Northwest Veterinary Associates Newsletter

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Reducing Lameness Can Improve Fertility

It is well-known that lame cattle can have reduced milk production and increased disease incidence, but lameness can also negatively affect fertility and reproduction. Relative to their healthy, non-lame herd mates, research indicates that lame cows have decreased conception rates, more services per conception, increased presence of ovarian cysts and an overall decrease in pregnancy rate.

All dairy cattle go through some extent of negative energy balance after calving and lameness can exaggerate this affect. This can directly affect a cow's breeding back by delaying first ovulation. Another way that lameness affects fertility is through its affect as a chronic stressor. When an animal is stressed, as she is when she is lame, the cow releases cortisol which appears to have an affect on the release of GnRH and LH, two reproductive hormones involved with causing ovulation. Decreases in progesterone levels have also been associated with stress and this can also negatively influence fertility through reduction in pregnancy maintenance. Therefore, until the stressor is removed, levels of hormones such as progesterone will not return to normal. Because of this, poor reproductive performance should be expected if one chooses to inseminate lame cows, especially those lame in the first 30 days after calving. Research has shown an increase in days open, decreased first service conception rates, and increase in ovarian cysts and/or ovulation failure.

Just managing lame cows isn't enough. Getting to the root of the problem is critical to reducing lameness. Investigating lameness involves utilizing records to assess and monitor lameness in the herd and building a team to merge the different aspects of the dairy involved with factors leading to lameness.

Locomotion scoring is a scoring system that forms the foundation for visual identification and recruitment of lame cows to be assessed by your hoof trimmer. See the table below for details. Scoring a portion of a herd, or different groups can give a snap-shot in time of how your herd is doing. Follow-up assessment can then be used to monitor progress. Hoof-trimming records, which include proper claw lesion diagnosis and recording, should also be reviewed routinely during management meetings.

Building a team of people routinely on the farm, including the herd owner or manager, Veterinarian, nutritionist, hoof trimmer and breeder(s) can help to identify areas to help in reducing lameness and improve reproductive performance. Locomotion scoring and hoof-trimming records should be used together to formulate a plan to address the factors causing lameness within each individual dairy. Reproductive records can then be analyzed over the same period of time and used to make possible correlations between the two. Incorporating this approach on a routine basis will provide for greater levels of reproductive performance.

Nutrition and feeding management practices on the dairy should also be looked

at. Historically, mistakes in nutritional formulations have played a significant role in lameness on dairies. Today this may not be quite the case. Most of the nutritionally related factors become manifested through how we group and manage cows and how feed deliveries are managed. The majority of diets fed today are well-balanced; however, the eating and resting/rumination behavior of the cows becomes affected by how the feed is mixed, delivered and pushed up and how pen stocking densities are managed — all of which significantly affects how the cow consumes the diet and ultimately contributes to compromised rumen function. In turn, this affects the degree of lameness seen in many dairies.

If lameness and reproduction problems seem to be "rearing their ugly heads" on your farm, consult with your herd veterinarian and hoof trimmer and consider a "tag-team" approach to reducing the economic losses associated with them.

Locomotion Score	Clinical Description	Description
1	Normal	Stands and walks with level back; long confident strides.
2	Mildly Lame	Stands with level back, but arches when walks; slightly abnormal gait.
3	Moderately Lame	Stands and walks arched back; short strides with one or more legs; slight sinking of dewclaws evident in limb opposite to affected limb.
4	Lame	Arched back standing and walking; favors one or more limb(s) but still weight-bearing; sinking of dewclaws in limb opposite to affected limb.
5	Severely Lame	Pronounced arching of back; reluctant to move; almost non-weight bearing in affected limb(s).

New Associate Veterinarian Tom Linden Joins Northwest Vets

Although I have already met several of you, I wanted to introduce myself as the newest member of the Northwest Veterinary Associates team. I am coming from the Finger Lakes region of New York, where I have spent the last 2 ½ years practicing dairy production medicine. I attended both SUNY Cobleskill and Cornell University after high school, majoring in Animal Science. Much like Drs. Brock and Nguyen, I remained at Cornell to complete my veterinary training, graduating in 2013. During my time in central NY, I have greatly enjoyed working with producers, as well as being an advocate for the dairy industry in the community. My professional interests include heifers and replacements, milk quality/parlor analysis, and embryo transfer. I am thrilled to be returning to New England this June to join Northwest Veterinary Associates, and I look forward to meeting and working with you all in the near future.