

# UNDERSTANDING ANTIBIOTICS AND BEEF CATTLE

Antibiotics are natural or synthetic substances that can be used to treat or prevent infections caused by bacteria. With a history dating back centuries, antibiotics are recognized in modern times as an essential tool in both human and veterinary medicine.

## ANTIBIOTICS AND RAISING CATTLE

Antibiotics are used in raising cattle for three main reasons: treatment of sickness caused by bacteria, prevention of disease, and to enhance feed efficiency or cattle growth.

The uses of antibiotics in cattle for treatment or prevention of disease are similar to human medicine approaches. Despite efforts to prevent illness, animals may still become sick and require treatment.

If cattle become sick or are at high risk of becoming sick, antibiotics approved by the Government of Canada are used to help control, prevent, and treat disease.

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## ANTIBIOTICS AND FEED EFFICIENCY

While the use of medically important antibiotics for growth promotion has always been limited, this practice will no longer be permitted after December 2018, a requirement that is supported by Canada's farmers and ranchers. There is an exception for a class of antibiotics called ionophores. Ionophores are feed additives used in cattle diets in small amounts to increase feed efficiency and weight gain. While ionophores are technically classified as an antibiotic, they are not used as antibiotics in human medicine.



Ionophores work by controlling a type of parasite that can infect cattle and also allow beneficial bacteria in the animals rumen to become more efficient.

An additional benefit is that cattle fed ionophores may produce less methane gas and also produce beef using less feed which is helpful from an environmental perspective.

Antibiotics in cattle will continue to be used judiciously and with veterinary oversight to treat sickness and to prevent disease.

## RAISED WITHOUT THE USE OF ANTIBIOTICS

In order to display the label 'raised without the use of antibiotics' the cattle used for producing this type of beef must not have received any antibiotics at any time. In addition, no antibiotics can be administered to the mother of the animal in question as well. In order to ensure the health and wellness of cattle, any animal that requires antibiotics must receive them however these animals will not be eligible to be sold with the claim "raised without the use of antibiotics". It is important to note that all cattle sold in Canada for meat that have been treated with antibiotics must undergo a 'withdrawal period' which is a specific period of time where no antibiotics can be used prior to going to market.

## ANTIBIOTIC RESISTANCE

Antibiotic resistance occurs when bacteria become resistant to an antibiotic treatment that was originally effective. When bacteria that cause illness in animals and/or humans become resistant to antibiotics, the options for treatment may be very limited. Bacteria can naturally develop antibiotic resistance, but overuse and misuse of antibiotics, in animals or people, can increase the risk. The Public Health Agency of Canada developed the Canadian Integrated Program for Antimicrobial Resistance Surveillance (CIPARS) to monitor antimicrobial resistance in bacteria isolated from humans, livestock, or retail meat. The surveillance results to date indicate that antibiotic resistance is low and not increasing in bacteria found in cattle or the meat from cattle, as it relates to the antibiotics of greatest importance to human medicine.



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