Management Protocols Important in Preventing Lameness in Dairy Cattle

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With any disease, prevention is "worth its weight in gold". This concept is extremely important as it pertains to preventing lameness through the implementation of sound management practices. Lame cows often struggle to perform as expected, often giving less milk, have poorer reproductive performance and are subject to a higher rate of culling; all of which decrease profitability. Recently, Dr. Nigel Cook from the University of Wisconsin-Madison Vet School offered the following advice as it relates to prevention of lameness in dairy cattle. He discussed 3 areas to evaluate to improve the prevention of lameness in dairy herds.

Routine Hoof Care

Routine hoof trimming allows one to restore the correct claw angle so that a cow's weight can be evenly distributed between the two claws of a hoof. Sole hemorrhages are an example of hoof lesions caused by an incorrect angle of the hoof. At least twice yearly, the hooves of cows should be evaluated on a trimming table/chute and a determination made as to whether hoof trimming is needed. Dr. Cook recommended that cows be evaluated in mid-lactation and again at dry off. He stated that 80 to 120 days in milk may even be better than mid-lactation. Generally, a hoof trimming lasts about 4 to 6 months. Hoof trimmers need to understand how to correctly trim hooves and need facilities that allow cows to be easily sorted and good lighting is provided.

Regular Footbath Usage

To control contagious infections (foot rot and hairy heel warts) that cause lameness, good hygiene and regular implementation of disinfection practices, i.e. using footbaths, are needed. By minimizing the amount of manure in contact with hooves, hooves are less exposed to disease-causing bacteria.

Footbaths are designed to prevent, not treat, hairy heel warts or digital dermatitis. They help keep chronic lesions in check and keep these lesions in an inactive form. Footbaths should be 10 to 12 ft long such that each foot is immersed 2 to 3 times. They should be used 4 times per week at the recommended concentration with the pH of the reconstituted solution above 3. In herds milked with robots, a guided entry into the footbath is needed after leaving the robot to ensure adequate usage.

Besides the milking herd, dry cows and HEIFERS should also go through a footbath. The key to prevention in the milking herd starts with heifer rearing programs at breeding age, not once heifers enter the milking string. Cows/heifers with active lesions should be found early through an active surveillance program before they become lame. Active lesions should be treated with topical agents as recommended by your veterinarian.

Prevent "Standing Up" Disease

Dairy cows, like us, need adequate rest and sleep. By designing and, more importantly, managing facilities to encourage longer lying times, cows spend less time standing on concrete and more time "off their hooves". Higher stocking densities (> 120% mid-lactation, >100% fresh cows), inappropriately sized stalls (too narrow or short), increased holding pen times (greater than 1 hour/milking), and heat stress contribute to decreases in lying times and more cases of lameness being observed.

Deep bedding of stalls with sand has been shown to increase lying times in comparison to stalls with mattresses. The deep bedding gives the cow a cushion and helps provide support when she gets up and down. Some farms can make mattresses work very well. However, they have excellent stall design, identify lameness cases before cows become visibly lame, effectively treat these lame cows and move them to a bedded pack for recovery, have an effective footbath preventative program, and provide sufficient bedding (1 inch) on mattresses to reduce hock injury.

Flooring surfaces also can contribute to an increased incidence of lameness. Cows need sure footing to prevent slipping. Dr. Cook recommended that grooves need to be ¾ inch wide, ½ inch deep, and spaced 3¼ inches apart on center. Grooves that are too shallow or too far apart are not as effective at preventing a cow from slipping since the grooves do not "catch" the hoof. He did not recommend rubber matting in the freestall area, but did recommend its use in transfer lanes to and from the parlor as rubber matting can help reduce hoof wear.