CLAW LESION IDENTIFICATION in DAIRY CATTLE
**DAIRY CLAW LESION Identification**

**Non-Infectious**

1. **WHITE LINE LESION (W)**
   - Also called: White Line Separation, White Line Disease
   - Zones Affected: 1, 2, 3, 9, 10
   - Common signs:
     - Mild to severe lameness
     - Instability of the claw due to lost or damaged horn resulting in uneven weight bearing
     - Vertical split in front or side of claw
     - Severe erosion of heel in irregular “V” shaped groove causing lameness
   - Common signs:
     - Separation of digits, infection produces a noticeable foul odor
     - Swelling of the entire foot (equally)

2. **SOLE ULCER (U)**
   - Also called: Sole Wound
   - Zones Affected: 6, 7, 8
   - Common signs:
     - Bulb horn clefts leading to contusion
     - Discharge and destruction of skin
   - Common signs:
     - Edges forming a white opaque ring or hard, thin, hairy wart-like growths or sores
     - Affected cattle are reluctant to walk or are lame

3. **SOLE HEMORRHAGE (H)**
   - Also called: Stable Foot Rot, Scald
   - Zones Affected: 0, 10
   - Common signs:
     - Black mark, blood stain and/or rupture in white line or sole at the toe
     - Recent injury to the foot

4. **HEEL EROSION (E)**
   - Also called: Heel Erosion
   - Zones Affected: 6
   - Common signs:
     - Separation of digits, infection produces a noticeable foul odor
     - Swelling of the entire foot (equally)

5. **INTERDIGITAL ULCER (I)**
   - Also called: Toe Necrosis, Interdigital Fibroma, Hyperplasia
   - Zones Affected: 4, 5, 6
   - Common signs:
     - Separation of digits, infection produces a noticeable foul odor
     - Swelling of the entire foot (equally)

6. **SOLE ULCER (U)**
   - Also called: Sole Wound
   - Zones Affected: 6, 7, 8
   - Common signs:
     - Bulb horn clefts leading to contusion
     - Discharge and destruction of skin
   - Common signs:
     - Edges forming a white opaque ring or hard, thin, hairy wart-like growths or sores
     - Affected cattle are reluctant to walk or are lame

7. **INTERDIGITAL HYPERPLASIA (K)**
   - Also called: Corn, Interdigital Fibroma, Hyperplasia
   - Zones Affected: 4, 5, 6
   - Common signs:
     - Rapid growth of skin and/or tissue between the digits, forming a firm mass
     - Secondary infection likely with severe (large) lesion
     - Causes difficulty walking

8. **THIN SOLE (Z)**
   - Zones Affected: 1, 2
   - Common signs:
     - Sole is thin and flexible when pressure is applied
     - Not to be confused with natural black pigmentation of claw horn

**Infectious**

1. **CORKSCREW CLAW (C)**
   - Also called: Corkscrew Claw
   - Zones Affected: 4, 5
   - Common signs:
     - Heel becomes sore as erosion progresses
     - Instability of the claw due to lost or damaged horn resulting in uneven weight bearing
     - Heel becomes sore as erosion progresses

2. **FOOT ROT, FOUL OR PHLEGMON (F)**
   - Also called: Interdigital Phlegmon
   - Zones Affected: 9
   - Common signs:
     - Instability of the claw due to lost or damaged horn resulting in uneven weight bearing
     - Heel becomes sore as erosion progresses

3. **INTERDIGITAL DERMATITIS (I)**
   - Also called: Interdigital Dermatitis
   - Zones Affected: 4, 5, 6
   - Common signs:
     - Separation of digits, infection produces a noticeable foul odor
     - Swelling of the entire foot (equally)

4. **TOE ULCER (T)**
   - Also called: Toe Necrosis
   - Zones Affected: 1, 2
   - Common signs:
     - Separation of digits, infection produces a noticeable foul odor
     - Swelling of the entire foot (equally)

5. **SOLE BRUISING (B)**
   - Also called: Sole Bruising
   - Zones Affected: 0, 10
   - Common signs:
     - Separation of digits, infection produces a noticeable foul odor
     - Swelling of the entire foot (equally)

6. **PODODERMATITIS (P)**
   - Also called: Sole Bruising
   - Zones Affected: 7, 8
   - Common signs:
     - Separation of digits, infection produces a noticeable foul odor
     - Swelling of the entire foot (equally)

7. **SOLE HEMORRHAGE (H)**
   - Also called: Stable Foot Rot, Scald
   - Zones Affected: 0, 10
   - Common signs:
     - Separation of digits, infection produces a noticeable foul odor
     - Swelling of the entire foot (equally)

8. **INTERDIGITAL FIBROMA (K)**
   - Also called: Corn, Interdigital Fibroma, Hyperplasia
   - Zones Affected: 4, 5, 6
   - Common signs:
     - Rapid growth of skin and/or tissue between the digits, forming a firm mass
     - Secondary infection likely with severe (large) lesion

9. **THIN SOLE (Z)**
   - Zones Affected: 1, 2
   - Common signs:
     - Sole is thin and flexible when pressure is applied
     - Not to be confused with natural black pigmentation of claw horn

10. **INTERDIGITAL PHLEGMON (F)**
    - Also called: Interdigital Phlegmon
    - Zones Affected: 9
    - Common signs:
      - Instability of the claw due to lost or damaged horn resulting in uneven weight bearing
      - Heel becomes sore as erosion progresses
      - Heel becomes sore as erosion progresses

11. **CORKSCREW CLAW (C)**
    - Also called: Corkscrew Claw
    - Zones Affected: 4, 5
    - Common signs:
      - Heel becomes sore as erosion progresses
      - Instability of the claw due to lost or damaged horn resulting in uneven weight bearing
      - Heel becomes sore as erosion progresses

12. **FOOT ROT, FOUL OR PHLEGMON (F)**
    - Also called: Interdigital Phlegmon
    - Zones Affected: 9
    - Common signs:
      - Instability of the claw due to lost or damaged horn resulting in uneven weight bearing
      - Heel becomes sore as erosion progresses
      - Heel becomes sore as erosion progresses

**Claw Zones**

**ZONES ABBREVIATIONS**

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

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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

Abaxial (outside) view

Axial (inside) view