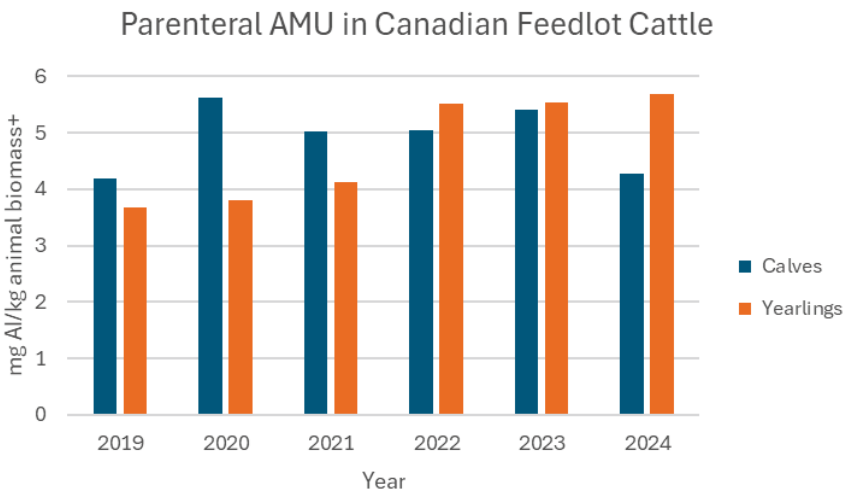


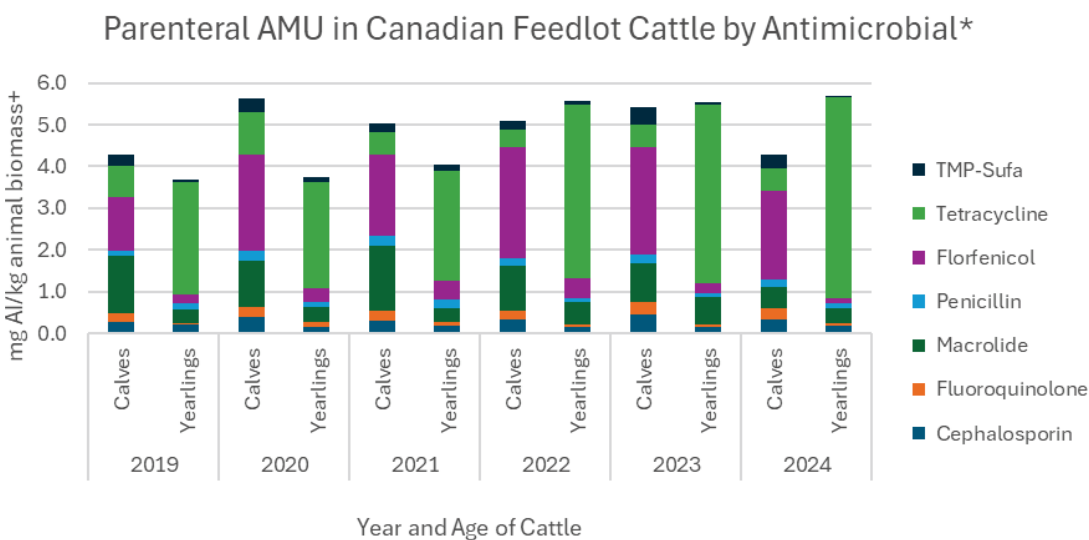
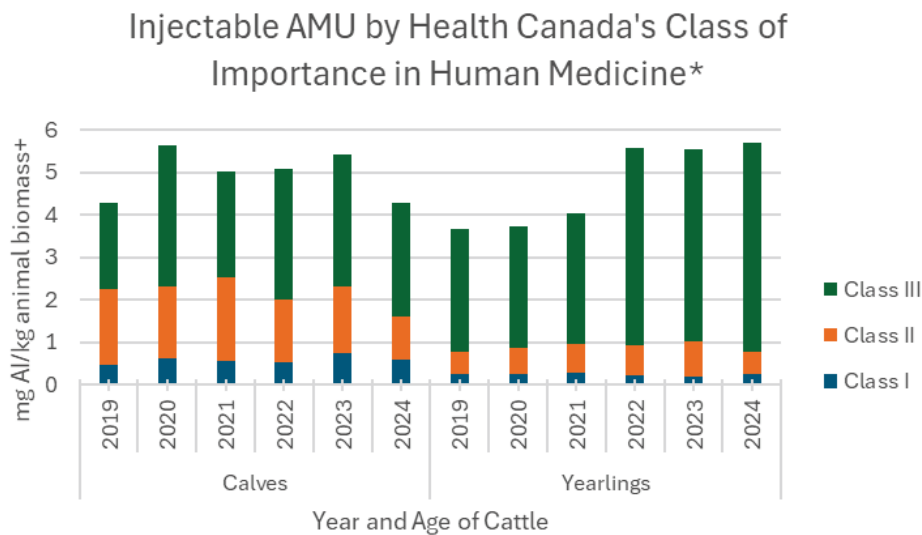
PARENTERAL ANTIMICROBIAL USE (AMU) IN CANADIAN FEEDLOT CATTLE - CFAASP 2024



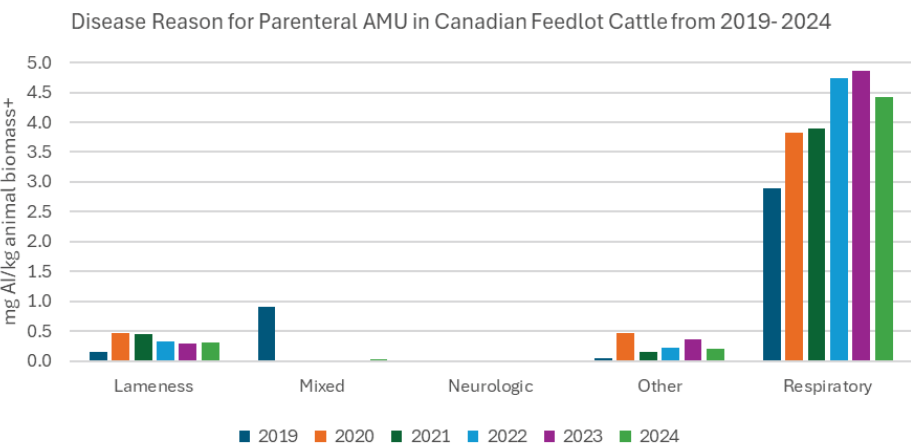
- In 2024, AMU (antimicrobial use) data were collected from 116,360 head of cattle in 359 randomly selected closed production lots from 21 finishing feedlots in AB, SK, and ON.
- 50% of the cattle were calves, 49% yearlings, and 1% adult.
- 58% of the cattle were at high risk for bovine respiratory disease (BRD) on feedlot entry.
- Injectable AMU comprised 4.6% of all AMU. There were no antimicrobials used in water or as boluses in 2024.
- Injectable AMU was relatively stable over time for calves and high-risk cattle, but it increased each year for yearlings and low-risk cattle, driven primarily by increased tetracycline use.



THE USE OF ANTIMICROBIALS OF VERY HIGH IMPORTANCE IN HUMAN MEDICINE (CLASS I)* REPRESENTED 8% OF ALL PARENTERAL AMU IN CANADIAN FEEDLOT CATTLE IN 2024.



FROM 2019-2024, TETRACYCLINE WAS THE MOST USED INJECTABLE ANTIMICROBIAL (43% OF ALL PARENTERAL USE), FOLLOWED BY FLORFENICOL (25%), MACROLIDES (16%), CEPHALOSPORINS (5%), FLUOROQUINOLONES (3%), PENICILLIN (3%), AND TRIMETHOPRIM-SULFA (4%).



- In 2024, florfenicol and macrolides were the most used injectable antimicrobials in calves; whereas, tetracyclines were the most used in yearlings.
- From 2019-2024, 85% of total parenteral AMU was for the treatment and control of bovine respiratory disease (BRD), which is a common infectious disease in feedlot cattle during the first month on feed. This disease causes feedlot producers significant financial losses from increased labor, drug costs, mortality and performance losses.
- Treatment for causes of lameness, such as arthritis, foot rot, toe abscesses, and hairy heel warts, accounted for 7% of injectable AMU from 2019-2024.

- Antimicrobial use for respiratory disease has been increasing since 2019. The risk of BRD is influenced by many factors, including environmental stressors such as weather, pen conditions, stocking density, the animal's immunity, pathogen (viral, bacterial) load, incoming nutritional status, age, source of cattle (auction vs ranch direct), stressful events such as transportation, handling, and mixing/housing of different sourced cattle together, and availability of competent trained feedlot staff.
- In 2024, 58% of the incoming feedlot cattle were considered high risk for BRD. Those at high risk for BRD may receive a metaphylactic antimicrobial on feedlot entry, such as a macrolide or tetracycline, to reduce morbidity and mortality rates and economic losses.
- **The largest reduction in parenteral AMU would occur if research could identify new, practical and cost-effective strategies to prevent and more accurately diagnose BRD. Until such time, we encourage beef cattle producers, both cow-calf and feedlot, to work closely with their veterinarians to identify ways to reduce the occurrence of infectious bacterial diseases (thus, AMU) through improvements in nutrition, animal husbandry, vaccination strategies, and early and accurate disease detection.**

RESEARCH CONTINUES TO IMPROVE DIAGNOSTICS AND IDENTIFY NON-ANTIMICROBIAL METHODS TO PREVENT BRD.

LEARN MORE ABOUT AMU/AMR IN CANADIAN FEEDLOT CATTLE ON OUR WEBSITE.

QUESTIONS?
EMAIL US!
INFO@CFAASP.CA

SCAN CODE OR CLICK
ON LINK TO VISIT US:
[CANADIAN FEEDLOT ANTIMICROBIAL USE
AND ANTIMICROBIAL RESISTANCE
SURVEILLANCE PROGRAM \(CFAASP\)](https://www.cfaasp.ca)



+ mg active ingredient (AI)/kg animal biomass = (mgs of all active ingredients administered by injection during the feeding period), divided by (the number of animals at risk multiplied by the annual average animal body weight at slaughter). Average slaughter weight in 2024 was 656 kg.

* For more information on Health Canada Veterinary Drug Directorate's classes of antimicrobials of importance in human medicine, click [here](#) to view the **Antimicrobial and Antibiotic Backgrounder for Feedlot Cattle**.