

UW-Extension Dairy Team

2016



Prevalence of Digital Dermatitis in Dairy Cattle in Eastern Wisconsin Dairy Herds

OBJECTIVES:

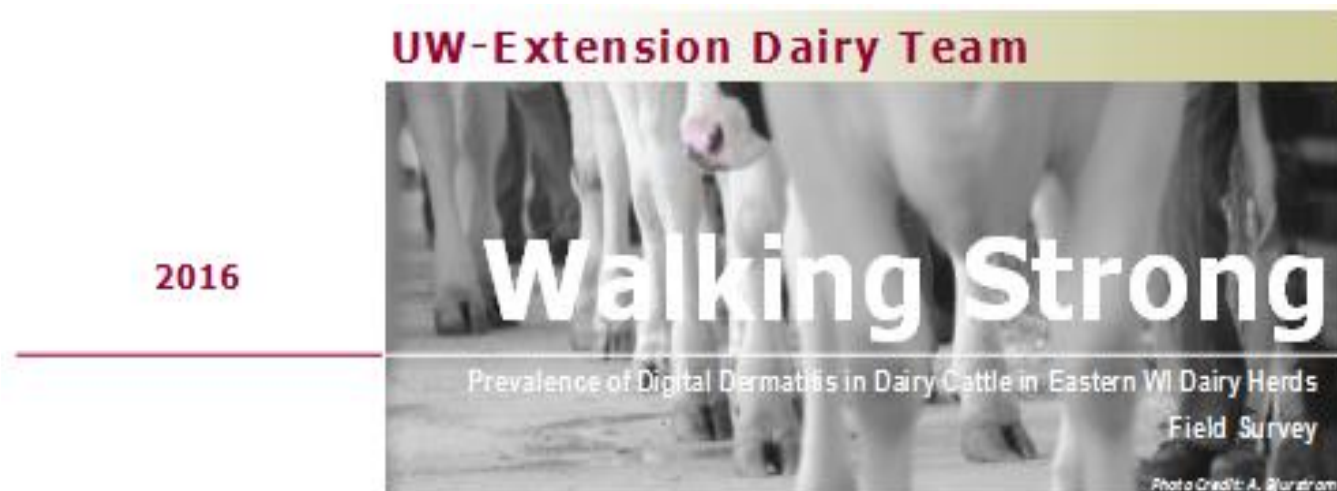
- Determine the prevalence of various stages (M0, M2 or M4) of Digital Dermatitis (DD) in selected groups of cows on eastern Wisconsin dairy operations.
- Determine hoof health management practices utilized to manage DD on eastern Wisconsin dairy operations.

HIGHLIGHT OF RESULTS:

- 45 eastern Wisconsin dairy operations.
- 11,817 cows identified, scored, and recorded for stage and chronicity of digital dermatitis (DD).
- Prevalence of DD within the group of 11,817 cows scored and recorded indicated the following:
 - M0 (no lesion) 81.1 percent
 - M2 (acute, active lesion) 1.8 percent
 - M4 (chronic, non-active lesion) 17.1 percent
- Prevalence of DD based on operation type is shown in the table below:

Operation Type	M0 (%)	M2 (%)	M4 (%)
Small (tie-stall)	76.1	5.8	17.4
Medium (less than 700 cows, freestall)	72.0	3.2	24.6
Large (700 cows and more, freestall)	82.9	1.1	16.0

- 17.8 percent of herds had a low (≤ 5 percent) prevalence of DD.
- Prevalence of DD between tiestall and freestall operations was similar.
- Concentration of footbath solution, trimming frequency, and type of treatment had a significant ($P > 0.1$) impact on the types and prevalence of DD lesions.



RECOMMENDATIONS FOR MANAGING DIGITAL DERMATITIS

- The UW School of Veterinary Medicine's Dairyland Initiative Footbath Blueprint <https://thedairylandinitiative.vetmed.wisc.edu/> recommends footbaths dimensions to be:
 - 10 to 12 feet long
 - 24 inches wide
 - 10-inch step-in or depth height
- Footbaths should be changed after 150 to 300 cows have passed through the footbath.
- Footbath solution should be maintained at 3.5 to 5.5 pH. Maintaining pH at normal skin pH level will help maintain healthy skin condition and improve treatment results.
- The recommended concentration for a copper sulfate (CuSO₄) footbath is two to five percent.
- Maintenance footbaths should be offered a minimum of three times per week. In the event of an outbreak, frequency should increase to four to five times per week.
- It is recommended to clean and apply two grams oxytetracycline powder to the affected area when treating an active digital dermatitis (DD) lesion. (*Please note:* the use of oxytetracycline powder for treatment of DD is considered extra-labeled prescription drug-use and must be used in this manner through a valid veterinary-client-patient-relationship (VCPR)).
- The purpose of a foot wrap is to ensure the treated lesion is dry and has contact with the antibiotics powder for a minimum of 30 minutes. Wraps should be removed within 24 hours, if they have not fallen off, to risk of injury and to perpetuate the foot disease.

**Recommendations based from 2017 UW-Extension Hoof Health Training conducted by Dr. Dörte Döpfer, DVM, MSc, PhD, UW-School of Veterinary Medicine*

For UW-Extension factsheets focusing on hoof health, please visit:

<http://fyi.uwex.edu/dairy/> for the Walking Strong Factsheet series on Dairy Hoof Health