



and the oblique distance of the neck rail ( $203.3 \pm 13$ ). Almost average of all dimensions were within the standard range, except for the brisket board. More detail examination of the stall dimensions should be done in order to find any possible freestall design risk factor for cow lying and comfort.

**Key words:** Free stall, stall, stall length, neck rail height, lunging space

### References

1. Tucker CB, Weary DM, Fraser D. Free-stall dimensions: Effects on preference and stall usage. *Journal of dairy science*. 2004;87(5):1208-16.
2. Cook NB. Optimizing resting behavior in lactating dairy cows through freestall design. *Veterinary Clinics: Food Animal Practice*. 2019;35(1):93-109.

## Detecting Claw Horn Lesions in High Locomotion Scored Cows

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Lameness is one of the most important health problems of dairy cows. Economic losses from lameness include reduced milk production, fertility reduction and reduced cattle economic life, and increased herd culling rates. For this reason, diagnosis and treatment of lameness in cattle is very important. Locomotion scoring system is one of the most practical methods in determining the severity, persistence and prevalence of lameness and is very important in early identification of lame



cows in the herd. In this current study, tracking claw horn lesions by locomotion scoring in one to three months before occurrence of the lesion were studied. Also, possibility of using locomotion scoring for prediction of claw horn lesion occurrence in the coming months were evaluated. Study was done in a dairy herd with 3400 dairy cows, 37 kg average daily milk production during 6-month period. Locomotion scoring with a 5-point scale were done on a monthly basis. Primiparous cows in a period of 6 months separated and divided it into two study and control groups. The study group include cows with claw horn lesions (areas 1, 2, 3, 4, 5, 7, 8, 11 and 12). The control group included cows in the same parity without claw horn lesion during study. Three consecutive locomotion scores during past three month were recorded in study group, and in control group, the last 3 months of the year considered as the time that three locomotion scores recorded before this time. The association between 4 or 5 scores (clinically lame cows) and claw horn lesions was evaluated with chi square or fisher exact tests. Lame scores one month prior to detecting lesion was statistically associated ( $p < 0.001$ ) occurrence of the claw horn lesions as cows with lame score had 12.1 odds for having claw horn lesions. Logistic regression analysis of locomotion scoring show that it could not use as a predictive tool for occurrence of claw horn lesions. ( $p > 0.05$ ).

**Key words:** locomotion scoring, sole ulcer, claw horn lesion, dairy cow

## References

1. Mohamadnia, A. R., Kheiri, S., Aliabadi, H., Mohamaddoust, M., & Kabiri, J. (2007). Study on distribution of dairy cattle hoof lesions and its relation to locomotion scoring. *Iranian Journal of Veterinary Surgery*, 2(2), 22-30.
2. Tadich, N., Flor, E., & Green, L. (2010). Associations between hoof lesions and locomotion score in 1098 unsound dairy cows. *The Veterinary Journal*, 184(1), 60-65.