

# No Hoof, No Cow



By Julie Wadzinski, B.S.

Lameness is one of the most costly conditions affecting dairy cattle today. The economic factors, coupled with the social implications and public perceptions of farm animal welfare make lameness prevention a top priority for dairy producers across the country. I have had the unique opportunity to learn about lameness from a world renowned hoof care expert, Karl Burgi. Based on his years of practical, hands on experience as a hoof trimmer, Mr. Burgi estimates that many of the cows culled due to lameness would still be in the herd had they received proper routine trimming. Below is a summary of the many lessons I learned from Mr. Burgi's classes.



## The Three Causes of Lameness: Infectious, Mechanical and Metabolic

Lameness is a preventable condition. As a dairy producer, you have several different tools available to help you manage, minimize, and prevent lameness. In your toolbox you have access to Crystal Creek's® products and knowledgeable staff, maintaining cow comfort, foot baths, maintenance trimming, and hygiene.

### *Infectious Causes of Lameness*

Infectious diseases are some of the most common causes of lameness; with hairy warts and hoof rot being two of the most common. Lameness, caused by bacterial agents, can be minimized by maintaining skin integrity, a clean environment and immune function through stress management. Properly managed foot baths can go a long way in keeping a hoof clean and preventing infectious lameness. Routinely cleaning out pens, loafing areas, and holding areas can also help to minimize bacteria load in the environment. Stressed animals will also have decreased immune function making them more susceptible to infectious agents.

### *Mechanical Lameness*

Mechanical lameness refers to lameness caused by the conformation of the cow and the cow's environment. Types of hoof conditions you could expect would be overgrowth, claw imbalance, poor hoof angle, and incorrect hoof trimming induced lameness.

### *Metabolic Lameness*

Metabolic lameness refers to laminitis. Laminitis is caused by swelling of the laminae; the tissue between the pedal bone and hoof wall. With laminitis, you will not see physical signs of it in the hoof until 3-6 weeks after the metabolic insult (such as acidosis) took place. Some types of hoof lesions can have more than one cause. For example, white-line lesions are caused from over-crowding and/or poor bunk management.

## Lameness Economics:

Some producers put off hoof trimming because they perceive it as expensive or unnecessary. Current hoof trimming rates range anywhere from \$8-18 a cow. When compared to the cost of having a lame cow, the investment in a hoof trimming could be the best \$8-18 you spend that day. The average cost of a case of lameness was estimated at \$404 (Guard et.al. 2006). Clinically lame cows experience higher cull rates, risk of death from a systemic infection, lost milk production, increased days open, and increased labor expense in monitoring and handling. It does not take long to realize the positive economic benefits of routine hoof trimming by an experienced professional.

In 2001, Dr. Nigel Cook from the School of Veterinary Medicine in Wisconsin conducted a study that looked at 30 herds in Wisconsin. Of those 30 herds, they averaged 73 lameness cases per

every 100 cows over a 12 month period. In 2006, Dr. Marcia Endres did a similar study in Minnesota. Her results showed a herd wide lameness rate of 5.4% on the best managed farms. Poorer managed dairies in her studies had a herd wide lameness rate of 46.2%. Her study also revealed that 12.8% of first lactation animals were lame.

## Managing Lameness with Crystal Creek®

Crystal Creek® trace minerals are polysaccharide chelates, making them 100% available. Besides skin integrity, the animal's immune function is important in preventing an infectious cause of lameness. Immune function can be improved with the proper mineral and with managing stress. Cortisol, the stress hormone, can be countered with Crystal Pellets™.

Metabolic lameness is caused by high concentrate and low forage rations and sudden changes in the diet. The Crystal Creek® Dairy Nutrition Model (CCDNM) couples a high quality mineral, with

gradual ration changes by experienced staff. We work with your forage inventories to promote fiber digestion in your herd, thus reducing acidosis and metabolic induced lameness.

## Treating Clinical Lameness: On Farm Approaches You Can Do

Despite diligent prevention measures, low levels of lameness will always be present on dairy operations. The rule of thumb is if you see a lame cow, trim her right away. Lameness can compound overtime if not taken care of immediately. For hairy warts, cleaning the hoof and using a topical product with essential oils (like Prism™, Wound Spray™, or No Fly™) as a carrier for Copper or Zinc Sulfate has been a proven success on several farms. A cow you suspect with hoof rot may not only have a hot swollen hoof, but the skin above her hoof may be hot as well. It's best to support her immune system with a Crystal Creek® aloe product (Crystal Pellets™ or Aloe Vera Juice) and add a garlic product such as Power Powder™. These suggestions only buy you some time until a hoof trimmer or a veterinarian can check on the cow. Hoof rot, if left untreated, can spread into the joint.

## Treating Lameness: When to Call an Expert

Knowing when to call in a hoof trimmer or veterinarian for further examination of a lame cow is very important. All too often, producers will allow a lame cow to limp around until the hoof trimmer arrives for his next scheduled visit. I encourage producers to call a veterinarian to examine the lameness if the wait for the hoof trimmer's routine visit is more than two days away. Calling in a vet can minimize the cost of the lameness and speed recovery.

A veterinarian or hoof trimmer should be called if an animal has rapidly worsened in their lameness, has not responded to on farm treatments or are non-weight bearing on a foot. This will not only reveal the cause of lameness, but often will provide a prognosis of recovery as well.

In conclusion, an ounce of prevention is always cheaper than a pound of cure; use the tools in your toolbox. The staff at Crystal Creek® is always willing to answer questions and work with your inventories. Preventative nutrition with a high quality mineral and regular trimming will help give your cows a hoof up when it comes to lameness issues. After all, no hoof, no cow.

