

**THE EFFECT OF MAINTENANCE CLAW TRIMMING ON THE PREVALENCE OF CLAW LESIONS AND THE NEED FOR THERAPEUTIC CLAW TRIMMING**

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A 2-year experiment on the effect of claw trimming on the prevalence of lameness and claw lesions was performed in 77 dairy herds (3,498 cows). Cows within each herd were blocked according to breed, parity and stage of lactation and allocated to receive one of two treatments: autumn trimming (n=2,015), or no autumn trimming (n=2,432). At the time of allocation to treatment groups, 524 animals were heifers, 1,528 primiparous cows, 1,646 cows in parity 2-3 and 682 in parity 4 or higher. A majority of examined animals were Swedish Holsteins (n=1,983) or Swedish Red and Whites (n=1,389). Only the claws of cows allocated to the autumn-trimming treatment were trimmed in the autumn while the claws of all animals were trimmed in the spring, on average 4.5 months after respective autumn trimming. The outcomes were claw measurements and claw health (prevalence and severity of claw lesions and lameness) as measured at spring trimming and acute claw treatments between scheduled trimmings. The average growth rate of the toe wall (measured as the difference between the toe length after autumn, and before spring claw trimming) appeared greater for the trimmed than for the not trimmed, with a marked variation in net growth between housing systems. When controlling for clustering on the herd-within-year level and for the effects of individual and herd-level covariates, the claw trimming was associated with significantly lower odds of lameness (odds ratio, OR = 0.64; 95% confidence interval, CI = [0.45 to 0.91]) and of the following lesions in the hind claws: moderate to severe haemorrhage of the sole or white line (OR = 0.86; 95% CI = [0.75 to 0.99]), sole ulcer (OR = 0.58; 95% CI = [0.46 to 0.73]) and white line fissure or double sole (OR = 0.71; 95% CI = [0.59 to 0.85]). No effect of claw trimming could be shown for moderate to severe heel horn erosion or dermatitis (OR = 0.96; 95% CI = [0.84, 1.09]). Sixty-four cows in 24 herds needed therapeutic claw treatments between scheduled trimmings; the relative risk of acute treatment was 2.0 times higher (95% confidence interval of [1.24, 3.27]) for cows that had not been trimmed in the autumn.