



MSc. Defence

Residual Metabolizable Energy Intake, a Measure of Feed Efficiency in Preweaning Canadian Holstein Calves, and its Estimated Genetic Parameters

Kyle Hoeksema

Date: May 4th 2023 at 8:30am

The MSc Defence for Kyle Hoeksema has been scheduled for May 4th, 2023 at 8:30am. The defence will be held online via Teams and in 101: https://teams.microsoft.com/l/meetup-join/19%3ameeting_MWYwZTA2NmQtNDAwYS00ZTUwLThkMTYtZGFIMDM3ZjQxMzAy%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. Alexandra Harlander

Advisor: Dr. Christine Baes

Adv. Committee Member: Dr. Filippo Miglior

Additional Graduate Member: Dr. Andy Robinson

Abstract:

Feed efficiency has been a major topic of interest in the dairy industry over the past decade. In recent years, feed efficiency in lactating animals has been incorporated into selection indices, but little is known about feed efficiency in calves. The objective of this thesis was to investigate feed efficiency in preweaning Canadian Holstein calves and estimate its genetic parameters. Preweaning is a significant period in a calf's life, as management can impact lifetime productivity, and rearing costs are a major expense for producers. Using feed intake and weight records from 471 Holstein calves, residual metabolizable energy intake was estimated for the first and second months of age as a measure of feed efficiency. Genetic parameters were estimated via bivariate analysis, treating residual metabolizable energy intake in the two periods as different traits. Moderate heritabilities were estimated in both periods, with a moderate to high genetic correlation between them.