

MSc Defence

**EXPLORING COMPOST-BEDDED PACK MANAGEMENT PRACTICES AND THEIR IMPACT ON
PACK CHARACTERISTICS, COW BEHAVIOUR, AND MILK QUALITY**

Kendra Gillett

Date: December 13th 2024 at 9:00am

The MSc Defence for Kendra Gillett has been scheduled for December 13th, 2024 at 9:00am. The defence will be held in room 141 and online via Teams: https://teams.microsoft.com/l/meetup-join/19%3ameeting_MjA0MzE1YzktNWNIMS00ZWl1LTkwOTgtYzg0YjcwMDAwNDhj%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

Examining Chair: Dr. David Huyben

Advisor: Dr. Renee Bergeron

Advisory Committee Member: Dr. Derek Haley

Additional Committee Member: Dr. Trevor DeVries

Abstract:

Compost bedded pack (CBP) barns offer welfare benefits for dairy cattle by providing a soft resting surface, but managing moisture may be challenging. This study evaluated the effects of shallow (20–25 cm) and deep (35–41 cm) tilling on pack conditions, cow cleanliness, and lying behaviour on 8 commercial CBP farms using a switchback design. Pack samples were analyzed for temperature, moisture, coliforms, aerobic counts, SCC, C:N ratio, and respiration rate. Cow cleanliness and lying behaviour were also recorded. No significant differences were found between treatments. Deeper tilling did not improve composting or animal outcomes, but cows had adequate lying times. The study also examined the relationship between lying behaviour, pack moisture and management on 14 CBP farms. Lying duration was associated with days since bedding, equipment, and bedding type, while lying bouts were associated with THI, days since bedding, and feed pushes.