



PRESS RELEASE

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DUC analyzing wetlands on farms and ranches for carbon capture

Hi-tech monitoring towers in Manitoba measuring benefits of nature-based climate solutions

New research in southwest Manitoba will help landowners, industry and government understand carbon storage and greenhouse gas release from wetlands in two important agricultural landscapes.

Funded by the Canadian Agriculture Partnership, Ducks Unlimited Canada (DUC) and its project partner Manitoba Forage & Grassland Association (MFGA) are measuring carbon dioxide and methane emissions from wetlands located on cattle farms and wetlands found in annual crop fields.

“Agriculture uses a significant amount of land in western Canada and our study will help inform how different agricultural practices can help reduce greenhouse gas emissions,” explains Pascal Badiou, lead project scientist from DUC’s Institute for Wetland and Waterfowl Research. “Scientific measurements are key in developing policies to protect and manage the remaining intact natural ecosystems on these production lands.”

Towers equipped with sensors are deployed on farms and ranches near Riding Mountain National Park - the first time ‘flux towers’ will measure wetland emissions within the Prairie Pothole Region. Spanning western Canada and several American states, the Region contains natural grasslands and wetlands which provide flood and drought mitigation, water purification, carbon sequestration and biodiversity.

“The preservation of grasslands and wetlands by beef and forage producers represents a major environmental service associated with the livestock industry,” says Lawrence Knockaert, MFGA Chair. “Accounting for the ecosystem services from these systems will be important for developing effective communications to increase public knowledge of the role the beef and forage industry play in maintaining natural landscapes and the services they provide society.”

With results expected in 2023, the study will:

- generate data necessary to facilitate the inclusion of wetlands and wetland management in national reporting for greenhouse gases (GHG) and carbon sequestration;
- inform offset protocols involving wetland restoration, potentially providing a new revenue stream to beef producers managing environmental on-farm assets; and
- lay the groundwork for a long-term monitoring program across the Canadian Prairies.

Previous research by DUC and MFGA shows wetlands buffer climate change by lowering extreme summer temperatures and that wetlands and grasslands are important in moderating severe climatic conditions, particularly in regions that may go from drought to flooding within the same year.

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