



Forage Insurance Research Pilot



The forage and livestock sectors in Manitoba have been vulnerable in times of substantial forage shortages. Traditional risk management and insurance methods used for other crops do not always work well for forage, given highly variable management systems, multiple harvest times throughout the season, lack of records for grazing livestock, etc., which leads to difficulty accurately measuring yield even when relying on costly human expertise. Advancements in data sensing technologies, including remote sensing, and advanced analytics, such as machine learning, have resulted in new opportunities to accurately, and remotely measure and predict yield in near-real-time (NRT). Participation rates in forage insurance have been relatively low in Canada with only about 10 to 20% of producers purchasing insurance. This has left the forage and livestock sectors particularly vulnerable in times of substantial forage shortages due to adverse weather.

The objective of this project is to develop an innovative usage-based insurance (UBI) product for forage crops, leveraging an AI-based state-of-the-art crop phenological model and other big data that includes satellite, weather, and geo-referenced information. The focus of the study is on the province of Manitoba, and the new insurance solution will be introduced via an interactive web-based application, powered by Agi3™, allowing producers to engage directly with the platform to select, insure, and monitor their fields in real-time, and gain AI-driven insights. The aim is to provide a new and much-needed forage solution that will contribute to strengthening the forage and livestock sectors in Manitoba through increasing the participation rates among forage producers, helping to facilitate access to credit, reducing the negative impacts of natural catastrophes, and encouraging investment in improved agricultural production technology, all of which contributes to the food and agricultural sector.

The project is being led by Dairy Farmers of Manitoba, along with collaborator, Manitoba Beef Producers. Additional collaborators, include Manitoba Agriculture Services Corporation, Manitoba Forage and Grassland Association, Manitoba Bison Association, Manitoba Sheep Association, as well as numerous participating farms. The research and development are being conducted by Winnipeg-based AIRM Consulting Ltd., a full-stack AI company offering innovative insurance products and technologies with a strong focus on the agriculture sector. The project leverages AIRM's rich data and AI-algorithms to develop the insurance solution. The Agi3™ platform has a custom GIS interface that integrates the data and algorithms, which supports education, transparency and builds trust across stakeholders. A team of experienced actuarial

and data science professionals will design and price the insurance product so that it is actuarially sound and ready to implement as a pilot by MASC.

Enroll in the 2022 Research Pilot

The project is looking to enroll at least 25 farms in Manitoba during the 2022 growing season (pasture and forage) to further develop, test and validate farm-level information and help ensure the product is relevant for producers. Participation in the pilot would involve working with an AIRM researcher to:

- Create an online account on the platform
- Select your forage and/or pasture fields and create a crop plan
- Share progress updates throughout the growing season regarding field observations and farm decisions
- Validate the end-of-season results

All data gathered during the pilot will be held strictly confidential. Participants will benefit from:

- The opportunity to provide feedback and contribute to new forage insurance solutions in the province
- Access to data and analytics
- Individual risk management recommendations

If you are interested and willing to participate, please contact:

forage@airmconsulting.com and a researcher will be in touch to get started.

Do you farm other crops? You may also be interested in enrolling in the broader pilot for other crops. Please contact agj3@airmconsulting.com for further information.