

Accepted Manuscript

Title: Risk factors for peri-parturient farmer diagnosed mastitis in New Zealand dairy herds: findings from a retrospective cohort study

Author: A.J. Bates Dohoo I.



PII: S0167-5877(16)30094-0
DOI: <http://dx.doi.org/doi:10.1016/j.prevetmed.2016.03.009>
Reference: PREVET 3999

To appear in: *PREVET*

Received date: 18-1-2016
Revised date: 16-3-2016
Accepted date: 16-3-2016

Please cite this article as: Bates, A.J., Dohoo, I., Risk factors for peri-parturient farmer diagnosed mastitis in New Zealand dairy herds: findings from a retrospective cohort study. *Preventive Veterinary Medicine* <http://dx.doi.org/10.1016/j.prevetmed.2016.03.009>

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**Risk factors for peri-parturient farmer diagnosed mastitis in New Zealand dairy herds:
findings from a retrospective cohort study.**

AJ Bates^{a§}

Dohoo I^b

^aCentre for Dairy Excellence, 20 Wilson Street, Geraldine 7930, New Zealand

^bUniversity of PEI, Charlottetown, Prince Edward Island, C1A 4P3, Canada

[§]Author for correspondence. Email: andrew.bates@vetlife.co.nz

Abstract

Risk factors associated with the development of clinical mastitis (CM) in multiparous cows, defined as detection of abnormalities in the milk by farm staff in the 30 days before and 90 days after calving were studied using a retrospective longitudinal cohort study of 18,162 cows on 30 South Island commercial New Zealand dairy farms. Risk factors studied included age, breed, length of dry period, farm, herd size, yield and individual somatic cell count (ISCC) status 30-60 days before the end of the previous lactation, rainfall at calving and number calving on the same day. A modified Cox Proportional hazards model with time varying effects for breed, age, length of dry period and ISCC was used to identify which factors were significantly associated with an increased hazard of CM after calving. Rainfall at calving > 10mm increased the hazard ratio (HR) by 1.14 (95%CI=1.01-1.30) for 30 days before to 90 days after calving. Milk production > 1.5kgMS/cow/day in the 30-60 days before the end of lactation increased the HR for CM by 1.36 (95%CI=1.21-1.52) for the same period. The effects of breed, age, length of dry period and ISCC 30-60 days before the end

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