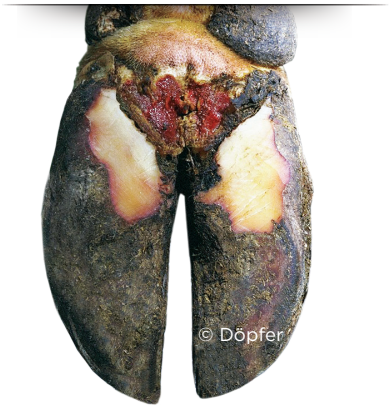
Understanding
Digital Dermatitis
in Dairy and Beef Cattle

ZINPRO®
ADVANCING PERFORMANCE TOGETHER



Digitial Dermatitis (DD) is the most prevalent infectious hoof lesion and is present in dairy, beef and even young-stock cattle. It is described as raw, bright-red or black circular inflammation of the skin above the heel bulbs, with edges forming a white margin and overlong hairs that surround sores or are adjacent to thick, hairy, wart-like growths.

Pathogenesis

Damaged skin due to chronic exposure to moisture and chemicals as well as mechanical irritation. Infection of the skin (by different bacteria such as *Treponema*) leads to swelling, pain and ultimately forming an ulcer. If left untreated, these ulcers can become chronic and cause the skin to thicken and in some cases cause growth of skin that look like hairs protruding from the skin surface.

Identification and Progression of DD

Understanding how to identify the presence and severity of digital dermatitis is key to keeping the disease under control. Once the disease is introduced into a herd, it spreads rapidly and prevalence often exceeds 70%.

There are five stages of digital dermatitis originally identified by Döpfer *et al*., 1997, beginning with M0, which is normal digital skin with no signs of dermatitis.

M1 Early / Subclinical

M2 Painful / Acute Ulcer

M4 Proliferative

Prevention

- Improved management, hygiene
- Clean and dry environment
- Pay attention to biosecurity
- Footbaths
- Zinpro® Availa® Plus

Treatment

- Topical

Risk Factors

- Introducing new animals into the herd (biosecurity)
- Poor hygiene, such as muddy pens and inadequate footbath programs
- Chemical/physical skin trauma
- Early lactation cows and young cattle

Digital Dermatitis Develops

Complications

- Wall and toe abscesses
- Pre-mammary dermal sores
- Layered heel horn erosion and abnormally shaped claws
- Poor hygiene in interdigital space

DD Prevalence Level Rating

High	More than 25%
Low	Less than 5%

Importance of Keeping Heifers DD-free

No DD pre-calving =	80%	Stay clean in the first lactation
One case of DD pre-calving =	50%	Stay clean in the first lactation
Repeated cases pre-calving =	70%	Repeatedly get cases of DD

Zinpro® Availa® Plus Provides Breakthrough in **Hoof Management**

Zinpro Availa Plus contains zinc, manganese and copper chelates of amino acids hydrate, plus iodine as a counter ion and has been developed specifically for use in cattle. When fed as part of a specific in-feed mineral formula and a well-balanced diet, it has shown to significantly decrease the prevalence and severity of digital dermatitis in cattle.

Rethink Hoof Health Management

Making a change to common hoof health practices and incorporating Zinpro Availa Plus will:

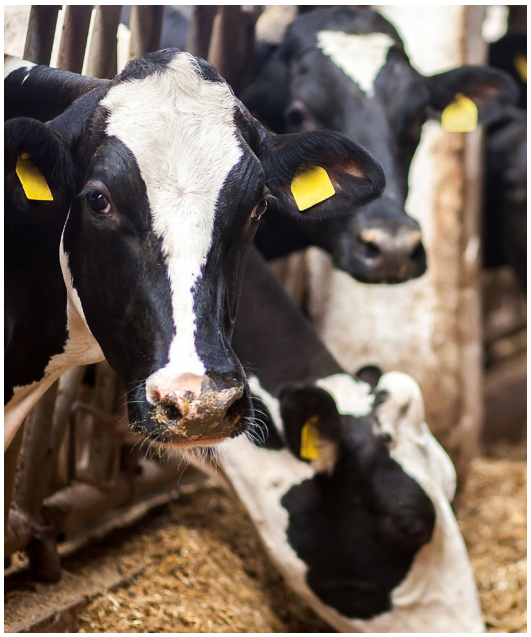
DAIRY

- ↑ Claw integrity, reproduction/ fertility rates, feed efficiency, milk yield and milk quality (lower SCC)
- ↓ Veterinary bills and costs associated with footbaths and foot condition

BEEF

- ↑ Hoof integrity, average daily gain, feed conversion, live and carcass weight
- ↓ Mortality and veterinary costs

Benefits of Feeding Heifers with Zinpro Availa Plus



45% ↓ REDUCTION IN DIGITAL DERMATITIS[a]

192kg ↑ MORE MILK[b]

3.7% ↑ HIGHER SURVIVAL RATE[c]

11% ↑ BETTER FEED EFFICIENCY[c]

[a] Gomez, A. *et al*., 2014. A randomized trial to evaluate the effect of a trace mineral premix on the incidence of active digital dermatitis lesions in cattle. J. Dairy Sci. 97:6211-6222.
[b] Gomez, A. *et al*., 2015. First-lactation performance in cows affected by digital dermatitis during the rearing period. J. Dairy Sci. 98:4487-4498
[c] Zinpro internal study 2015

ZINPRO® AVAILA® PLUS

For more information: contact your Zinpro representative or visit **zinpro.com**