

Hoof Defense™

A New Approach To Hoof Health



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Digital dermatitis, more commonly referred to as hairy heel warts, is the most common infectious cause of lameness in dairy cattle¹. The painful lesions are a result of compromised hoof or skin condition leading to an infection of the skin surface.

The most common location of heel warts are on the back feet, between the claws where the hoof heels meet the skin, below the dew claws. Lameness caused by hairy heel warts often reduces feed intake, subsequently negatively impacting milk production. Affected cows increase their laying time in the stalls, and are less likely to compete at the bunk.

Controlling the spread of heel warts and other conditions that compromise hoof health requires implementing preventative measures. Routine trimming and the use of a hoof bath are important tools that will reduce the impact of lameness in a dairy herd.

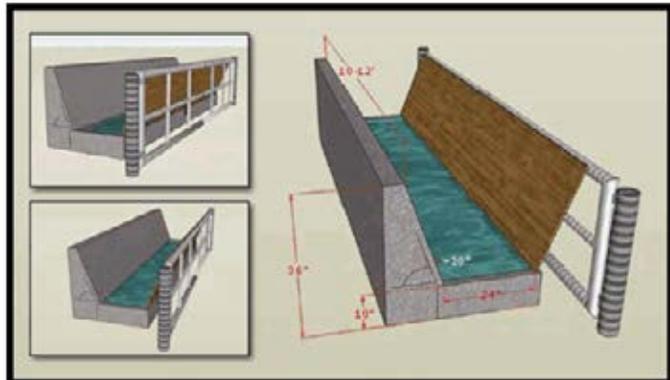
What Makes An Effective Hoof Bath?

University research has recently introduced new recommendations for hoof bath sizing. Previously, hoof bath recommendations used shorter and wider designs, resulting in less steps and decreased contact time, making them less effective.

Studies have shown an increase in hoof bath effectiveness when dimensions of the hoof bath are longer and narrower (see Figure 1). New curb height recommendations help slow cow travel through the hoof bath, allowing more contact time with the solution and the cow's feet. A slower pace and longer design causes more steps to be needed to pass through the bath. This increases soak time and solution penetration.

When evaluating the effectiveness of your hoof bath program, it is important to take into consideration

Figure 1



Picture courtesy of The Dairyland Initiative

factors that might inhibit solution penetration and decrease hoof health success such as:

- Solution type
- Frequency of changing solution
- Volume
- Placement
- Impact of organic matter

Hoof Defense™: Why Use Chlorine Dioxide?

Chlorine dioxide takes a different approach to hoof health by attacking harmful pathogens and bacteria from the cell wall inward². Chlorine dioxide provides the quickest action at the lowest concentration of use compared to most traditional solutions.²

Chlorine dioxide remains effective when in contact with organic matter and has a wider window of safety for handling. It is very soluble in water (10 times more so than chlorine), especially cold water. This high solubility makes the use of warm water unnecessary to hold the foot bath in suspension, resulting in a better quality solution overall.² Chlorine dioxide based foot bath solutions are not currently approved on organic farming operations but the National Organic Program does allow

chlorine dioxide as a disinfectant for cleaning equipment, feeding utensils and animal housing.

Hoof Defense™ is available as an activator and base formula (see Figure 2). See Table 1 for mixing directions and sizing recommendations. Farmers may choose to mix copper sulfate into the hoof bath at a reduced rate. Hoof Defense™ creates an acidic solution which holds the copper sulfate in

Figure 2



suspension better than regular solutions, reducing the risk of it settling out and allowing a lower copper sulfate inclusion rate.

Directions for Making Hoof Defense™ Concentrate:

1. Fill a 5 gallon pail with 3 gallons of cold water
2. Add appropriate volume of activator from Table 1 and rinse out measuring cup
3. Add appropriate volume of base from Table 1 and rinse out measuring cup
4. Seal container (airtight) and leave for at least 30 minutes
5. Fill hoof bath with cool water and add copper sulfate
6. Add Hoof Defense™ Concentrate to footbath

To make an economical decision for herd wide control of hairy heel warts with proven, effective results, turn to Hoof Defense™. For tips on how to get the most out of your hoof bath protocol, contact Crystal Creek® at 1-888-376-6777 or visit our website at www.crystalcreeknatural.com.

Sources:

¹ Tomlinson, Dana. "Foot Fitness: Preventing Digital Dermatitis." AgWeb. Farm Journal, 01 Oct. 2014. Web. 24 Apr. 2017.

² Acepis Calf Hygiene Manual

Table 1

Foot Bath Size	Water	Copper Sulfate	Activator	Base
60 Gallons	3 Gallons	10 lb.	1 Quart	1 Quart
70 Gallons	3 Gallons	11.75 lb.	1.1 Quarts	1.1 Quarts
80 Gallons	3 Gallons	13.25 lb.	1.25 Quarts	1.25 Quarts