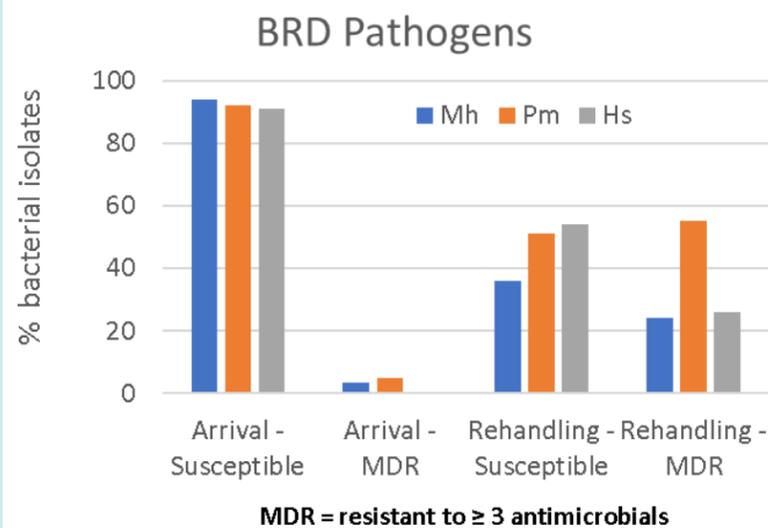


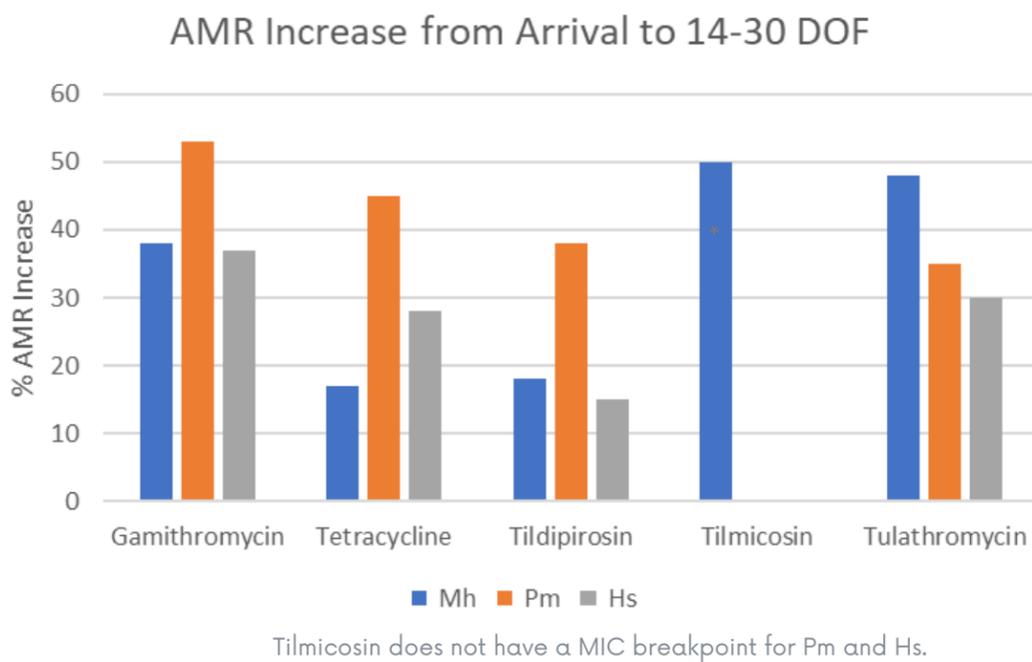
# BOVINE RESPIRATORY DISEASE (BRD) PATHOGEN ANTIMICROBIAL RESISTANCE (AMR) UPDATE - 2022



- *Mannheimia haemolytica* (Mh), *Pasteurella multocida* (Pm), and *Histophilus somni* (Hs), common respiratory bacteria, were isolated on arrival and 14-30 days post-arrival from nasal swabs.
- The number of bacteria susceptible to all tested antimicrobials decreased during the 1st month on feed.
- There was a significant increase in Mh and Pm resistance to tulathromycin (e.g., Draxxin®), tildipirosin (Zuprevo®), and gamithromycin (Zactran®) post-arrival.
- Tilmicosin (e.g., Micotil™) resistance increased in Mh post-arrival.



**ON FEEDLOT ENTRY, 92% OF RESPIRATORY BACTERIA FROM NASAL SWABS OF FEEDER CATTLE WERE SUSCEPTIBLE TO ALL TESTED ANTIMICROBIALS.**



- Hs resistance did not significantly increase after 14-30 DOF, probably due to the small number of bacterial isolates grown.
- Tulathromycin resistance in Mh post-arrival was higher in 2022 (52%) than in 2019-2021 (11-31%), most likely due to the shorter DOF when nasal samples were collected (14-30 DOF vs 60 DOF).
- Increases in bacterial macrolide resistance shortly after feedlot arrival are expected due to the use of these drugs on or shortly after arrival to treat and control BRD.
- Tetracycline resistance increased significantly in Pm post-arrival.

**BRD BACTERIAL RESISTANCE TO ANTIMICROBIALS OF VERY HIGH IMPORTANCE IN HUMAN MEDICINE WAS LOW ON ARRIVAL AND AT 14-30 DOF.**

- 1.2% of Mh isolates were resistant to cephalosporins e.g., Excenel, Excede, or fluoroquinolones e.g., Baytril 100, A180®, either on or shortly after arrival.
- 9% of Pm isolates were resistant to danofloxacin (A180®) and 5% to enrofloxacin (Baytril 100) shortly after arrival.
- Hs isolates were sensitive to cephalosporins and fluoroquinolones on or shortly after arrival.
- In previous years (2019-2022), antimicrobial resistance to cephalosporin and fluoroquinolones was also low, which is good, because these are important therapeutic drugs in human and animal medicine.



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



**QUESTIONS?  
EMAIL US!**

[INFO@CFAASP.CA](mailto: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)

