

A Better Gait Scoring System

Lameness, now recognized as the most common malady of dairy cows, was the focus of this year's BC Dairy Expo. Seminar topics dealt with lameness research, prevalence, economics, causes and cures. Researchers from the UBC Dairy Research and Education Centre, along with invited guests, hosted a workshop on improved methods for identifying injuries and gait abnormalities. Two similar workshops were conducted by the UBC group at the Western Canadian Dairy Seminar in March.

Much of the current research at the UBC Dairy Research and Education Centre at Agassiz relates to lameness assessment and to the design of better environments and management strategies which will prevent injuries leading to lameness. Through detailed study of cow movement, the UBC group has developed a gait scoring system based on more detailed observations of animal movement than the

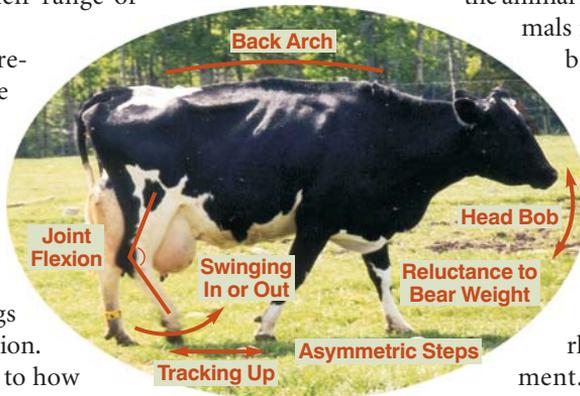
Hoof Lesions in Fraser Valley Herds	
Hoof Lesions	Prevalence
Sole lesions	86% at least one lesion 35% severe lesions
Heel erosion	severe in approximately 80% of mid-lactation cows and 40% of heifers
Digital Dermatitis 'Fungus'	15%
Foot Rot Interdigital necrobacillosis	0.5%
Corns Interdigital hyperplasia	2.4%

source: University of BC Animal Welfare Program

Michigan system described in the Fall 2002 issue of Western Dairy Digest. The system uses the gait characteristics described below in the 5-point scoring system outlined on the next page.

Behaviour Descriptions

1. *Back arch* - an injury-free animal has a flat back while an injured animal may arch her back.
2. *Joint flexion* - expect animals with no injuries to flex and extend their limbs through the normal range of motion. Injured animals may be more limited in their range of motion.
3. *Swinging in or out* - refers to how much the hind legs swing out from the body. Animals with no injuries move legs in a straight line but those with injuries swing the legs out in a circular motion.
4. *Tracking up* - refers to how close the hind feet place in relation to the front feet. An injury-free animal will place her hind hoof in the track of her front hoof. The hind hooves of animals with inju-



- ries often fall short of the track where the front hooves were placed.
5. *Head bob* - the head moves as an animal walks but animals with injuries often have a jerky up-and-down head movements as they walk.
6. *Reluctance to bear weight* - this looks at whether the animal is favouring a limb. Animals free from injury would be expected to bear weight evenly over the four limbs where an animal with an injury may not place all her weight on an affected limb.
7. *Asymmetric steps* - looks at the rhythm of the foot placement. An animal free from injuries places her hooves in an even 1,2,3,4 fashion but an animal with injuries might have an uneven foot placement-1,2,,,3,4.

source: University of BC Animal Welfare Program

Gait Scoring System for Dairy Cows

Score	Description	Behavioural Criteria
1 Sound	Smooth and fluid movement	<ul style="list-style-type: none"> • Flat back when standing and walking • No swinging out • Symmetrical gait • All legs bear weight equally • Joints flex freely • Hind-hooves track up to fore-hoof prints • Head carriage remains steady as the animal moves
2	Ability to move freely not diminished	<ul style="list-style-type: none"> • Flat or mildly arched back when standing and walking • Minimal swinging out • Slightly asymmetric gait • All legs bear weight equally • Joints slightly stiff • Hind-hooves do not track up perfectly but shortened strides are uniform • Head carriage remains steady
3	Capable of locomotion but ability to move freely is compromised	<ul style="list-style-type: none"> • Flat or mildly arched back when standing, but obviously arched when walking • Swinging out • Asymmetrical gait • Slight limp can be discerned in one limb • Joints show signs of stiffness but do not impede freedom of movement • Hind-hooves do not track up and strides may be shortened • Head carriage remains steady
4	Ability to move freely is obviously diminished	<ul style="list-style-type: none"> • Obvious arched back when standing and walking • Swinging out • Asymmetrical gait • Reluctant to bear weight on at least one limb but still uses that limb in locomotion • Strides are hesitant and deliberate and joints are stiff • Hind-hooves do not track up and strides are short • Head bobs slightly as animal moves
5 Severely Lame	Ability to move is severely restricted Must be vigorously encouraged to stand and/or move	<ul style="list-style-type: none"> • Extreme arched back when standing and walking • Swinging out • Asymmetrical gait • Inability to bear weight on one or more limbs • Obvious joint stiffness characterized by lack of joint flexion with very hesitant and deliberate strides • One or more strides obviously shortened • Head obviously bobs as animal moves

source: University of BC Dairy Education and Research Centre, Animal Welfare Program