



Kirkton Veterinary Clinic

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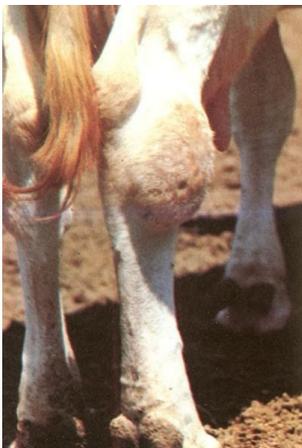
Lameness in Dairy Cattle

Lameness is a disease which causes a lot of frustration on most dairies. Data collected through proAction has shown that >25% of all dairy cows show some level of lameness. This disease is often underdiagnosed and can be difficult to treat and control. Lameness is not only a cattle welfare issue but leads to decreased production, lower reproductive performance, increased involuntary culling rates and increased labour costs to manage these cows. Due to its commonality, a study out of New York has shown lameness to be the most costly disease on the majority of dairy farms.

There are many different causes of bovine lameness which complicates efforts to control this disease. This newsletter will focus on the most common non-infectious and infectious causes of lameness as well as herd level control measures used to decrease them.

Most Common Causes of Bovine Lameness

Knee/ Hock Swelling



Causes

- repetitive rubbing/ banging of hocks or knees on hard or abrasive surfaces

Prevention

- appropriate stall design, replace old mattresses
- adequate bedding (sand is the best). Bedding is ALWAYS required, deep bedding is ideal.

Treatment

- focus on prevention as treatment is often unsuccessful
- move to bedded pack to prevent rubbing on hard surfaces
- Usually it is not recommended to poke/ drain these lesions as this can introduce bacteria and cause infection
- Infected swellings may require treatment with antibiotics

Laminitis/ Sole Ulcers/ Sole Abscesses/ White Line Disease

Laminitis is the inflammation of the connective tissue between the hoof wall and the bone of the hoof. Once inflamed, this leads to sole ulcers, abscesses and white line diseases.

Causes

- sub-acute rumen acidosis, excessive time standing on hard surfaces (ex. concrete), severe systemic disease (ex. metritis or mastitis)

Prevention

- proper balanced ration for good rumen health and minimal transition cow issues
- limit standing time on hard surfaces, prevent running on concrete
- appropriate stall design, bedding, and pen densities to encourage lying

Treatment

- Pare out ulcers and abscesses in the affected claw to allow proper drainage, block unaffected claw to relieve pressure and promote healing
- treatment for chronic laminitis is usually not successful



Pasture Foot Rot

Sudden lameness with swelling above and/or between the claws

Causes

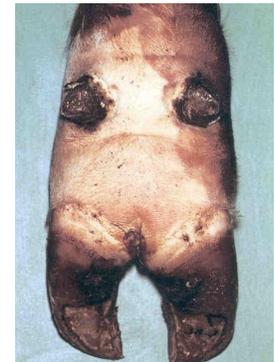
- injury to the skin or wet/ dirty conditions allowing infection to occur

Prevention

- Foot baths, clean and dry alleys, crosswalks, holding areas

Treatment

- Injectable antibiotics given for 7+ days



Digital Dermatitis (Strawberry Foot Rot)



Open wound or raised growth. Usually present between the claws on the heel. Foul smelling odour.

Causes

- Transmitted from cow to cow, increased transmission in wet/ dirty conditions, difficult to get rid of once on farm

Prevention

- Footbaths, clean and dry floors, disinfect trimming tools

Treatment

- Typically topical tetracycline applied with a hoof wrap

****Important preventative measures to decrease lameness in your herd****

1) Nutrition

- a) A properly balanced TMR with routine monitoring to prevent sub-acute ruminal acidosis. Ruminal acidosis can be caused by:
 - High levels of highly fermentable carbohydrates with inadequate fiber
 - Sudden increase in the energy content of the ration (or decrease in effective fiber)
 - Feeding to an empty bunk or overstocking which encourages slug feeding

2) Cow Comfort

- a) Properly designed stalls to encourage lying down
- b) Adequate bedding, comfortable mattresses (they don't last forever!)
- c) Limit overstocking to make sure everyone has a stall
- d) Implement heat abatement and fly control strategies to encourage lying

3) Low Stress Handling

- a) Yelling or hitting animals causes running on hard, abrasive concrete surfaces and increases hoof trauma

4) Cleanliness of alleys, crosswalks, packs and walkways

- a) Walking on wet concrete or deep manure will increase risk of infectious footrot and can lead to slippery conditions resulting in foot trauma.

5) Preventative and Corrective Hoof Trimming

- a) Need to be done regularly. Typically, one of 2 methods is used:
 - i) Trimming all cows and heifers approximately 60 days prior to calving then ideally 2 other times during lactation.
 - ii) Whole herd trimming multiple times per year. Minimum 2x/year in herds with sand bedding. Minimum 3x/year with any bedding other than sand.
 - iii) Cows that develop a lameness require foot trimming and treatment immediately to prevent suffering and worsening disease.

6) Footbaths

- a) Usually formaldehyde or copper sulfate
- b) Often used once a week for prevention, differs depending on the herd
- c) Footbaths need to be big enough to ensure all feet are submerged when cow walks through (ideally 10'L x 20"W x 10"H- provides 2 immersions/ foot), fill to 3.5"-4"
- d) Typically only good for 150 animals before liquid needs to be changed
- e) Using water with dish soap on days between medicated footbaths has shown to help decrease lameness

7) Biosecurity Measures

- a) Strawberry foot rot is a common disease brought in with bought animals and can cause a lameness outbreak if not present or present in low levels in home herd
- b) Make sure tools are cleaned thoroughly between animals when trimming to prevent spreading strawberry footrot between animals in your herd.

Hoof maintenance and treatment protocols are not "one size fits all". Talk to your herd veterinarian about what management strategies you could implement to better manage lameness on your farm!