

# Hoof lesions in lame pasture-based dairy

## COWS

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### Summary

- Hoof lesions are the predominant cause of lameness in dairy cows.
- Non-infectious lesions are the most common lesion type in lame pasture-based dairy cows, with sole haemorrhage, white line separation and overgrown claws being most prevalent.
- Identifying the most prevalent hoof lesions on your farm can help you put prevention and treatment methods in place.
- Farmers should consider preventative hoof trimming to reduce overgrown claws, prevent future lesions and to treat any lesions detected on examination.

### Introduction

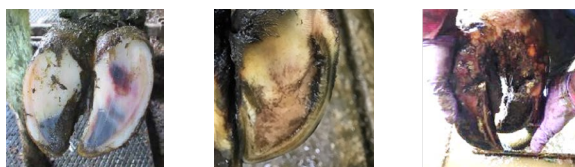
Lameness in dairy cows is a major animal welfare concern, and is primarily caused by the presence of hoof lesions. Understanding the prevalence of different hoof lesion types will provide focus for management practices to prevent and treat these hoof lesions within the dairy herd.

### Teagasc hoof lesion study

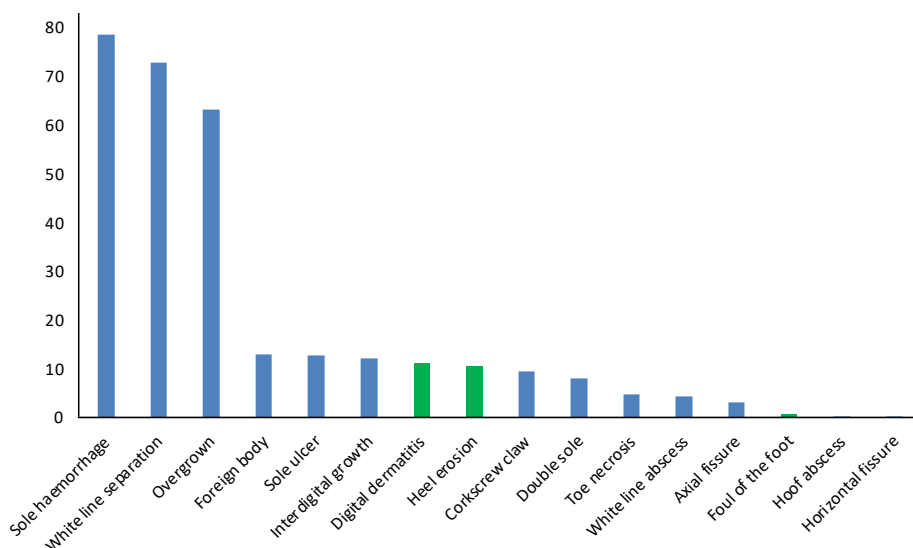
A study was carried out to investigate hoof lesions in lame Irish pasture-based dairy cows. Ninety-eight farms were visited during the grazing period and 74 farms were visited a second time during the subsequent housing period. At each visit the entire herd was lameness scored using the Agriculture and Horticulture Development Board scale from zero (good mobility) to three (severely impaired mobility). Following lameness scoring, the hind hooves of up to 20 lame cows (mild and severe lameness score 2 and 3) were lifted in a hoof trimming crate and examined to collect data on hoof lesion prevalence. A total of 941 lame cows were examined during the grazing period and 631 lame cows during the housing period (235 of these cows were examined during both the grazing and housing visit).

### The most common hoof lesions

Non-infectious lesions were more prevalent than infectious lesions. Over 95% of lame cows examined had a non-infectious lesion present, whereas less than 25% of lame cows had an infectious lesion. Over 60% of the lame cows had a sole haemorrhage, white line separation or overgrown claw (Figure 1). All other lesion types were present in less than 15% of cows examined. The most prevalent infectious lesion in all lame cows was digital dermatitis. The prevalence of each lesion type is shown in Figure 2.



**Figure 1.** The three most common hoof lesions identified in lame Irish dairy cows (sole haemorrhage, white line separation and overgrown claw)



**Figure 2.** Cow-level lesion prevalence (%) based on 1,572 lame cow examinations over the grazing and housing periods. Blue shows the non-infectious lesions and green the infectious lesions

### Grazing vs. housing

The presence of foreign bodies in the hoof, such as stones, were higher during the grazing period than the housing period. This highlights the importance of reducing the number of loose stones present on the cow tracks that can penetrate the hoof sole. Overgrown claws were also found to be more prevalent during the grazing period compared to the housing period. Farmers should consider preventative hoof trimming to reduce overgrown claws. Preventative trimming also allows detection of lesions that are not yet causing lameness, and helps to prevent future lesions occurring. A good time to carry out a routine inspection of the whole herd is prior to drying off. The prevalence of other hoof lesion types did not differ between the grazing and housing period.

### The most painful hoof lesions

Cows with foul of the foot, sole ulcers, white line abscesses and toe necrosis were more likely to be severely lame compared to mildly lame. This indicates that these lesions are associated with more pain. Farmers should promptly detect and treat mild lesions before they turn into these more severely painful lesions. For example, treating sole haemorrhages may prevent future sole ulcers. Regular lameness scoring will ensure that mildly lame cows (score 2) are being recognised as lame, and are treated accordingly. The use of non-steroidal anti-inflammatory drugs should be considered for all lameness cases; however, this is particularly important for these most painful lesions to improve cow welfare.

### Conclusions

A large range of hoof lesions were present in lame Irish pasture-based dairy cows, with non-infectious lesions being most prevalent. Some lesions were also shown to be more painful than others. Management plans should be put in place to mitigate the risk of dairy cows developing these hoof lesions, thus reducing lameness within the herd.

### Acknowledgements

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