

ONTARIO SHEEP MARKETING AGENCY

Position Statement

Antimicrobial Use in the Sheep Industry

Policy Position

Ontario's sheep farmers are concerned about the issue of antimicrobial resistance. We recognize the importance of the fact that the use of antimicrobials in human and animal medicine could contribute to that resistance and our potential to treat humans who are sick.

The animal pharmaceutical industry is working with Health Canada to phase out product growth promotion claims for critically important drugs needed in human medicine. Health Canada plans to modernize regulations to close loopholes that enable importation and use of non-approved antimicrobials in animals.

Through programs such as the On-Farm Food Safety Program, veterinarians and producers have implemented drug use protocols that target management of drugs to prevent harmful residues entering the food chain and minimize the occurrence of resistance.

The Own-Use Importation (OUI) Policy provides Canadian livestock producers access to nonprescription pharmaceuticals and generic product not available but approved in Canada.

- OSMA agrees that a surveillance or monitoring system of imported products is important and is prepared to work with VDD (Veterinary Drugs Directorate) on that;
- Our position is that only non-prescription products already approved for use in Canada be allowed;
- The majority of products entering Canada under this provision are not used in human medicine, i.e. ivomectins.

Background

Few antimicrobials are licensed for use in sheep in Canada, and the range of indications is narrow. Treatment in an "extra-label" manner may be ineffective. In addition, potentially harmful drug residues in food-animal products and antimicrobial resistance in bacteria may be associated with extra-label drug use (ELDU). No data had been documented on drug use, specifically antimicrobial use (AMU), in Ontario sheep, although it was thought that much use was extra-label. (Moon et al., 2011)

Relative to major livestock species, few antimicrobials are licensed for use in sheep in Canada, and those that are so licensed have a narrow range of indications. Thus, rates of ELDU of antimicrobials in sheep were high. (Moon, et al., 2011) When antimicrobials are used therapeutically in feed or water, there are opportunities to use vaccines instead. Support for

development/approval of vaccines would assist the sheep industry in lowering use of antimicrobials.

All medicated feeds are under strict control of the Canadian Food Inspection Agency (CFIA), and the Ontario Sheep Marketing Agency has great respect for the work that CFIA does. Under the authority of the federal *Feeds Act and Regulations* CFIA administers a national feed program to verify that livestock feeds manufactured and sold in Canada or imported into Canada, are safe, effective and labeled properly. All medicated livestock feed imported, manufactured (including on-farm mixing) or sold in Canada must meet the standards set out in the CFIA's [Compendium of Medicating Ingredient Brochures \(CMIB\)](#), unless the feed is a veterinary prescription feed (a feed that is manufactured pursuant to a veterinary prescription). Only drugs and drug combinations that are specifically listed in the CMIB are allowed in feed unless accompanied by a veterinary prescription. Any medication for use in feed must be of an approved "feed grade" designation, and must carry a Drug Identification Number (DIN), assigned by the VDD. CFIA conducts on-farm inspections of farms where medicated feeds are used to ensure approved brands and levels are being used. Feed manufacturers (commercial and on-farm) are subject to inspection by the Agency.

Many assume in-feed uses of antibiotics equate to growth promotion, but this confuses the use with the route of administration. In fact, any of the four uses (treatment, prevention, control and health maintenance) including therapeutic, can be administered via feed or water, as that is under certain circumstances the only practical way to administer medication to large flocks. In most cases, a veterinarian is involved in this process, recommending feed that is specifically formulated for the health management system used for the flock.

A Policy Paper entitled, *When Antibiotics Stop Working*, released by the Ontario Medical Association stated "As evidence mounts that the use of antibiotics in animals has negative impacts on humans, and the effectiveness of antibiotics to treat human infections, the urgency of modifying the use of antibiotics is becoming clear." (Ontario Medical Association, 2013)

The paper also says, "Antibiotics approved for the use in livestock which are in the same family as antibiotics only used for humans will contribute to the resistance of the bacteria to human antibiotics." (Ontario Medical Association, 2013)

FACTS ON ANTIMICROBIALS AND THE SHEEP INDUSTRY

Why are antimicrobials used in sheep production?

Antibiotics are one type of antimicrobials. Antimicrobials are medications that fight bacterial infection in both humans and animals. Antimicrobials made for sheep are used to help an animal regain or maintain superior health and produce safe lamb. They are an important and necessary tool in protecting animal health and well being. Antimicrobials may also be added to the feed of food producing animals to promote growth and increase feed efficiency, as well as preventing infections.

How does the Canadian government regulate the use of antimicrobials in food animal production?

The Veterinary Drug Directorate, Health Canada, must approve all veterinary drugs before they can be sold in Canada. A drug is approved for use only if it:

- does not pose a risk to humans
- is safe for animals
- is an effective treatment
- follows strict manufacturing guidelines

Does the lamb sold in Canada contain antimicrobials?

Residues of antibiotics in lamb are extremely rare. In fact, most recent results of the Canadian Food Inspection Agency's (CFIA) residue testing program show 100% compliance.

What is antimicrobial resistance?

The purpose of antimicrobials is to kill or reduce bacteria that may cause illness. Antimicrobial resistance happens when an antimicrobial is no longer effective in killing or slowing down the growth of particular microorganisms, like bacteria. When antimicrobials are used inappropriately, weak bacteria are killed, while the stronger bacteria survive and multiply. Germs that develop resistance to one antimicrobial can also develop resistance to another antimicrobial.

According to Health Canada, a major cause of resistance is believed to be overuse or inappropriate use of drugs such as antibiotics, in preventing or treating infections in people, animals and plants. As well, germs constantly adapt to their environment and have the ability to take on the characteristics of other germs. Although the use and misuse of antimicrobials in human medicine is recognized as being the major contributor, the sheep industry realizes the potential for the development of antimicrobial resistance within the livestock industry. Veterinarians and farmers take measures to ensure that bacteria do not develop resistance as it is important that antimicrobials remain effective. In fact, Health Canada categorizes antimicrobials as low, medium, high or very high importance in human medicine. The antimicrobials that are of high or very high importance in human medicine are not used for growth and feed efficiency in Canadian sheep. The majority of the antimicrobials used for growth and feed efficiency belong to a class of antimicrobials known as ionophores, and are not used in human medicine.

What would happen if animal antimicrobials weren't used?

When used according to label instructions, animal antibiotics benefit both consumers and producers. By managing the disease within the animal, producers are able to control the spread of diseases and reduce the risk of illnesses that are difficult to treat. In addition, healthy animals grow more efficiently.

When antimicrobials are used therapeutically in feed or water, there are opportunities to use vaccines instead. Support for development/approval of vaccines would assist the sheep industry in lowering use of antimicrobials.

Recommendations

- OSMA will work with the Veterinary Drug Directorate to lobby for and access more approved medications. Support for the development / approval of vaccines would assist the sheep industry in lowering the use of antimicrobials.
- OSMA will research alternative ways of managing diseases. For example genetic resistance to anthelmintics (wormers).

Sources:

- Beef Farmers of Ontario Memo: Key Messaging: Antimicrobial use in the beef industry, March 2013.
- Moon, C.S., et al. Rates and determinants of antimicrobial use; including extra-label, on Ontario sheep farms. *Canadian Journal of Veterinary Research*, 75:1-10. 2011.
- Ontario Medical Association, When Antibiotics Stop Working, Policy Paper. 2013.