Effect of access to pasture on claw health in Swedish dairy cows
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Our objective was to study the effect of access to pasture on claw health in dairy cows. Factors of interest were the length of the pasture period, hours per day with access to pasture and cow density at pasture. Information on housing and pasture management in 2010 were collected from farmers by phone interviews. Information on individual cows, such as claw-trimmings and parity, were retrieved from the Swedish Dairy Association. The risk of having a claw disorder at claw trimming after the pasture period was analyzed at the individual level using multilevel logistic regression and including claw trimmer and herd as random effects. The diagnoses analyzed were; dermatitis (mild), digital dermatitis (severe dermatitis, DD), sole ulcer (also including severe sole haemorrhage) and heel horn erosion. Information from 174 herds and 16,364 cows were used in the analyses (76 and 41 herds for dermatitis and DD). The median (10th/90th percentile) length of the pasture period was 123 days (92/153), hours per day with access to pasture was 11 hours (6/20) and cow density was 4.6 cows per ha pasture (1.9/15.2). Significant associations were found between the length of the pasture period and the risk of sole ulcer and between the amount of daily access to pasture and DD. However, the risk for either of these disorders did not decrease linearly with a longer pasture period or with a higher daily access to pasture. Cow density at pasture was significantly associated with the risk of sole ulcer, dermatitis and DD. The risk of dermatitis and sole ulcer were highest in herds with the highest cow density but the risk of DD did not decrease with lower cow density. In conclusion, in our study most cows had access to pasture to a larger extent than the law stipulates. The amount of pasture was associated to sole ulcer, dermatitis and DD but not to heel horn erosion. We expected a decreased risk of claw disorders with increasing access to pasture but this pattern was not seen.