UNIVERSITY of GUELPH

ONTARIO AGRICULTURAL COLLEGE

DEPARTMENT OF ANIMAL BIOSCIENCES

MSc Defence

Genetic Selection for Low Boar Taint as a Welfare Friendly Alternative to Surgical Castration

Lydia Conrad

Date: December 19th 2023 at 9:30am

The MSc Defence for Lydia Conrad has been scheduled for December 19th, 2023 at 9:30am. The defence will be held online via Teams and in room 141: https://teams.microsoft.com/dl/launcher/launcher.html?url=%2F_%23%2Fl%2Fmeetup-join%2F19%3Ameeting_M2JjZjAyOWUtN2QxYy00NWU3LTljM2ItMjJkODBjNTkzMWJj%40thread.v2%2F0%3Fcontext%3D%257b%2522Tid%2522%253a%2522be62a12b-2cad-49a1-a5fa-

The exam committee will consist of:

Examining Chair: Dr. Dan Tulpan

Advisor: Dr. Renee Bergeron

Advisory Committee Member: Dr. Lee-Anne Huber

Additional Committee Member: Dr. Mohsen Jafarikia

Abstract:

The relationship between aggressive and sexual behaviours and boar taint is relatively unknown. Before genetic selection for low boar taint can be implemented as a welfare friendly alternative to castration, behavioural implications must be understood. Using 119 boars from two farms, aggressive and sexual behaviour was monitored, and an ease of handling assessment and an open-door test were performed. Androstenone concentrations were determined to assess boar taint. Genotyping was performed to investigate five previously identified single nucleotide polymorphisms (SNPs). Aggression and sexual behaviours were rare and had few differences between high and low boar taint animals. Differences in androstenone-between genotypes (P = 0.0238, P = 0.0042, P = 0.0286) were found in three of the SNPs investigated. It was concluded that selection for low boar taint would have no impact on behaviour. Further research is required to investigate SNPs in cross-bred animals commonly used within the Canadian pork industry.