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RESEARCH FACTS
RESEARCH & TECHNOLOGY DEVELOPMENT FOR THE CANADIAN BEEF INDUSTRY

Scratching the surface: Investigating the Prevalence, Nature, and Potential Causes of Itchy Cattle

Project Title:

Scratching the surface: Investigating the Prevalence, Nature, and Potential Causes of Itchy Cattle

Project Code:	ANH.03.20
Completed:	*In Progress. Results expected in March 2023.*

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Background

Producers and veterinarians have reported situations where cattle have lost hair even after being treated with a pour-on “mectin” product (e.g. Ivomec). This is often assumed to mean that lice are developing resistance to these products. However, some vets who have investigated these cases report that they haven’t necessarily found lice. Besides biting and sucking lice, other potential causes of itching include other parasites (e.g. microscopic mites), environmental factors (e.g. barley hull allergy, frost bite, straw mites), nutrition (e.g. Vitamin A or zinc deficiencies), and mycotoxins (e.g. ergot, citrinin, T2 toxins). This team wants to see if they can find the cause of and solution to the itchy cattle problem.

Objectives

- To provide insight into the cause and potential prevention/treatment of itching beef cattle in Western Canada

What they will do

The team will work with 20 herds that have more than 30% itchy cattle in British Columbia, Alberta, Saskatchewan, and Manitoba. They’ll examine the baldness patterns, treatment history, nutritional management, test skin for pathogens (e.g. lice, mites), allergies, and collect feed and blood samples for nutritional deficiencies. They will work with the Canadian Cow-Calf Surveillance Network to ensure all relevant production and management information is collected. Blood samples will be collected from 10 itchy

and 5 non-itchy animals in each herd and analyzed for a variety of metabolites and nutrients. Baldness patterns will be photographed, and itchiness and skin injuries/trauma will be scored. Biting and sucking lice will be collected and counted at seven locations on each animal, and the louse species and level of infestation will be determined. Cattle will be skin-tested for hypersensitivity to 10 different antigens and irritants. Skin scrapings will be collected from the edges of lesions to look for chorioptic and sarcoptic mange mites. Skin samples will be collected and analyzed for signs of disease. Forage and grain samples will be collected analyzed for nutritional composition, ergot and mycotoxins. Bedding and hay will be tested for straw mites. The data will be analyzed to identify which of these factors may play a role in the itchy cattle syndrome and how they interact.

Implications

The first step to finding an effective solution to the itchy cattle syndrome is to determine the most likely true cause(s) of the problem.

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