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RESEARCH FACTS

RESEARCH & TECHNOLOGY DEVELOPMENT FOR THE CANADIAN BEEF INDUSTRY

IN PROGRESS

The impact of agricultural land conversion on carbon stocks across Canada, with a focus on grazing lands

Project Title:

The impact of agricultural land conversion on carbon stocks across Canada, with a focus on grazing lands

Researchers:

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Project Code:

ENV.02.18

Completed:

*In Progress.
Results
expected in
March 2022.*

Background

Some agricultural lands are unsuitable for growing crops or doing much more than grazing on them. As more of this land continues to get broken up and used for other purposes it releases carbon and it has been assumed that this has a negative effect on total carbon stores. No long-term Canadian research has been done on quantifying the effects of land conversion.

Objectives

To quantify the impact on soil C dynamics of grazing management practices, including the conversion of agricultural lands to other land uses across the Canadian agricultural zone.

What they will do

Researchers will compare current and past soil carbon stores as well as use modeling software to show how changes in land use affects the environment. This will produce spatially-explicit estimates of past, present and future soil C stocks on Canadian agricultural lands under different land management and climate scenarios. They will also use this model to predict how soil carbon will change with different climate change scenarios.

Implications

This will provide data to show the effects of leaving land as grazing pastures and possibly quantify some of the positive environmental impacts that grazing cattle can have.

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