

# Dairy Cattle Hoof Health



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<http://dairyhoofhealth.info>

## Pre-partum DD in Heifers Affects Post-partum Performance and Hoof Health

Researchers at the University of Wisconsin evaluated the hoof health of 719 heifers for 6 months prior to first calving. Heifers were classified into 3 groups according to the number of times digital dermatitis (DD) was detected in this period: group 1 heifers had no DD; group 2 had a single DD lesion; group 3 had multiple DD lesions.

Compared with those in group 1, group 3 heifers were 55% as likely to conceive at first service and remained open for an average of 25 extra days. Group 2 heifers produced 198 kg less milk than group 1 heifers in their first 305 days of lactation; group 3 heifers produced 334 kg less.

In relation to hoof health, group 2 heifers had a 5.16 times greater risk of having DD in first lactation than group 1 heifers. The relative risk for group 3 heifers was 12.5 times greater than for group 1 animals.

	Group 1 No Lesions	Group 2 1 Lesion	Group 3 2+ Lesions
1st Service Conception %	42.3	36.3	29.0
Days Open	132	134	157
305-day Milk kg	12,272	12,074	11,938
Percentage of heifers with DD lesions in first lactation:			
No DD Lesions	86.3	54.4	32.4
1 DD Lesion	7.7	20.0	20.7
2 DD Lesions	1.7	11.2	9.0
3+ DD Lesions	4.3	14.4	37.8

The authors recommend that, given the long-term effects of DD on health, reproduction and production, one of the priorities during the rearing period of dairy heifers should be an efficient DD prevention and control program.

source: A. Gomez et al., *J Dairy Sci* 98:1 (2015)

## Introducing the Western Canadian Certified Hoof Trimmers Association

Hoof trimmers in western Canada recently announced the formation of the Western Canadian Certified Hoof Trimmers Association (WCCHTA).

Although most members of the new organization are also active in the (International) Hoof Trimmers Association ([www.hooftrimmers.org](http://www.hooftrimmers.org)), the WCCHTA requires members to earn certification from the Dutch PTC+ Oenkerk institute.

Advanced training in anatomy, biomechanics, risk factors for lameness and the Toussaint-Raven 5-step hoof trimming method has been provided by Pieter Kloosterman of PTC+ in two workshops conducted on central Alberta dairy farms. In July 2015, 4 trimmers who had earned their certification in the initial 2012 course began the process of qualifying as instructors while 6 additional trimmers earned their primary certification. The skills and knowledge learned will constantly be tested through a re-check procedure which means that the certified trimmer will have to review hooftrimming protocols on a regular basis.

The mission of the WCCHTA is to demonstrate to the dairy industry, dairy health care professionals and the public, a standard and professionalism in bovine hoof trimming, hoof care, stockmanship and animal welfare that will be maintained through continuing education.

With the formation of the WCCHTA, western Canadian dairy farmers now have the option to hire a hoof trimmer with a standard of skill and knowledge of hoof health care and prevention established through evidence-based treatment and trimming protocols.

For more information about the WCCHTA or to identify a certified trimmer practising in your area, contact:

Robin Geier, WCCHTA President, CasperTrimming Ltd., (403)818-4675



WCCHTA trimmers utilize computerized lesion recording systems such as Hoof Supervisor®, shown at the top of this photo.

## A Multi-Platform Hoof Lesion Identification App

Hoof trimmers who use Hoof Supervisor® (HS) lesion recording software have an excellent pictorial, touch-screen based system for selecting hoof lesions, based on the claw zone where they appear.

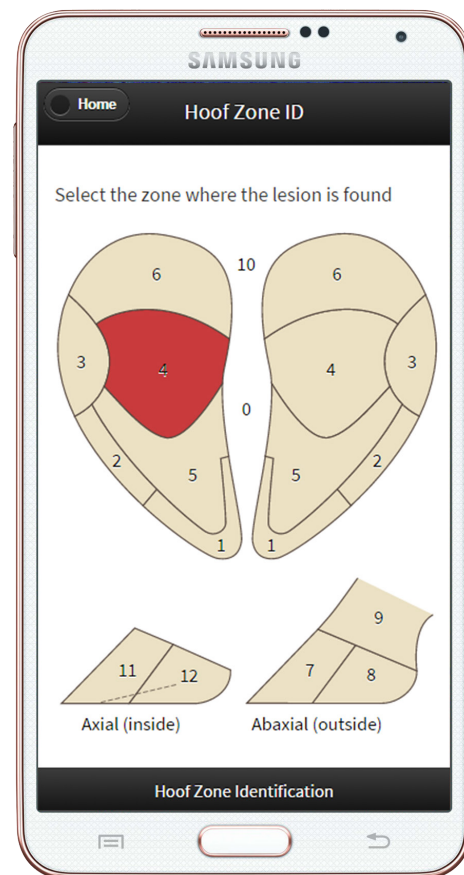
For others wanting to identify and deal with a lesion they see on inspection of a hoof, a web- or mobile phone-based lesion selector similar to that used in the HS system will be helpful. After choosing the zone where the lesion is found, the lesions commonly found in that zone are listed. By examining photos of each of those candidate lesions, the user can decide on which lesion (s)he is seeing. A detailed 'Causes, Prevention and Treatment' section for each lesion will help in the development an action plan to deal with the issue.

A web-based version of the app is available on the Dairy Cattle Hoof Health blog site:

<http://dairyhoofhealth.info/LesionID/index.html>

A beta-test mobile app version for Android smartphones and tablets can be downloaded directly to those devices by capturing the QR code on the right using any QR code reader app. After downloading the app, pull down the notifications area of your device, tap on the LesionID notification (HoofLesionID-debug.apk) to initiate installation of the app, then accept all prompts to install. Since this is a beta-test version of the app, your feedback would be appreciated. Please let us know how the app worked for you by clicking the 'LEAVE A COMMENT' button on the blog site page describing the apps:

<http://dairyhoofhealth.info/lesions/lesion-identification/web-based-lesion-id-app/>



## An Optimum Footbath Design

A 2011-12 survey of 82 Alberta dairy farms revealed a wide variety of footbath dimensions, products used and foot bathing schedules. Footbath lengths varied from 1.0 to 5.8 m; widths ranged from 0.35 to 2.2 m; step-in heights were from 5 to 30 cm. What dimensions provide for consistent immersion of hooves with minimum product volume?

A study at the University of Wisconsin used a custom-designed footbath to test four different bath dimensions with two different step-in heights. The number of immersions per rear foot was counted for each footbath design for each cow passing through the bath on two consecutive days.

While a higher step-in height significantly increased the number of foot immersions, the effect was small compared to the effect of length. The probability of each rear foot being immersed at least twice reached 95% at a bath length of 3.0 m, and a significant increase in the frequency of three and four immersions per foot was observed when bath length was increased to 3.7 m.

In order to optimize the number of foot immersions per cow pass, while limiting the footbath volume, the Wisconsin study recommends a bath 3.0-3.7 m long, 0.5-0.6 m wide, with a 28 cm step-in height. Sloped side walls facilitate the limited bath width while accommodating larger animals. The diagram above illustrates a footbath design that optimizes cow flow and the number of foot immersions per cow, while minimizing bath volume.

*sources: Laura Solano, WCDS 2014; N. B. Cook, et al., The Veterinary Journal 193:669 (2012)*

