













Most important hoof disorders

SOLE ULCER	INTERDIGITAL DERMATITIS	DIGITAL DERMATITIS	LAMINITIS	INTERDIGITAL PHLEGMON	TYLOMA/GRANULOMA
Pressure problems	Bacterial infection <i>Dichelobacter nodosus</i> + <i>Fusobacterium necrophorum</i>	Bacterial infection Mix of bacteria Often <i>spirochetes</i> or <i>treponema bacteria</i>	Metabolic disease	Bacterial infection <i>fusobacterium necrophorum</i>	Neglected Interdigital Phlegmon <i>fusobacterium necrophorum</i>
					
					
<p>symptoms</p> <ul style="list-style-type: none"> • Hole in the sole • Painful • Moderate-severe lame • Possible protruding of the quick <p>treatment</p> <ul style="list-style-type: none"> • Relief sick claw by hooftrimming • Apply step 4 and 5 of trimming manual • If necessary use claw blocks 	<ul style="list-style-type: none"> • Wet - stinky eczema in/on interdigital skin • Fissures in the heel • Assymetric swelling in the pastern + tyloma <p>Functional hooftrimming</p> <ul style="list-style-type: none"> • Relief defects • Clean out the fissures (step 5) • Footbath 5 days after trimming 	<ul style="list-style-type: none"> • Strawberry-skin like lesion around the coronet • Long hairs straight up around the lesion • Painful by touch <p>Functional hooftrimming</p> <ul style="list-style-type: none"> • Drying and cleaning • Spray with antibiotic 2x (30" interval) • Don't forget young stock 	<ul style="list-style-type: none"> • Buckled toe • Red/yellow discoloration of the sole • White line defects • Double sole • Sole ulcer(s) <p>Functional hooftrimming 2x year, at drying off, 4 months after calving</p> <ul style="list-style-type: none"> • Relieve affected claws 	<ul style="list-style-type: none"> • Acute lameness • Tip-toeing • Hard, red symmetric swelling above the interdigital space <p>Immediate antibiotic injection (2 days)</p> <ul style="list-style-type: none"> • If antibiotic is too late, clean open wound with bicarbonate sodium during 7 days 	<ul style="list-style-type: none"> • Protruding skin in between the claws • Swelling of the skin between the claws • Sometimes painful <p>Make more space between claws at trimming</p> <ul style="list-style-type: none"> • Can be removed by veterinarian



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Hoof Trimming Chart

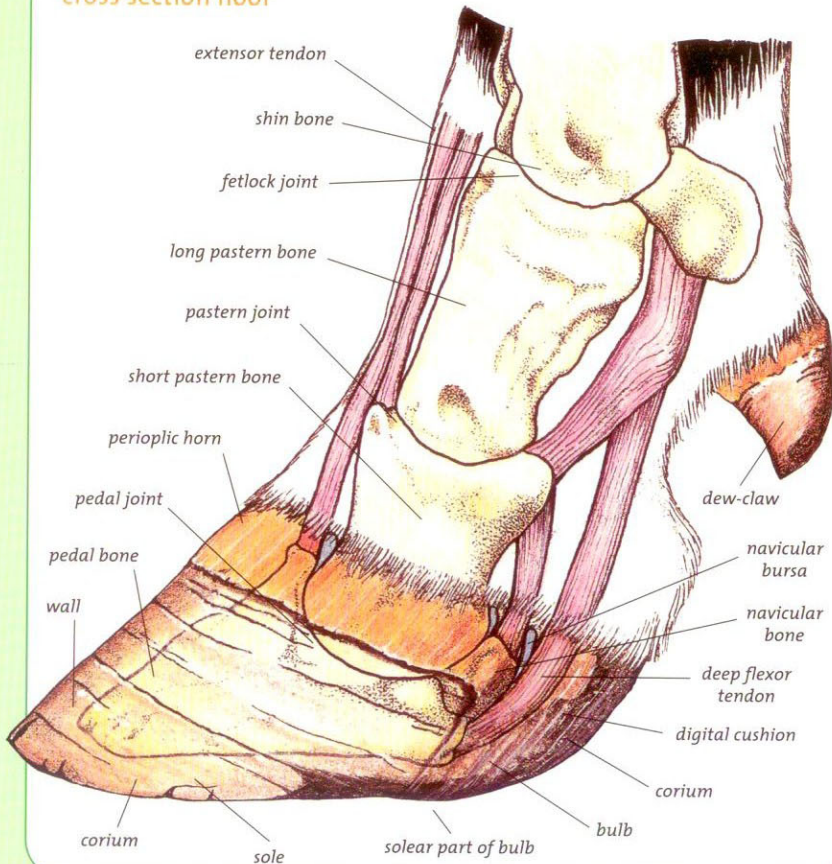
Trimming



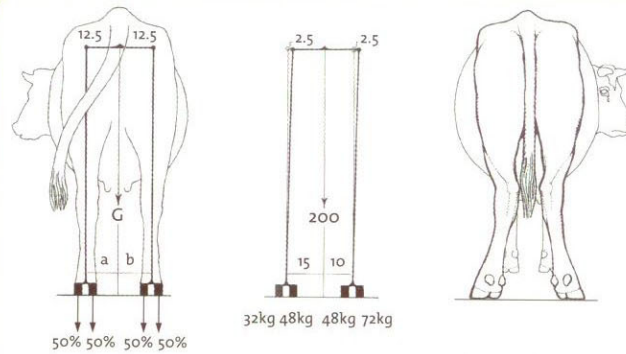
Claw angle 45°-52°

Hoofs are trimmed preventively or curatively. Prevention is better than curatively and will prevent a lot of lameness. The trimming depends on farm conditions. Lameness occurs more in the hind feet (95%) than in the fore feet. In hind feet the outer claw grows faster than the inner claw and therefore becomes overloaded.

cross section hoof



Hind feet



Normally the hind legs are more or less parallel

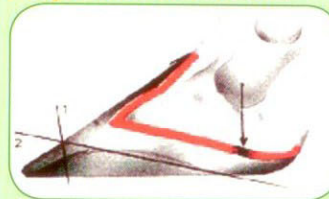
The leg on the side that the cow leans on takes more load

In case of overloading of the outer claw, the cow adapts a cow-hocked posture

Biomechanics

Biomechanics show that the outer claw of the hind feet takes more weight than the inner claw. In the long run this will result in the outer claw being overburdened. When the outer claws are overburdened the cow will adapt a cow hocked posture. Typical sole-lesion starts after long pressure on the outer claw and after that creation of the typical sole ulcer.

Long and overburdened



Improving claw angle



Typical sole-lesion starts after long pressure on the outer claw

Fore feet

In free stalls with a concrete floor and a feeding passage the cow is reaching forward in order to eat. This exercise may lead to overburdened and slightly twisted claws. Trimming (once a year) is necessary.

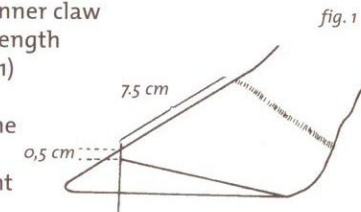


The 5 steps of trimming

The following Five-step schedule is used for the hind legs (for the front legs inner /outer claw is switched). The first three steps serve as routine or preventive trimming and the last two are curative trimming steps (to treat defects).

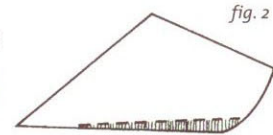
Functional Trimming

1. Cut back the inner claw (medial) to a length of 7.5 cm. (fig. 1) Leave 5-7 mm thickness in the tip of the toe. Save the height of the heel.
2. Make the outer (lateral) claw equally long and high as the inner claw (if possible).
3. Trim the claws into a slightly hollow shape, starting 2.5 - 3 cm from the toe.

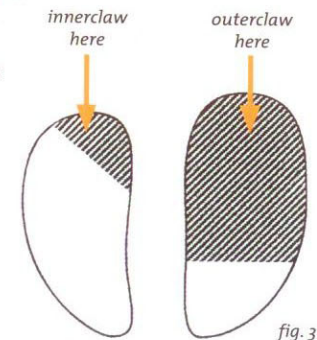


Curative Trimming

4. If one of the claws is damaged (often the outer claw) lower this claw towards the heel 2/3 of the sole (fig 2), (if possible).



The weight is now partly transferred to the sound claw. If not (sufficiently) possible a block is applied to the sound claw.



5. Remove loose horn and hard ridges on the claws (fig 3).