ANTIBIOTICS

Updated Jan. 2024

BACKGROUND

The Canadian beef industry is committed to producing a safe, ethically raised, high-quality product for our customers. The responsible use of antibiotics in maintaining animal health and welfare is an essential component of sustainable and humane beef production in Canada. Vaccines and antibiotics are critical tools to prevent and manage disease in beef cattle. The beef industry uses antibiotics to treat and control disease, prevent infection - and with ionophores - promote growth.

KEY MESSAGES

- Beef farmers and ranchers manage their cattle to proactively prevent illness. Low-stress cattle handling, proper vaccinations, low stress weaning techniques and providing high-quality feed, water and bedding are just some of the ways that cattle producers try to prevent disease and infection. When these techniques aren't enough, antibiotics are an essential part of maintaining animal health.
- Stopping the overall use of antibiotics has negative consequences for the health and well-being of animals. Failing to prevent or treat disease is irresponsible, unethical, and leads to animal suffering.
- The vast majority of antibiotics used to treat beef cattle are classified as 'low importance' to human health (meaning they are rarely, if ever, used in human medicine)[1].
- Medically important antimicrobials are only used on the farm to treat and prevent disease - not to promote growth or feed efficiency[2].
- **All Canadian beef is antibiotic free.** A specified withdrawal time must pass after the last treatment to ensure that no residues can be detected. The Canadian Food Inspection Agency (CFIA) routinely conducts random sampling of beef products[3].
- Research and surveillance evidence suggests that eliminating antimicrobial use in beef production will have clear negative health consequences for cattle with no obvious benefit for human health[2].
- In Canada, surveillance indicates that resistance levels in cattle and beef are extremely low and have not increased over time[2].

WHY ARE ANTIBIOTICS USED?

- To treat illness in affected animals and avoid unnecessary suffering.
- To prevent potential infection and boost the immune system prior to stressful events.

ANTIBIOTIC USE IN FEED

- In some instances, such as when mixing weaned calves together from different farms, antibiotics may be used in feed. This boosts the immune system when animals are more vulnerable to sickness as a proactive and preventative measure to maintaining animal health.

IONOPHORES

- Although technically an antibiotic, ionophores are not used for human medicine and have a different mode of action than other antibiotics. For this reason, they are classified as 'low importance' to human health by Health Canada. Ionophores selectively inhibit methane producing bacteria and allow beneficial rumen bacteria to make more feed energy available to the animal. This improves feed efficiency and decreases the amount of methane being produced. Ionophores also prevent cattle diseases such as coccidiosis.

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ANTIBIOTIC USE OVERSIGHT AND REGULATORY MEASURES

- Antibiotic use is regulated by the federal government under the Food and Drugs Act. The Canadian Food Inspection Agency (CFIA) routinely conducts random sampling of beef products to check for residues. If residues are detected the meat is removed from the food chain.
- The Health Canada Veterinary Drug Directorate (VDD) evaluates and monitors the safety, quality, and effectiveness of veterinary drugs as well as sets standards for use to ensure they are safe for the animals and humans when used as the label directs.
- In Canada, Medically Important Antimicrobials are only available for cattle by veterinary prescription, within the confines of a valid veterinary-client-patient relationship (VCPR)[2].
- The Canadian cattle industry has developed programs like Verified Beef Productions Plus (VBP+) for producers to ensure responsible and safe use of antibiotics, vaccines and other products.

99.99% of meat tested by the CFIA has no antibiotic residue, and meat that tests positive is removed from the food chain. **This means that all meat that is available for the consumer is deemed to be "antibiotic free".**

ANTIMICROBIAL RESISTANCE (AMR)

- Antimicrobial resistance (AMR), also called antibiotic resistance, occurs when a bacterium becomes resistant to an antibiotic and is therefore no longer effective. While AMR can occur naturally, overuse or improper use of antibiotics can increase the risk of resistance.
- The Public Health Agency of Canada developed the Canadian Integrated Program for Antimicrobial Resistance Surveillance (CIPARS) to monitor the AMR in bacteria isolated from humans, livestock, or retail meat. Due to this surveillance, CIPARS reports that AMR is low and not increasing in bacteria found in cattle or beef for the antibiotics that are of high importance in human medicine[1].
- Canadian Integrated Program for Antimicrobial Resistance Surveillance (CIPARS) surveillance found 0% E. coli isolates in beef cattle and retail beef resistant to Category I (Very Important to human medicine) antimicrobials[4].
- The Canadian beef industry is committed to keeping AMR at a minimum. Through research and collaborations with veterinary and human health professionals, beef producers are implementing strategies that reduce the need for antibiotics and ensuring the right measures are taken when they are needed.
- Science indicates that AMR in cattle is the result of antibiotics used in cattle, and AMR in humans is the result of antibiotics used in humans.
- It is extremely important to reduce AMR, but there is no evidence that suggests that AMR is being transferred. from cattle to people, or vice versa – they are separate issues.

REFERENCES

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4. Canadian Roundtable for Sustainable Beef (CRSB). (2024). National Beef Sustainability Assessment and Strategy summary report. Calgary, AB.: CRSB.