



# Innovating Agricultural Insurance Through Data-Driven Solutions



## Introduction and Project Background

Saskatchewan Municipal Hail Insurance (SMHI) is one of Canada's oldest and largest crop hail insurers with a long-standing reputation of excellence and commitment to its customers. In 1917, SMHI started as a single service, acting as a farmer-led hail insurance system for Saskatchewan growers, since then it has grown to include multiple subsidiaries such as Additional Municipal Hail Insurance and Prairie Municipal Hail Insurance, expanding their customer service from Manitoba to Alberta.

Crop producers in Canada have come to rely on SMHI to provide quality insurance products to protect their farm investments. With this growth, and their progressive CEO driving innovation, SMHI sought a partner to deliver trusted technology solutions to address its evolving challenges. The goal: to streamline operations, enhance decision-making, and ensure accuracy in claims processing amidst growing industry pressures.

*Since 1917, Saskatchewan Municipal Hail Insurance has established itself as a leading provider of spot loss hail insurance protection by providing coverage that meets the evolving demands of producers while providing client-first service.*



## The Challenges at Hand

SMHI faced growing customer demand for seamless digital data sharing but lacked the infrastructure to support it efficiently. To meet these expectations, they needed a partner with proven capabilities to deliver a robust, integrated solution without starting from scratch. The scope of the project introduced several complex challenges.

Accurately determining crop growth stages, especially in dense canola fields, was essential for assessing hail damage, as even minor inaccuracies could disrupt settlements and erode customer trust. At the same time, managing 14.6 million acres of weather and hail data across three provinces demanded highly precise geospatial and meteorological information, tightly integrated with field boundaries to ensure claims accuracy.

Compounding this was the inefficiency of working with multiple vendors for data, processing, and software, which created a fragmented and time-consuming system. On top of it all, SMHI faced growing pressure to deliver timely analytics and reporting, such as identifying flowering dates, during the claims process. Every delay impacted both operations and customer satisfaction.

# The Corvian Solution

Since 2021, SMHI was in pursuit of the right provider who could tackle their challenges head on. With Corvian historical direction focused on the grower as their primary customer, their technology could solve industry problems, but it wasn't until the change of company direction and new leadership that led to Jay Kinnaird, Corvian Vice President of Enterprise Technology, Garth Wruck, Principal Strategic Partnerships and new addition Andrew Gardner, Director Strategic Partnerships able to present the right solution that would win over the CEO and COO of SMHI.

SMHI believed that Corvian were the provider that had the technology that could alleviate their operational pressures and support their customers. In 2024, working alongside each other, SMHI and Corvian collaborated on a pilot project that delivered the monitoring capabilities to support their adjusting insights on 4.6 million acres of canola. The success of the pilot project has led to driving real value for SMHI and has fostered a strong partnership between the two organizations.



*"Working with innovative and forward thinking leadership in a company like SMHI, has really helped the success of this partnership. SMHI understands the value that an experienced technology partner, like Corvian, can bring and the speed and scale at which business innovation can be deployed is key."*

**– Garth Wruck, Principal Strategic Partnerships**

## Technology Highlight

Corvian technology uses advanced remote sensing models to accurately identify crop growth stages affected by hail events. With forensic analytics, it can precisely determine flowering dates, enabling consistent and reliable claims assessments. This data-driven approach helped SMHI overcome one of its most critical challenges in evaluating crop damage, ultimately supporting faster and fairer settlements for customers.

To support comprehensive monitoring, Corvian integrated daily weather and hailstorm data with geospatial field boundary overlays. This enabled SMHI to track storm impacts across millions of acres more effectively. The streamlined approach enhanced hail event reporting and significantly improved the accuracy of claims assessments.

By leveraging an established data infrastructure, SMHI avoided the complexity of building new systems from the ground up. Corvian solutions were seamlessly integrated into SMHI's operations, reducing internal workload while delivering a scalable and reliable framework to manage their expanding data needs.



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