

# Modelling: factors to consider in hoof trimming

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Are you a dairy producer who learned the basics of hoof trimming at home? I mean, perhaps your father taught you. He may have told you that the sole of the hoof needs full “dishing out” because this is the hoof form we see in pasture cows in their natural environment. But how do you proceed if your animals tread cement floors? What will be the best hoof trimming practice then?

It should be obvious that the answers we seek depend on the environment. Let me guide you through two basic scenarios, after which I’ll return to the trimming part.

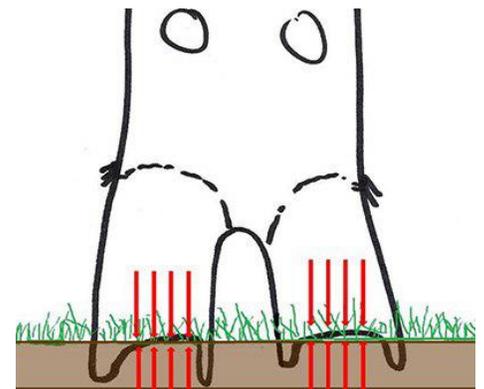
## The natural environment scenario (Figure 1)

The fact is that pasture cows have little, if any, sole horn. I’d like to include here dry cows and heifers inhabiting a dry environment. In these animals, the sole horn gets so dry that it starts flaking and falls out.

However, the wall horn is different. It’s a harder structure and remains intact most of the time. Take a look at the drawing of a “pasture hoof.” You can see that its wall will sink into the dirt until the bottom of the sole also starts carrying weight. As a result, we get weight distribution across the entire surface.

We call this a footprint. The same thing happens when you walk barefoot on the beach. Your footprint in the sand feels relaxing, doesn’t it? That’s because your foot sinks so deep in the sand that all of it carries your weight (even the arch) and the sand fills the gaps.

This also happens with cows in a natural environment. In short, their claws adjust to the soft surface.



1. Soft surface housing. Optimum weight distribution

## The cement flooring scenario (Figures 2 and 3)

A shaped foot, with only the wall on the outside of the claw, will never sink down in cement as it does on a soft natural surface. Therefore, we have a tremendous weight load on the walls. The sole hangs, as it were, above the concrete flooring, never touching the surface. Because of this, it never carries any weight. However, the pedal bone (the bone in the hoof) stands on the sole.

At this point, we may see some lameness occurring in pasture hooves that move into a new environment. Do your best to prevent it and provide these animals with timely trimming adjustments and environmental changes. If necessary, seek advice from your local hoof trimmer or veterinarian.

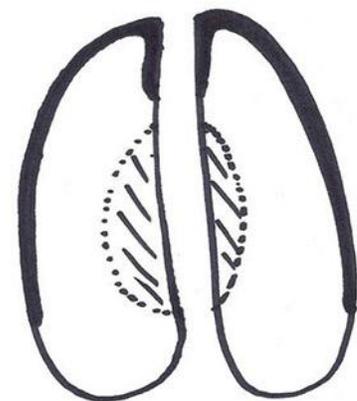
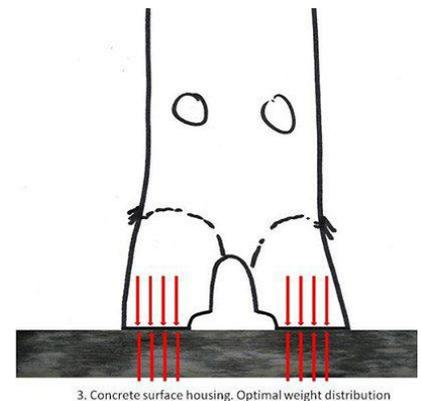
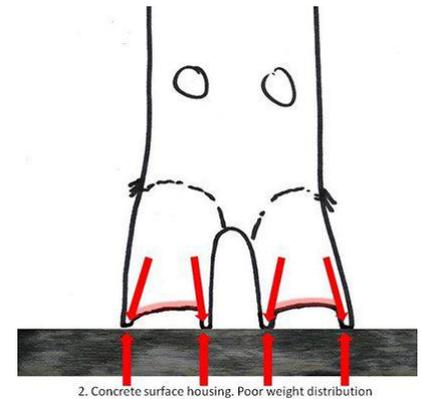
### More on the hoof trimming part (Figure 4)

Let me finish with a few pointers on how far you should shape or model the sole of the claw.

To fill the void I described above, you need to leave enough sole horn to produce counter-pressure. Balancing the two claws for weight distribution is extremely important and you should do it regularly.

Some slight modelling will be necessary to determine if problems could arise. You can thus prevent potential issues from getting out of hand. However, overdoing this modelling, even up to the wall, will produce counter-effects on cement flooring. It's better to play it safe otherwise you run the risk of causing lameness.

If you have any questions or suggestions, please contact me through our [Contact page](#).



4. Example for modeling