
Hoof Care Incentives



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Lameness, mastitis, and reproduction are the three most common causes of cows leaving the herd prematurely. Many of the losses associated with lameness can be prevented by good dairy management and proper attention to hoof health (hoof trimming and prompt treatment of lame cows). Lameness can be due to infectious or non-infectious causes. Infectious causes are digital dermatitis (footwarts), footrot, interdigital dermatitis, and heel horn erosion. Non-infectious causes are

due to disruption of horn production or trauma and are commonly lumped under the category of "laminitis". Some of the factors that influence the incidence of laminitis are nutrition, feeding management, cow comfort, time standing on concrete, and husbandry.

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lameness in the dairy herd is locomotion scoring. Locomotion scoring information is available from the following website:

<http://www.availa4.com/locomotion/index.html>.

Further information on lameness can also be obtained from the author.

Locomotion scoring must be done in a location where the cows have a level walking surface and good footing. Cows must be observed standing and walking with special attention paid to the posture of the back (flat or arched). Keep in mind that older cows will tend to score higher and may need more attention than younger cows. [Editor's note: in an incentive pay program, this would

have to be considered so that dairy workers are not punished or rewarded for the average cow herd age.] The scores are as follows:

Locomotion Score 1: Normal gait. Animal stands and walks normally and with a flat back. All feet are placed with purpose.

Locomotion Score 2: Abnormal gait. Stands with a flat back and walks with an arched back. Gait is slightly abnormal.

Locomotion Score 3: Mildly lame. Stands and walks with an arched back. Takes short strides with one or more legs.

Locomotion Score 4: Moderately



Before Trimming: Here is a front foot of a cow. The outside claw (on the right) has a toe that is approximately the right length, while the inside claw (on the left) is too long and will need more extensive trimming.



During Trimming: Here the hoof trimmer is removing the excess horn using an electric grinder motor with a cutting disc. Most of the hoof trimming can be done with the electric grinder, which is easier on workers but necessitates great care since it can cut very rapidly.



After Trimming: A small amount of horn has been removed from the outside claw, leaving the heel intact. More horn was removed from the inside claw making it the proper length and is now balanced with the outside claw so that weight bearing is more even between the claws. Also, more horn has been removed from the toe area making the cows weight distribution more even from the toe to the heel.

lame. Arched back standing and walking. One or more limbs favored but at least partially weight bearing.

Locomotion Score 5: Severely lame. Arched back standing and walking. Animal refuses to bear weight on one limb. May refuse or have great difficulty rising from lying position.

Note that the above definitions are slightly different from those on the

website or on the current issue of "Locomotion Scoring of Dairy Cattle". We are currently revising the locomotion scores according to our observations of cows on confinement (freestall) dairies. Cows scoring 3, 4, or 5 are considered lame and should be examined and treated appropriately. According to research by Peter Robinson at UC Davis (see article on website above), cows scoring 3 were

Cows that have properly designed, bedded, and maintained freestalls will spend from 10-14 hours per day lying down and ruminating. This lying time is critical for optimum milk production and prevention of many lameness problems.

four times more likely to score 4 or 5 the following month than were cows scoring 1 or 2. Some older cows with chronic laminitis will exhibit a locomotion score of 3 even though there are no visible lesions and her feet are properly trimmed and balanced. Most of these cows will require more frequent examination and trimming but if they are good milk producers, more serious lameness might be prevented and the cows kept in the herd.

A herd with a very good locomotion scoring profile might have 90% of the cows scoring 1 or 2 with 10% scoring 3, 4 or 5. It should be possible with an excellent hoof health program to maintain 1% or less of the cows scoring 4 or 5 (that is 10 cows scoring 4 or 5 and 90 cows scoring 3 on a 1000 cow

dairy). While cows with a locomotion score of 3 do not appear very lame, they have already lost considerable money for the producer by decreased dry matter intake, milk yield, and reproductive performance and an increased likelihood of premature culling.

If an incentive pay system is to be implemented on a dairy, then it must be designed to reward the worker for performance that is under his control. For instance, if a worker is paid by the head for hoof trimming, then he will probably trim more cows but there will be no incentive to only trim cows that need it. Whereas, if a worker is paid an incentive to maintain or improve hoof health on a dairy and is allowed to choose the cows to trim, he might be more inclined to pick the cows that need



trimming to prevent more serious lesions.

Let's consider two scenarios for implementing a hoof health program on a dairy:

Scenario 1: An outside hoof trimmer is hired to trim cows on the dairy. The hoof trimmer is presented with lame cows and dry cows to trim on the day he is there. The cows are picked by the herdsman or manager on the dairy facility. The hoof trimmer gets paid by the cow for trimming and any treatments used for lame cows. In this case, the incentive is for the hoof trimmer to trim cows and apply treatments since he gets paid on a piece basis. The hoof trimmer could do a very good job and yet the prevalence of lameness might stay the same on the dairy because the hoof trimmer is not getting the cows he needs to decrease the lameness. If it is the herdsman's job to pick cows for the hoof trimmer then it may be possible to pay the herdsman a differential incentive based on the prevalence of lameness from month to month. In order to assess whether the lameness prevalence was decreasing it would be necessary to have another, objective person (the manager, veterinarian, or owner) assess the locomotion scores on a regular, perhaps monthly, basis. Problems with this program that are out of the herdsman's control would be the nutritional program (ration formulation, mixing, and feed bunk management), cow comfort (freestall maintenance and bedding), alley flushing, and time standing on concrete during milking. In my opinion, it would be better to establish a hoof health management team with plainly stated goals of performance for all members involved than to establish an incentive program for just one person.

Scenario 2: Some larger dairies are building special needs facilities, which include a hoof trimming chute on the dairy. Some producers are interested in having workers on the dairy trim the cows rather than hiring an independent hoof trimmer. Since the average case of lameness costs the producer approximately \$300 per case and it is very easy to make cows lame with improper trimming, I always encourage

dairy producers to make sure that workers are properly trained in functional hoof trimming. There are several schools in the US and abroad that teach the theory and practical aspects of hoof trimming. For this scenario to work well, someone with management responsibility would have to monitor the lameness prevalence and serve as a quality control supervisor for the person(s) doing the actual trimming. It would also be very helpful if the supervisor or manager had training in proper functional hoof trimming so that new personnel could be trained as turnover occurs. It should be possible to train the worker doing the hoof trimming to observe the cows and spend some time each day identifying which cows need to be trimmed or treated. In this way, the hoof trimmer has partial ownership in the program and is not trimming cows that do not need to be trimmed. If the hoof trimmer was given responsibility for picking the cows that needed to be trimmed and treated, it should be possible to design an incentive program based on monthly locomotion score prevalence. [*Editor's note:* A good way to train workers to see with skilled eyes is to have the worker score 100 cows in terms of whether or not trimming is needed. After finishing this task, this worker's opinions are compared to those of a skilled rater. They can then both look at each cow where there are differences of opinion and discuss these. Over time, as the worker's ability to discern which hoofs need trimming, this responsibility can be increasingly delegated.]

From my perspective, hoof health would benefit more from forming management teams and rewarding results with responsibility and salary rather than a specific incentive program. I think that workers would respond to developing further skills in cow care and having their opinions valued by managers and owners. One of the problems with training on-dairy workers to trim cow claws is that they may learn that they could make more money as an independent hoof trimmer and turnover could be a problem unless steps were taken to ensure loyalty and job

satisfaction. [*Editor's note:* A well trained employee may well be worth paying more in recognition for special skills. This pay may come either in terms of an added incentive (Chapter 1) or wages (Chapter 2). The employee can benefit from such appreciation, and the dairy can save money.]

CHAPTER 7 REFERENCES

- S. L. Berry. Locomotion Scoring of Dairy Cattle. Eden Prairie, MN: Zinpro Corp. 2001.
- S. L. Berry. How Do Well Managed Herds Manage Feet? *Proceedings: 2004 Hoof Health Conference*, Hoof Trimmers Assoc. Inc., Phoenix, AZ:17-19, 2004.
- E. Toussaint Raven, R. T. Haalstra, and D. J. Peterse. Cattle Footcare and Claw Trimming, Ipswich, United Kingdom:Farming Press Books, 1989. 127 pages.

This cow has a locomotion score of 5 and will not bear weight on her left hind foot. She is losing body condition because her feed intake is lower than normal.

