

## MSc Defence

EXPLORING PREPARTUM FEED INTAKE AND WEARABLE SENSOR DATA AS PRE-  
DICTORS OF TRANSITION HEALTH AND PERFORMANCE OF DAIRY COWS

**Matheus Santos**

Date: August 24th 2023 at 9:00am

The MSc Defence for Matheus Santos has been scheduled for August 24th, 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\\_NDU3NGI2NTAtZjE4OC00ZTJiLWI0MzgtYTEzYWZiZmQzYjQ1%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](https://teams.microsoft.com/l/meetup-join/19%3ameeting_NDU3NGI2NTAtZjE4OC00ZTJiLWI0MzgtYTEzYWZiZmQzYjQ1%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. Eduardo Ribeiro

Advisory Committee Member: Dr. Dan Tulpan

Additional Committee Member: Dr. Trevor DeVries

**Abstract:**

The objectives of this thesis were: 1) to evaluate the variability in the modulation of prepartum dry matter intake (DMI) and its associations with the transition metabolism, health, and performance; and 2) to assess the impact of rumination time prior to calving on the metabolism, health, and performance of dairy cows. Data on rumination and physical activities and blood metabolites improved the performance of linear models explaining the variability among cows in the modulation of prepartum DMI. Cows with a large decline in prepartum DMI were fatter and heavier before calving, had impaired metabolism, but yielded more milk. Although cows with a low level of prepartum DMI had similar metabolic outcomes, they produced less milk in the subsequent lactation. Regarding objective 2, cows with reduced prepartum rumination time had a challenging transition metabolism, but only parous cows were associated with a higher incidence of clinical diseases and impaired performance.