

# Prevalence of Digital Dermatitis in Alberta Dairy Cattle Using Intensive Copper Sulphate Footbath Protocol

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Digital dermatitis (DD) comprises 43% of all hoof lesions associated with lameness in dairy cattle in Alberta, and likely Canada. DD is highly infectious and on-farm management procedures routinely consist of differing footbath protocols. A clinical trial was conducted to determine the effect of an intensive copper sulphate footbath protocol on the prevalence of all DD lesion stages and active DD lesions.

10 Alberta dairy farms were recruited to participate; 5 farms were assigned to an intensive copper sulfate protocol (5% solution, once a day, Monday – Friday), and 5 farms continued their previous footbath protocol (non-interference). Lesions of hind feet of all lactating dairy cattle were scored in 3-week intervals for copper sulfate group and 6-week intervals for non-interference group. Scoring was done in the milking parlor using the M0-M4 scoring system by Dopfer *et al.* (1997). Prevalence of all stages of DD lesions and active lesions (M1 and M2 stage) are reported in Table 1.

**Table 1. Prevalence (%) of all and active (M1 and M2) DD lesions during trial.**

Treatment	Lesions	Initial	Week 3	Week 6	Week 9	Week12
Copper sulfate	All DD	70	66	62	57	49
	Active	4.6	4.6	4.0	3.0	4.2
Non-interference	All DD	68		50		52
	Active	15		8.8		18

**Implications:** DD lesions are highly prevalent on Alberta dairy farms despite on-farm footbath and treatment protocols. However, the use of an intensive copper sulphate footbath protocol decreased all DD lesion stages and maintained a low prevalence of active lesions compared to farms with less specific protocols. Future research should focus on intensive footbath protocols using other products.