Digital Agriculture in Action: EMILI Plays a Key Role



Did you know that farmers are employing digital technologies, like AI and satellite imagery, to help be more sustainable? A digital revolution is underway, reshaping how food is grown, harvested, and brought to your table. Playing a key role in this transformation is EMILI, an industry-led non-profit based in Manitoba. This organization works collaboratively with farmers, industry, investors, and innovators to grow a sustainable and economically resilient digital agriculture industry.

Tech on and off the farm

Digital agriculture is the application of intelligent technologies — such as artificial intelligence, robotics, drones, sensors, and big data — to any or all the components of the agri-food value chain before, during, and after on-farm production. Picture a farmer using satellite imagery to monitor crop health, or a start-up developing AI tools that can monitor pest activity. These innovations help farmers make better decisions, reduce environmental impact and ultimately produce food more efficiently. EMILI also helps make Manitoba a leader in agri-food innovation. It brings together farmers, researchers, technology developers, and educators to promote the adoption of digital tools in the industry.

The results benefit all of us with greater food security, reduced waste, and a more sustainable agriculture industry — right here in Canada.



Bridging Innovation and Agriculture
One of EMILI's standout initiatives is the Manitoba Digital Agriculture Table, a cross-sector working group that brings together individuals and organizations from across the agri-food value chain. This includes farm groups like Keystone Agricultural Producers, individual farmers, agribusinesses, government, and academic institutions, all working toward shared goals for digital innovation in agriculture. The Manitoba Digital Agriculture Table helps align priorities, identify emerging needs, and shape policy recommendations, ensuring that innovation is grounded in real-world challenges and opportunities.

Innovation Farms: De-risking agtech on a commercial farm
EMILI's work comes to life at Innovation Farms, a real-world test site where cutting-edge technologies are trialed on actual working fields. This 5,500-acre farm outside of Winnipeg is a proving ground for tools that can help farmers do more with less—less fertilizer, less water, and fewer emissions. Whether it's using drones to spot pests before they spread, or sensors that track soil health in real time, the results are more precise farming practices that benefit the environment, the farmer, and ultimately, the consumer.

2025 marks the third growing season at Innovation Farms. EMILI is collaborating with close to 30 partner organizations to test, validate and demonstrate their technologies. For example, Elmer's Manufacturing, a Manitoba equipment manufacturer, is testing the capabilities of its Hive Motherbin and HIVE CONNECT app. This portable grain cart can store up to 8,250 bushels of grain. Its dual tank system enables separate storage and custom blending of grains with varying moisture levels. In 2024, EMILI tested the Hive Motherbin on two fields during harvest, covering a total of 445 acres to evaluate its operation and capabilities, and found that using the technology reduced the need for additional staff and equipment, streamlined operations, and optimized logistics.

Last year EMILI welcomed more than 500 people to Innovation Farms to showcase new agricultural technologies, expand innovation opportunities, and increase understanding and adoption of digital tools. Registration is now open for their 2025 field tours.

Why It Matters

As the threat of tariffs, rising costs, and global instability continue to impact farmers, food production, and the agriculture ecosystem, advances in digital agriculture and organizations like EMILI are helping ensure that Canadians can continue to count on safe, affordable, and sustainable food. By supporting digital agriculture, we're supporting local farmers who are adapting to new challenges with new tools—and ensuring that the next generation of farmers can thrive.