

# Antimicrobial Usage and Vaccine Usage in Canadian Beef Calves

In 2020, 146 cow-calf herds from across Canada reported their antimicrobial usage (AMU)<sup>1</sup>. In 2020, vaccine usage was studied in 131 herds. Median size of herds was approximately 130 cows<sup>2</sup>

<sup>1</sup> Vet. Sci. 2023, 10, 366. <sup>2</sup> Front. Vet. Sci. 10:1235942.

## Respiratory Disease

### AMs Used:

florfenicol (60% of herds), tulathromycin (20%), and oxytetracycline (12%),



### AMU Frequency:

of herds reported AMU in calves for respiratory disease

Less than 5% of calves were treated in 79% of herds

56% of herds vaccinated nursing calves for *Mannheimia hemolytica*

18% for *Pasteurella multocida*

40% for *Histophilus somni*

## Diarrhea

### AMs Used:

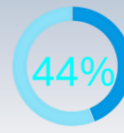
sulfadoxine/trimethoprim (30%), sulfamethazine (25%), and florfenicol (12%)



### AMU Frequency:

Less than 5% of calves treated for diarrhea in 51% of herds  
Less than 5% of calves were treated for diarrhea in 78% of herds

### Vaccination of Dams to Protect Neonatal Calves from Calf Diarrhea



*E. coli*



Rotaviruses or coronaviruses

## Navel Ill

### AMs used:

florfenicol (32% of herds), oxytetracycline (12%), and benzylpenicillin procaine (8.2%)



### AMU Frequency:

of herds used for navel ill

Less than 5% of calves were treated in 88% of herds

## Arthritis

### AMs used:

oxytetracycline (31% of herds), florfenicol (14%), and benzylpenicillin procaine (8.2%)



### AMU Frequency:

of herds used for arthritis

Less than 5% of calves were treated in 95% of herds

## Conclusions

The high proportion of herds treating bacterial navel infections and joint infections suggests potential for reducing crowding and fecal contamination of calving and nursery areas.

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