

CLAW LESION IDENTIFICATION

in DAIRY CATTLE



*This brochure was co-developed by Zinpro Performance Minerals
and The International Lameness Committee.*



DAIRY CLAW LESION

Identification

Non-Infectious



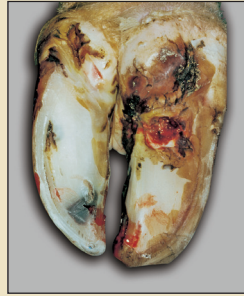
WHITE LINE LESION (W)

Also called: White Line Separation, White Line Disease

Zones Affected: 1, 2, 3

Common signs:

- In mild cases, a void occurs in the junction between the sole and the wall
- In severe cases, abscesses form, generally at the heel-sole-wall juncture (zone 3)



SOLE ULCER (U)

Also called: Pododermatitis Circumscripta, Rusterholz Disease

Zone Affected: 4

Common signs:

- Raw sore (horn erosive defect) occurring at sole-heel junction on inner side of outside hind claw
- Often occurs in both outside hind claws (when present)



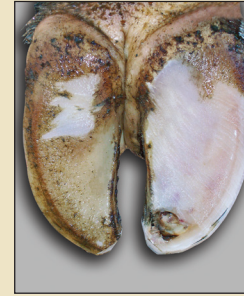
SOLE HEMORRHAGE (H)

Also called: Sole Bruising

Zones Affected: 4, 5, 6

Common signs:

- Slight to significant red (or blue) coloration of the sole
- Not to be confused with natural black pigmentation of claw horn



TOE ULCER (T)

Also called: Toe Necrosis, Apical Necrotica

Zone Affected: 1

Common signs:

- Black mark, blood stain and/or rupture in white line or sole at the toe
- Caused by rotation of pedal bone within the claw pressing down on the sole or thin soles



CORKSCREW CLAW (C)

Zone Affected: 7

Common signs:

- Rapid irregular growth of the claw with rotation
- Sole displaced inward and rear
- Causes difficulty walking



HORIZONTAL FISSURE OR HARDSHIP GROOVE (G)

Also called: Horizontal Wall Fissure, Fissura Ungulae Transversalis

Zones Affected: 7, 8

Common signs:

- Claw wall parallel to the hair-line cracks and eventually breaks off
- Caused by nutritional or metabolic stress



VERTICAL FISSURE (V)

Also called: Sandcrack, Fissura Ungulae Longitudinalis

Zones Affected: 7, 8

Common signs:

- Vertical split in front or side of claw
- Occurs primarily on outside front claws
- Often the most painful cause of lameness



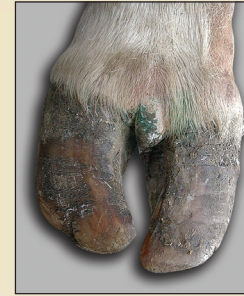
AXIAL FISSURE (X)

Also called: Axial Wall Fissure

Zones Affected: 11, 12

Common signs:

- Deep groove on interior surface of claw wall parallel to front claw surface
- Bleeding may indicate lesion presence
- Mild to severe lameness



INTERDIGITAL HYPERPLASIA (K)

Also called: Corn, Interdigital Fibroma, Interdigital Growth

Zone Affected: 0

Common signs:

- Rapid growth of skin and/or tissue between the digits, forming a firm mass
- Secondary infection likely with severe (large) lesion



THIN SOLE (Z)

Zones Affected: 4, 5

Common signs:

- Sole is thin and flexible when pressure is applied
- Caused by insufficient length of toe, excessive wear or over trimming
- Minimum claw length of 3 inches (7.5 cm) does not apply to heifers or animals that weigh less than 900 lb (400 kg)

Infectious



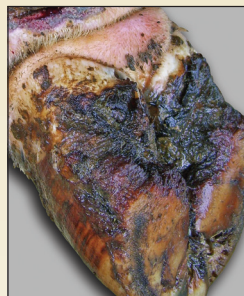
DIGITAL DERMATITIS (D)

Also called: Hairy Heel Warts, Mortellaro Disease

Zones Affected: 9, 10

Common signs:

- Raw, bright-red or black circular growth above the heel bulbs, with edges forming a white opaque ring or hard, thin, hairy, wart-like growths or sores
- Affected cattle are reluctant to walk or are lame

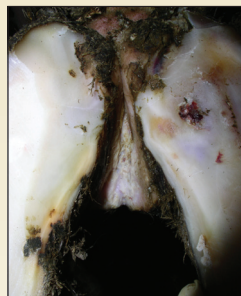


HEEL EROSION (E)

Zone Affected: 6

Common signs:

- Severe erosion of heel in irregular pit-like depressions or "V" shaped grooves causing lameness
- Instability of the claw due to lost or damaged horn resulting in uneven weight bearing
- Heel becomes sore as erosion progresses



INTERDIGITAL DERMATITIS (I)

Also called: Stable Foot Rot, Scald

Zones Affected: 0, 10

Common signs:

- Discharge and destruction of skin between the claws
- Bulb horn clefts leading to contusion of the corium and ulceration



FOOT ROT, FOUL OR PHLEGMON (F)

Also called: Interdigital Phlegmon, Interdigital Necrobacillosis

Zone Affected: 9

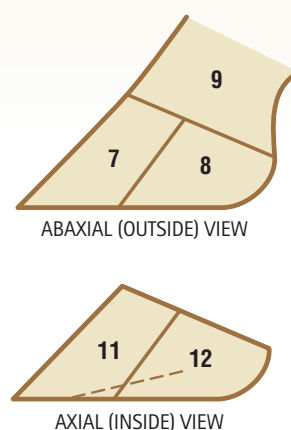
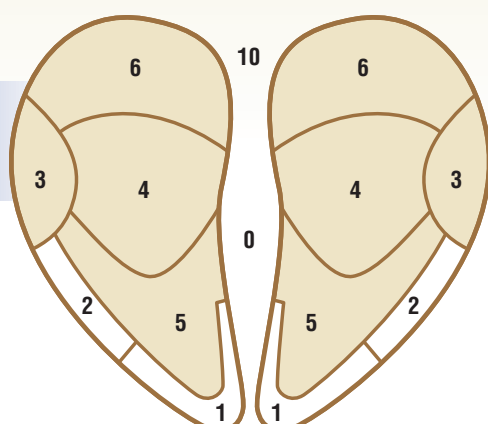
Common signs:

- Swelling of the entire foot (equally) including the dew claws
- Separation of digits, infection produces a noticeable foul odor
- Animals will likely have a fever

LESION ABBREVIATIONS

- C = Corkscrew Claw
- D = Digital Dermatitis
- E = Heel Erosion
- F = Foot Rot, Foul or Phlegmon
- G = Horizontal Fissure or Hardship Groove
- H = Sole Hemorrhage
- I = Interdigital Dermatitis
- K = Interdigital Hyperplasia
- T = Toe Ulcer
- U = Sole Ulcer
- V = Vertical Fissure
- W = White Line Lesion
- X = Axial Fissure
- Z = Thin Sole

Claw Zones



PERFORMANCE MINERALS®

www.zinpro.com

Establishing Processes to Reduce Lameness

By recording lesions and where they occur, producers can implement a more targeted treatment plan and track over time which lesions are most prevalent in their cattle.

- Properly identify and record the observed lesions; the proper treatment for the different lesions and the proper corrective action plan for decreasing prevalence can vary.
- Record the zone where lesions occur to help determine the root cause.

Non-Infectious Lesion Risk Factors

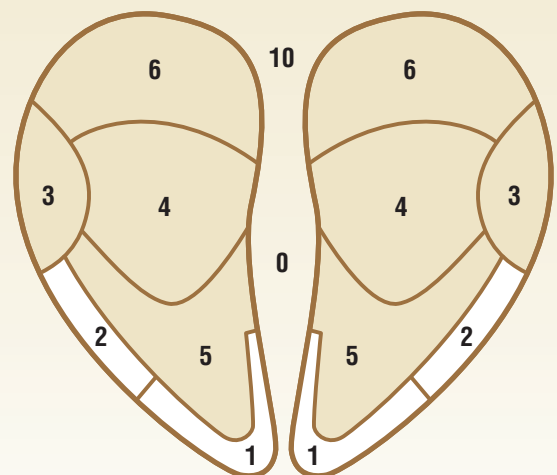
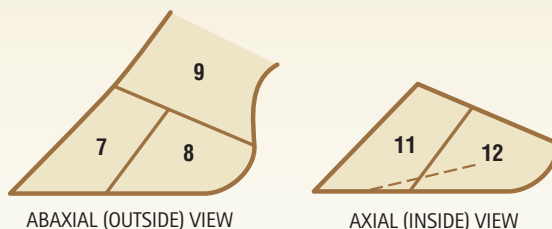
- Lack of claw trimming, infrequent claw trimming or improper claw trimming
- More than three hours per day spent standing in the holding area, stall area and/or excessive time locked in headlocks
- Poorly designed stalls creating discomfort
- Insufficient lying time
- Limited access to feed due to overstocking or insufficient feed bunk space
- Flooring conducive to excess horn wear
- Nutritional factors, such as feeding excessive amounts of rumen fermentable carbohydrates, lack of effective fiber, excessive amounts of protein, TMR sorting, inconsistent feeding times and inadequate trace mineral status
- Post-calving metabolic disorders such as milk fever and ketosis
- Heat stress, resulting in lower rumen pH and cows spending more time standing
- Abrupt transition (nutrition and environment) from dry to lactation period

Infectious Lesion Risk Factors

- Wet conditions
- Poor foot hygiene
- Presence of infected animals in the herd
- Poor footbath management

Regardless of whether the lesion is non-infectious or infectious in nature, one major factor contributing to lameness reduction success is the prompt and effective treatment of all lesions as early as possible.

Claw Zones



www.zinpro.com