiency. A cost that would be passed on to the consumer in the form of higher priced product.

How do we manage risk?

Just as driving your vehicle is not without risk, so is the use of antibiotics in food animal production. However, as with driving, with its traffic rules and vehicle safety standards, the risk of antibiotic use is managed through regulation and industry standards.

First and foremost, companies typically develop new products solely for use in veterinary medicine. Furthermore, the Bureau of Veterinary Drugs, Health Canada will only approve a new antibiotic with dual application (human and animal) as a prescription product, meaning it can only be prescribed by a veterinarian to treat sickness in farm animals.

Product approval process sets high standards

The Bureau of Veterinary Drugs reviews all new product sponsors' data packages to confirm that recommended use and strict observation of specified withdrawal times will prevent harmful residues in meat, milk, or eggs. Individuals within the Bureau have a tremendous level of expertise in the fields of human toxicology, microbiology, chemistry, epidemiology and veterinary medicine. This skill set enables them to conduct a comprehensive review of all new products with the goal of minimizing and managing risk.

Tolerances provide wide safety margin

Health Canada's tolerances for chemical and biological residues are among the strictest in the world. Residue limits are based on an estimated maximum daily consumption over a lifetime.

The increasingly sophisticated testing methods used to measure levels of chemical residues, food additives and microbial contaminants are capable of detecting concentrations well below the threshold of any health concern. However, it is unrealistic to expect zero residues in all food - many contaminants occur naturally in the environment. Working with food safety experts, our federal regulators have established maximum residue limits (or tolerances) that provide a 100- to 1,000-fold margin of safety.

Veterinarians provide expertise

Veterinarians are individuals with a skill set matching that of medical doctors, only with application to food and companion animals. These highly trained individuals are an integral part of the on-farm team that manages the risk of antibiotic use with food animals, advising producers on herd health and proper antibiotic use and withdrawal times.

Producers recognize their responsibility

Canada's livestock and poultry producers work in concert with their veterinarians to reduce the need for antibiotics. Maintenance of detailed records as part of their quality assurance programs helps ensure proper use and timely withdrawal of antibiotics.

Stringent compliance programs protect Canadians

Through continuous monitoring of animal food products (at the processing stage) for antibiotic residues, the recently formed Canadian Food Inspection Agency strictly enforces regulations which prohibit the sale of animal foods that contain harmful residues.

Eli Neidert, Chief of Program Evaluation and Development - Chemical Residues, for the Canadian Food Inspection Agency, explains that "Health Canada sets the standards, and the Agency is responsible for monitoring and surveillance programs." Neidert adds, "The bottom line is that our agri-food system provides an exceptionally safe and wholesome supply of food to Canadians at affordable prices."

The end result

All participants in Canada's animal agriculture industry have a vested interest in - and a responsibility for - the production of wholesome food. The combined efforts of government, producers, veterinarians and the developers of new antibiotics ensure that there are no harmful residues in meat, milk and eggs.