

MSc Defence

Effect of glycerol supplementation in early lactation on metabolic health, milking activity, and production of dairy cows in automated milking system herds

Clayton McWilliams

Date: November 22nd 2023 at 9:00am

The MSc Defence for Clayton McWilliams has been scheduled for November 22nd, 2023 at 9:00am. The defence will be held online via Teams and in room 141: https://teams.microsoft.com/l/meetup-join/19%3ameeting_NTI1OTRkODYtNWY4Zi00MzA5LWExMzgtMzljNmE1M2M2OWFk%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. Marcio Duarte

Advisor: Dr. Trevor DeVries

Advisory Committee Member: Dr. Todd Duffield

Additional Committee Member: Dr. Mike Steele

Abstract:

The objective of this thesis research was to quantify the effects of supplementing early-lactation dairy cows with a dry glycerol product, delivered through automated milking system (AMS) concentrate, on metabolic markers, milking behaviour, and milk production. Cows either received a control pellet or the treatment pellet for the first 21 days in milk (DIM) and were observed until 150 DIM. Overall, glycerol supplementation improved milk yield, milking frequency, and AMS concentrate intake during the 21-d supplementation period and also from 22-150 DIM. Over-conditioned glycerol cows were not at an elevated risk of high β -hydroxybutyrate (BHB; BHB \geq 1.2 mmol/L), as opposed to over-conditioned control cows, and glycerol cows maintained better body condition to peak lactation. In summary, this research indicates that supplementing glycerol through the AMS concentrate to early lactation dairy cows may be an effective way to improve milking behaviour and yield until mid lactation.