



was significantly harder than area 2-4. And the hardest area in group two was located in zone 5 (49.43 ± 4.94) that didn't show any significant difference with the other area of the sole. All area of the hooves were significantly harder in group II than group I ($P < 0.05$).

Days in milk plays an important role in hoof hardness that may be the reason for more claw horn lesions in 100 days after parturition. This may be a result of negative energy balance, peak production, less comfort, loosing body condition score and so many other problems that may originate in transition period.

Evaluation of the culling rate in cows with interdigital necrobacillosis

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Culling in cows is a complicated condition. Many factors such as, age (parity), milk production, fertility, health, season, feed price, and other variables may influence severity of this condition. Infectious foot diseases are common in dairy herds, causing welfare reduction and financial losses. Interdigital Necrobacillosis (INB) which is a painful condition is one of the most important infectious causes of lameness. *Fusobacterium necrophorum* has been isolated from over 90% of clinical cases of INB in cattle. When the organism enters subcutaneous

tissue through interdigital skin after traumatic damage or the action of irritant agents in slurry this condition may happen. Lack of micronutrients, genetics and disturbances in the local immune system are known as predisposing factors. The overall incidence of INB is probably less than 5%, but in epidemic outbreaks the incidence of the disease can be as high as 20% of the milking cows in a herd.

This current study was done in a dairy herd with 910 productive cows (including milking and dry cows), during 12 month period started from March 2014 till February 2015. All cows housed in free stall barns and milk three times a day. The average production of the cows during this period recorded as 36.5 lit/day. Hoof care programs including regular hoof trimming by veterinary practitioners and skilled hoof trimmers was done as the cows at least trimmed two times a year and total 4 times including different inspections and treatments referred to hoof trimming chute. Days in milk (DIM), milk production, parity recorded in all cows in addition to the records of the diseases. The INB located in zone 0 of the hooves selected as treatment group and in addition to the above mentioned records culling rate in these animals in comparison to the control (the cows without any digital disorder 6 month before to 6 month after case occurrence) were recorded. In treatment group total of 94 (annual incidence of 10.32%) cases recorded and 40.42% of them were culled in average of 8.97 days after detection. This number were significantly higher than culling rate of the control group (23.3%)(Chi square test, $P = 0.009$). No significant difference between culling rate of the cows with lower production



(less than 30 Lit/day) and higher production (more than 30 lit/day) recorded ($P>0.05$). Thirteen cows were culled in treatment group (32.5%) with days in milk less than 150 days that did not show any significant difference with the culling rate in this group with days in milk over 150 days (49%) ($P>0.05$).

It seems that despite of a very intensive care of the affected animals still culling rate in INB animals is higher than normal cows that need special attention to control the hygiene and other predisposing factors. Days in milk and milk production record of the cows do not affect the culling rate following INB.

Sole ulcer occurrence cure rate in a dairy herd

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This 12 month current study were done in a dairy herd consisting of 1340 productive cows (Milking and dry cows) started March 2013- February 2014. Cows housed in loose stalls, milk three times a day. And receive total mixed ratio. The average milk production of the cows during this period recorded as 39.2 lit/day. Hoof care programs including regular hoof trimming by skilled hoof trimmers was done as the cows at least trimmed two times a year and total of 3.45 times including different inspections and

treatments referred to hoof trimming chute during the year. Data of days in milk (DIM), milk production and parity recorded in all cows in addition to the records of the digital disorders. Data recorded on a zonal basis (1-12) of the digits and any wounds in zone 4 recorded as sole ulcer and included in this current study. All wounded cows inspected on a 15 days basis and covering of the lesion with a film of horny tissue considered as cured wound. New cases selected based on new lesions at least 3 month after curing of the previous lesion or occurrence in another digit or zone.

Total of 57 sole ulcers were detected. Most ulcers occurred in hind feet (51, 89.47%) and just 6 ulcers (10.52%) occurred in forelimbs. Twenty three ulcers in right hindlimb (40.35) and twenty ulcer occurred in left hindlimb (35.08%). In twelve cows (21%) sole ulcer detected in two digits. Sole ulcers (mean \pm SEM) cured in 82.66 ± 7.95 days, started from 15 days to 364 days after its occurrence.

Although the ulcers cured longer when the cow affected in DIM less than 100 (87.65 ± 8.15) than higher DIM (82.66 ± 7.95) but the difference was not significant ($P>0.05$). Cows with milk production less than 30 lit /day and higher production didn't show significant changes in duration of treatment ($P>0.05$). Although cows with low body condition scores (less than 3.2) were treated faster (82.66 ± 7.95) than cows with higher body condition scores (more than 3.2, 92.35 ± 8.48) but the difference were not significant ($P>0.05$).

Days in mil, milk production and BCS at the time of sole ulcer occurrence does not affect duration of treatment.