

News Release

Bison Return to Regenerate Soils

By Wayne Hildebrand

Each year, Manitoba Habitat Heritage Corporation invites Conservation Trust grant applications for on-the-ground conservation projects across Manitoba that benefit water quantity and quality, wildlife habitat, soil health, and nature.

The Conservation Trust received a project application in 2020 from the Manitoba Forage and Grasslands Association (MFGA) to convert 160 acres of grainland to a grazing system. The project goals were to demonstrate regenerative agriculture to improve economic returns to the farm while providing water storage, improved soil health, and increased wildlife habitat.

Brooks and Jen White were identified as the farmers who would implement the project. They are the 5th generation owner/operators of Borderland Agriculture, a grain farm and bison ranch located in the far south-west corner of Manitoba.

In 1882 Richard and Lorinda White homesteaded in Treaty 2 territory, near Lyleton, the driest part of the province dominated by sandy soils, and at the time, a sea of mixed grass prairie with roaming bison herds.

Only twelve years prior (1870), Manitoba had joined confederation with the Great Plains Bison on the provincial Seal. By 1888, no wild bison were left in Canada. Their slaughter removed the keystone species that supported indigenous communities and the Great Plains grasslands ecosystem.

Brooks and Jen White are regenerative farmers. “Our approach to regenerative agriculture focuses on integrating poly cropping and grazing to build soil organic matter and soil biodiversity, grow better crops and produce healthier bison,” said Brooks.

“Through this project we seeded 160 acres to a perennial pasture which we fenced and added a watering system,” Brooks said. “We installed structures to back-flood areas in the spring to encourage water infiltration and reduce field runoff to prevent downstream flooding.”

“Bison are the key to building soil and improving plant health,” said Brooks. “We rotate bison and our domestic livestock across the farm. We graze a variety of forages, perennial pasture, cover crops, crop residue and corn. In doing so, the animals get all the nutrients they need, and we build soil.”

Bison are physically adapted to winter grazing. “Our rotational system allows us to graze fields 365 days a year,” said Brooks. “The bison manure and herd trampling helps to spread nutrients, reducing our fertilizer costs by 75%. By maintaining plant cover and moving them through the farm year round, we are essentially mimicking the ecological system when the bison roamed the Great Plains.”

Through regenerative agriculture Brooks and Jen have come to see changes in their soil. “In fields where we have transitioned from annual cropping to grazed perennial pastures, we see significant changes in dung beetles and earthworms in our soil, and we see increased plant production and better water infiltration,” said Jen.

“We believe in ecological systems and providing ecological goods and services from our farm,” Jen said. “This includes increased biodiversity, flood mitigation, carbon sequestration, improved water quality, and enhanced wildlife habitat. One thing we know for sure, the deer and moose love our farm.”

“Bringing home the bison is a bit like a step back in time when farming was based more on biology than chemistry,” said Brooks. “That said, regenerative agriculture addresses current issues like climate change and removing carbon from the atmosphere, as well as healthy food production and supporting a cleaner environment to meet the demands of today’s consumers. Better for your food and better for the planet is a common theme with regenerative agriculture.”

In addition to Conservation Trust funding the MFGA Borderland Agriculture project was also supported by Ducks Unlimited (Canada), the Souris River Watershed District, and Manitoba Agriculture-Ag Action along with significant cash and in-kind contributions from the Whites.

“Brooks and I strive to promote positive change in the agriculture industry by being innovative in our management practices, and we appreciate the support as we undertake this journey,” said Jen.

Since 2018, Manitoba Habitat Heritage Corporation has approved over \$9.7 million in grant funding for 110 Conservation Trust projects in partnership with 45 organisations.

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