

MSc Defence

THE EFFECTS OF DIETARY CAMELINA OIL ON PLASMA AND SKIN FATTY ACID PROFILE, IMMUNE AND INFLAMMATORY RESPONSE, AND BEHAVIOURAL REACTIVITY IN HORSES

Samantha Hartwig

Date: December 4th 2024 at 9:00am

The MSc Defence for Samantha Hartwig has been scheduled for December 4th, 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_ODRmODZjMTMtMjEyYy00M2FkLTg0OTMtODhlZjk5ZGQ1N2Uw%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. Jim Squires

Advisor: Dr. Kate Shoveller

Advisory Committee Member: Dr. Jen Ellis

Additional Committee Member: Dr. Wendy Pearson

Abstract:

Camelina oil is increasing in popularity as an alternative to other oils high in α -linolenic acid (ALA) in the equine industry. The objective of this thesis was to evaluate the effects of camelina oil on skin, immune, and inflammatory responses compared to flaxseed and canola oil, and behavioural reactivity compared to either a camelina/algal oil mix or a control. No differences in immune or inflammatory responses were observed in horses fed camelina compared to flaxseed and canola oil, and skin FA profile changed among all oils and favoured n-3 incorporation during supplementation. Additionally, reactivity was not influenced by camelina compared to the camelina/algal oil mix and control. These results suggest that ALA-enriched oils beneficially impact the skin and camelina oil supports a comparable immune and inflammatory response as flaxseed and canola oil. The lack of behavioural impacts suggest oil supplementation in this population of horses does not affect reactivity.