



Effects of access to pasture before calving on hoof pathologies in dairy cattle after calving

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INTRODUCTION:

Hoof pathologies are a major concern in dairy production and lameness is considered to be one of the top three reasons for involuntary culling of lactating dairy cattle. The aim of this study was to test the effect of a period of access to pasture before calving, versus continuous freestall housing, on the incidence of sole lesions, dermatitis and heel erosion in dairy cattle during the months that follow calving.

METHODOLOGY:

57 animals were examined at least once during 3 phases of the lactation cycle: pre-calving (200 to 0 days prior to calving), early lactation (0 to 100 DIM), and mid-lactation (100 to 200 DIM). Hind hooves were scored for sole lesions (score 3 or greater; Leach et al. 1998), heel erosion (score 3 or greater with oblique grooves; Smilie et al. 1999) and digital dermatitis (scored as present if “active”).



RESULTS:

Overall incidence of pathologies is shown in Figure 1. Multiparous cows were more affected by sole lesions > 3 than were primiparous animals during the pre-calving period (32 vs. 0 %, $P < 0.01$) but not the mid-lactation period (37 vs. 63 %, $P < 0.05$; Figure 2). Although not significant, cows housed continuously in freestalls tended to be more affected by dermatitis than were pasture animals pre-calving (27 vs. 16 %, $P = 0.22$), in early lactation (53 vs. 32 %, $P = 0.09$) and mid-lactation periods (41 vs. 24 %, $P = 0.15$; Figure 3).

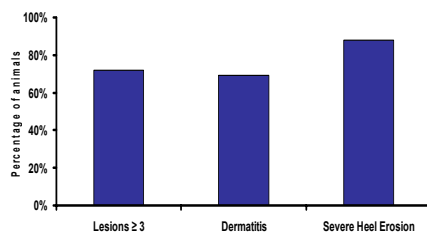


Figure 1. Overall incidence of pathologies

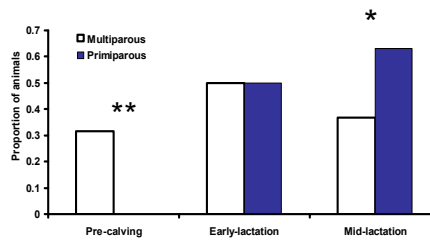


Figure 2. Proportion of animals with sole lesions

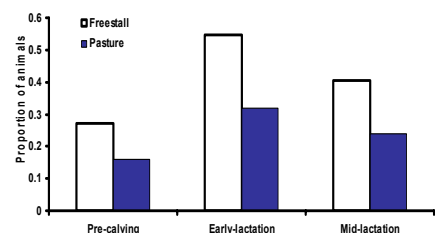


Figure 3. Proportion of animals with active dermatitis

IMPLICATIONS:

These results show a high prevalence of all three hoof pathologies recorded, and correspond with previous work showing that risk varies with age and stage of lactation. The results also indicate that a period of access to pasture before calving has only minor effects on hoof health after calving. Other approaches are necessary to address these common pathologies in dairy cattle.