



THE UNIVERSITY OF
BRITISH COLUMBIA

RESEARCH REPORTS



dairy education
& research centre

Vol 9 No 1

February 2009

Lameness Workshop for Producers, Hoof-trimmers and Veterinarians

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Lameness is a key issue for the dairy industry, and thus is a research focus at the UBC Dairy Education and Research Centre and abroad. To help keep producers and other professionals in the dairy industry updated on techniques to prevent lameness and properly treat those cows that do become lame, the UBC Dairy Education and Research Centre and Greenbelt Veterinary Services held a two-day lameness workshop this past November.

The first day of the workshop brought together 175 participants from British Columbia, Alberta and Washington State for presentations by some of the world's leading experts on hoof-trimming, veterinary medicine and cow comfort. In addition, four leading producers from BC's Fraser Valley provided producer perspectives on lameness and shared practical tips to prevention and treatment.

*"To properly tackle this problem...
we need to work together." - Koster*

Dr. Gerard Cramer, an Ontario producer, hoof trimmer, veterinarian, and researcher working on hoof health, began the workshop by identifying the major risk factors for lameness and practical solutions that address these factors.

According to Cramer, "lost income per lame cow is approximately \$520...total lost income for a 200 cow herd with 40% incidence is \$41,600". To avoid these costs, Cramer's solutions included routine record keeping, early detection and providing "a housing environment that ensures cows' feet are comfortable, clean and dry". Cramer also emphasized the importance of well-bedded lying stalls and

management practices that reduce excessive standing times, such as the time spent waiting to enter the milking parlour.

Elbert Koster, owner of No Tilt Hoof Trimming in Innisfail, Alberta, followed Cramer by introducing the concept of the "Hoof Health Team" – including the herd manager, the hoof-trimmer, the veterinarian and the nutritionist. Koster explained that gathering information from diverse members of the "Hoof Health Team" is essential, as lameness is a multi-factorial disease. "To properly tackle this problem," Koster states, "we need to work together."



Figure 1. Gerard Cramer answers questions about proper hoof-trimming techniques during the wetlab session of the workshop. Participants were then encouraged to practice these techniques.



Figure 2. Dr. Chuck Guard used images to “quiz” participants and prompt discussion about how proper detection and management can be used to treat and prevent these conditions.

UBC’s own Dr. Dan Weary was the third to speak, and started with a local context to the problem of lameness. Based on recent research out of the UBC Dairy Centre, an average of 26% of cows in Fraser Valley herds are clinically lame – similar to reports from Ontario and the U.S.

Weary spoke on the value of programs that train herdsmen to accurately identify lame cows, and provided practical tips for improving gait-scoring techniques. We can all recognize cows that are 3-legged lame, but to pick out cows in earlier stages of lameness we need to recognize more subtle changes in walking behaviour such as the jerkiness of the cow’s head and the arch of her back. Dan ended his presentation with specific suggestions to improve cow comfort and reduce lameness, such as removing the neck rail from the stall.

Last to speak was Dr. Chuck Guard, Head of Medicine in the Ambulatory and Production Medicine Clinic at Cornell University in New York. Guard focused on treating lame cows once they are identified, providing a practical list of dos and don’ts. For instance, anti-bacterial powders are commonly used to treat ‘fungus’ (digital dermatitis), but wrapping the treated foot with a bandage is counter-productive, as bacteria thrive in moist environments with little oxygen. Instead, Guard recommended a mixture of the powder with propylene glycol, a sticky anti-freeze. The mixture needs only one minute of contact to be effective, and avoids the risks of bandaging.

The following day provided hands-on training for 40 hoof trimmers, veterinarians and others wanting to improve their skills in treating problems in hoof

health. Dr. Guard began the session with images of common diseases associated with lameness to quiz participants on their current hoof health knowledge (Figure 2). He recommended that all cows be trimmed twice a year, to shape the hoof in such a way that the cow’s weight is distributed evenly on her four feet. Cows also need their hooves inspected as soon as they are recognized as lame, so it is important that every farm has the facilities (e.g. a chute) and people trained to provide treatment.

Following this discussion on hoof health, the group met at the largest dairy farm in Canada, Chilliwack Cattle Company, currently milking close to 3,200 dairy cows. Participants were given the opportunity to observe Koster, Guard and Cramer “correctively trim” cadaver hooves obtained from a slaughterhouse, and were then encouraged to practice these techniques and receive feedback (Figures 1 and 3).

Participants left the workshop with new information about lameness prevention and treatment, and a newfound excitement about building relationships with their “Hoof Health Teams”. As one participant noted, “I learned a lot from this workshop, and look forward to more options like this to help me continue my education on such an important issue as lameness”.



Figure 3. Elbert Koster teaches Barry Thompson of Agassiz, BC, about the 3 ¼ inch rule for toe length. Cutting a toe too short may result in a “thin sole” and predispose cows to lameness.

We thank Dr. Dan McDermid and Greenbelt Veterinary Services for leadership and assistance in organizing this event. We are also grateful to the sponsors of the event: Investment Agriculture Foundation of BC, Westgen Endowment Fund, Merial Animal Health and Zinpro Performance Minerals.