UNIVERSITY of GUELPH

ONTARIO AGRICULTURAL COLLEGE

DEPARTMENT OF ANIMAL BIOSCIENCES

MSc Defence

Holding On or Heading Up? The Roosting Preferences of Laying Hen Pullets: A Traditional and Modelling Approach

Madison Penney

Date: Wednesday July 16, 2025 at 9:00am

The PhD Defence for Madison Penney has been scheduled for July 16, 2025 at 9:00am. The defence will be held online via Teams and in room 141: https://teams.microsoft.com/l/meetup-join/19%3ameeting_ZGMzYzI5NTEtZTg0Yi00NDZmLThhNDItN2I0Nzk2NDRlNWMy%40thread.v2/0?context=%7b%22Tid%22%3a%22be62a12b-2cad-49a1-a5fa-85f4f3156a7d%22%2c%22Oid%22%3a%22dfbebf32-99ae-4022-a68f-422f93e11c7f%22%7d

Exam Committee:

Examining Chair: Dr. Katharine Wood

Advisor: Dr. Tina Widowski

Advisory Committee Member: Dr. Vicky Sandilands

Additional Member: Dr. Jennifer Ellis

Abstract:

This thesis investigated the preferences of laying hen pullets for roosting on round perches versus platforms and whether different elevations affect their preference. Platforms and perches were systematically offered such that the pullets were required to choose between type of structure and elevation. Mechanistic modelling was used to reproduce data on the distribution of pullets on structures within a closed system. Laying hen pullets of both brown and white strains preferred to roost on platforms around rather than round perches. Although pullets increased their foot length and perhaps developed the ability to grasp round perches as they aged, their preferences did not reflect this capability unless the perch was the highest available structure after 16 weeks of age. Mechanistic modelling was successfully used to support our observations and offer new research questions. These findings suggest that the code of practice should aim to include alternative structures within their perching definitions.