Hoof diseases

Lameness is very common in sheep and goats. Several diseases can cause it, including footrot, foot scald, shelly hoof, hoof abscess, and laminitis. Lameness can have negative effects on productivity. It is also, a welfare issue that should not be ignored. Treating lame animals requires an understanding of the different types of infections,

(A) Foot scald (interdigital dermatitis) is caused by a soil-borne bacteria called *Fusobacterium necrophorum*. The primary site of infection is between the toes. The skin between the toes is red, hairless, and swollen. Foot scald occurs most commonly when underfoot conditions are wet, often late in the spring. Persistent moisture on the skin softens the skin and damages the tissues between the toes, thus allowing the invasion by *F. necrophorum*. Foot scald is the precursor to footrot.

(B) Footrot (or hoof rot) is a severe infection of the hoof caused by the coinfection of two anaerobic bacteria, *Fusobacterium necrophorum and Dichelobacter nodusus* . *D. nodusus* is an introduced bacteria (brought-in animals are the most likely source) that can only survive outside the hoof for 10-14 days. It is highly contagious, Footrot spreads more readily in warm, moist weather outdoors and when animals are housed. It is characterized by its distinct and strong odor of rotting tissue. Flystrike can occur with chronic footrot. Footrot can be very painful and affects sheep and goats of all ages. The severity of disease depends upon the strain.

(C) The white line is the site at which the horn of the wall of the hoof joins that of the sole. Shelly hoof (also known as white line separation or white line disease) is characterized by pockets impacted with dirt and other debris, where the hoof wall has become separated. Mild cases, not necessarily leading to lameness, are very common. More severe cases result in abscesses and lameness The risk factors for shelly hoof are not fully understood; more research is needed.

(D) Foot abscess differs considerably from foot scald and foot rot in that it is caused by bacteria that enter the hoof via puncture injury or via delamination of the hoof laminae (white line), allowing entry of bacteria to deeper recesses of the hoof. This creates a pocket of infection that can be surprisingly small or sometime large. usually involving only one toe or hoof.

(E) Laminitis occurs as a result of high concentrate diets or concurrent disease. The hoof is tender and painful. It may become misshapen over time.

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