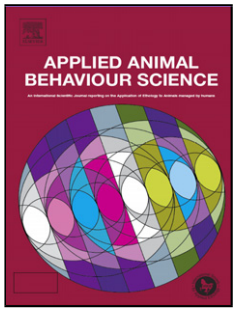

Title: Behavioural and physiological responses to pest flies in pastured dairy cows treated with a natural repellent

Authors: Carrie E. Woolley, Simon Lachance, Trevor J. DeVries, Renée Bergeron

PII: S0168-1591(18)30404-0
DOI: https://doi.org/10.1016/j.applanim.2018.07.009
Reference: APPLAN 4685

To appear in: *APPLAN*

Received date: 15-2-2018
Revised date: 1-7-2018
Accepted date: 14-7-2018

Please cite this article as: Woolley CE, Lachance S, DeVries TJ, Bergeron R, Behavioural and physiological responses to pest flies in pastured dairy cows treated with a natural repellent, *Applied Animal Behaviour Science* (2018), https://doi.org/10.1016/j.applanim.2018.07.009

Behavioural and physiological responses to pest flies in pastured dairy cows treated with a natural repellent

Running head: Responses to pest flies in pastured cows

Carrie E. Woolley[a], Simon Lachance[b], Trevor J. DeVries[a] and Renée Bergeron[a]

[a]University of Guelph, Department of Animal Biosciences, 50 Stone Rd. E., Guelph, Ontario, Canada, N1G 2W1.

[b]University of Guelph, Ridgetown Campus, 120 Main St. East, Ridgetown, Ontario, Canada, N0P 2C0, E-mail: slachanc@uoguelph.ca, Tel.: 1-519-674-1500 Ext. 63633 (Corresponding author)

Highlights

- Cows treated with an essential oil repellent had lower fly densities
- Tail flicks, skin twitches, head throws and leg stamps were reduced for treated cows
- Treated cows grazed longer, spent less time ruminating and walked less than untreated ones.

ABSTRACT

The effects of reducing fly attack intensity, using an essential oil fly repellent, on fly avoidance behaviour, grazing, milk production and stress was evaluated. Twenty Holstein dairy cows on pasture were divided into two groups of 10, which were