UNIVERSITY of GUELPH

ONTARIO AGRICULTURAL COLLEGE

DEPARTMENT OF ANIMAL BIOSCIENCES

MSc. Defence

"Feeding Switchgrass as a Direct Replacement for Wheat Straw in Moderate and High Starch Lactating Dairy Rations"

Rebecca Nagle

Date: April 30th, 2021 at 9:00am

The MSc Defence for Rebecca Nagle has been scheduled for Friday April 30th, 2021 at 9:00am. The defence will be held online via Teams: https://teams.microsoft.com/l/meetup-join/19%3ameeting_NWY4ZmE0ODQtNTliNC00ZDhhLWI4NDgtYmU4ZmZiNTllZjlj%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: John Cant

Advisor: Katie Wood

Adv. Committee Member: Gail Carpenter

Additional Member: Michael Steele

Abstract:

The overall objective of this thesis research was to determine if replacing switchgrass (SG) hay for wheat straw (WS) in moderate or high starch lactating dairy rations would affect feed intake, milk production, as well as feeding and sorting behavior. In the first study, mid-lactation cows were fed a moderately high starch diet with the direct substitution of either SG hay or WS. It was determined that SG hay depressed dry matter intake (DMI), milk yield, and protein yield, but did not influence milk fat or protein percent. In the second study, mid-lactation cows were fed diets with either SG hay or WS as a direct substitution when transitioned from a low starch to a moderate or high starch diet. It was determined that SG hay inclusion did not affect DMI nor milk yield but did depress milk fat yield and tended to depress milk protein yield. Also, regardless of SG hay or WS inclusion, cows fed the high starch diets had a greater DMI, milk yield, and milk protein yield, but a lower milk fat percent.