EcoServices NETWORK

PROJECT PROFILE: UNDERSTANDING GRAZING IMPACTS ON ALBERTA RANGELANDS

UNDERSTANDING HOW GRAZING ALTERS CARBON CYCLING

Rangelands provide many ecosystem services (ES) including carbon storage for which no policy exists to provide ranchers compensation. This study provides data to inform economic models for the development of carbon storage incentives for rangelands.

PROJECT LEAD

University of Alberta

OVERVIEW

Rangelands provide many ecosystem services (ES) including carbon storage. But currently, no policy exists to provide ranchers compensation for providing this service. This study used decomposition rates and microbial activity to understand grazing impacts on nutrient cycling and carbon sequestration on Alberta rangelands. Ultimately, the estimates of carbon cycling will provide policy makers with data to inform economic models that provide incentives for carbon storage.

OUTCOMES

The project was intended to:

1. Supplement estimates of carbon stock in grasslands with an understanding of factors regulating carbon cycling litter and soil organic matter.
2. Provide data to develop innovative policy and economic tools that provide incentives to the beef industry for carbon storage and revenue diversification.
3. Increase general awareness of the role grasslands have in providing ecosystem services that benefit society, including carbon storage.

Results from this study suggest that grazing could play a critical role in regulating litter decomposition and Carbon cycling in the northern temperate grassland.

THE ESN CONNECTION

This project resulted in a better understanding of how cattle grazing specifically alters carbon cycling and stores in northern temperate grasslands. Results provide necessary information needed to promote innovative policy and market instruments that reward cow/calf producers for carbon storage.

LEARN MORE

About the project at albertalandinstitute.ca.

About the ESN at ecoservicesnetwork.ca and follow us on Twitter, Facebook and LinkedIn