

MSc Defence

Do beef heifers previously classified as high or low methane emitters respond the same to a canola oil methane mitigation strategy?

Kathryn Kroeze

Date: October 29th 2024 at 1:00pm

The MSc Defence for Kathryn Kroeze has been scheduled for October 29th, 2024 at 1:00pm. The defence will be held online via Teams and in room 141: https://teams.microsoft.com/l/meetup-join/19%3ameeting_NDI3ZmM1ZGEtMTExZC00MWVhLTlhNGYtYmMzZmZkZDAzZGQx%40thread.v2/0?context=%7b%22Tid%22%3a%22be62a12b-2cad-49a1-a5fa-85f4f3156a7d%22%2c%22Oid%22%3a%22fbd28915-dda5-478f-8ecb-a3682dcf0c3a%22%7d

The exam committee will consist of:

Examining Chair: Dr. Mike Steele

Advisor: Dr. Katie Wood

Advisory Committee Member: Dr. Jen Ellis

Additional Committee Member: Dr. Marcio Duarte

Abstract:

The objective of this research is to determine if heifers previously classified as high or low enteric methane emitters respond similarly to a dietary lipid supplementation mitigation strategy. Sixty-four Angus crossbred heifers from the Ontario Beef Research Centre were first classified as either high or low CH₄ emitting animals then fed either the control ration or the same ration with 6% DM canola oil inclusion. Canola oil successfully reduced methane emissions in beef heifers ($P < 0.01$). Though not statistically significant ($P = 0.17$), the classification x diet interaction caused a 10.2% decrease in g CH₄/kg DMI in high emitters and a 4.5% decrease in g CH₄/kg DMI in low emitters showing that the high emitters reduction was more than twice the magnitude of the low emitters. Therefore, canola oil successfully mitigates methane emissions and baseline methane emission ranking was maintained for the duration of this trial.