Invited presentation

Etiology of bovine lameness (stall design management and subacut ruminal acidosis)

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Abstract

Dairy producers are faced with a bewildering range of recommendation concerning suitable dimensions and surfaces for free stalls. Some authors recommend sand bedding, while many farmers still use sawdust or straw. Bedding choices may affect not only cow comfort but also udder health . Cow preferred to lie down in the stalls bedded with mattresses and sawdust and were least likely to use the concrete stalls with paper. Cows were more likely to lie down in stalls when these had more bedding , regardless of whether the stall base was concrete, mat or carpet. Lameness is probably the most important animal welfare issue today in dairy herds and a good partion of the lameness observed in dairy cows may be attributed to laminitis secondary to high grain feeding. Ruminal acidosis can be direct human health concern as well. Low ruminal and intestinal pH due to high grain feeding increases the risk shedding enterohemoragic E. coli. Compromises in dairy cow health due to subacute ruminal acidosis (SARA) are a concern not only for economic reasons but also for animal welfare reasons. Rumenitis is the fundamental lesion of SARA and it leads to delayed , chronic health problems. Once the ruminal epithelium is inflamed bacteria may colonize the papillae and leak into portal circulation . These bacteria may cause liver abscesses, which sometimes cause peritonitis around site of the absce**ss.** If the ruminal bacteria clear the liver, they may colonize the lungs, heart valves, kidneys or joints. SARA may also be associated with laminitis and subsequent hoof overgrowth, sole abscesses and sole ulcers .These foot problems generally do not appear until weeks or months after the bout of ruminal acidosis that caused them.

Keywords: lameness, cattle, subacute ruminal acidosis

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