

Elmer's Manufacturing Hive Motherbin

About the technology: The Elmer's Manufacturing Hive Motherbin is a portable grain storage solution designed to streamline harvest logistics and optimize grain collection and distribution. Integrated with the HIVE CONNECT app, it delivers real-time data on grain weights, GPS, and load status, empowering farmers to make informed decisions on the go. Only two prototypes are currently available in North America.



Innovation Farms' objectives

- Test the capabilities of the Hive Motherbin to optimize harvest and improve efficiency.
- Validate the HIVE CONNECT app ability to deliver live weights, GPS and load tracking.

What this technology could unlock

This technology will allow for continuous operation, faster offloading, and reduced labor requirements, offering producers enhanced efficiency, streamlined logistics, and better control over grain quality throughout the harvest season.

Our approach

- EMILI tested the Hive Motherbin on two fields during harvest, covering a total of 445 acres to evaluate its operation and capabilities.
- The Hive Motherbin was placed in an accessible location and remained in-field once filled.
- Grain corn was harvested using a combine and unloaded on-the-go into a grain cart before being transferred into the Hive Motherbin.
- The grain trucks transported the grain from the Hive Motherbin to storage facilities at the yard site, up to 11 km away.
- EMILI used the HIVE CONNECT app, accessed via a tablet, to remotely monitor weight changes in the Hive Motherbin and control operations, including opening and closing the auger gate.

Project collaborators:



At Innovation Farms powered by AgExpert, EMILI provides innovators across industry and academia with access to leading-edge equipment, technology, and production practices to increase productivity, sustainability, and profitability across the agriculture and agri-food sector.

Innovation Farms project summary last updated: February 5, 2025



Students learning about the Elmer's Manufacturing HIVE Motherbin during a farm tour.

What we learned

- Using this technology reduced need for additional staff and equipment, streamlined operations, and optimized logistics.
- Reduced harvest operations staffing needs from five to three due to the flexibility of extra in-field storage.
- Combine idle time was minimized from 15% in 2023 (approx. four hours) to 5% in 2024 (under one hour), meaning better time management and fuel efficiency.
- Grain cart idle time reduced from 32% in 2023 to 25% in 2024, implying greater efficiency with equipment beyond the combine.
- Recommend addressing auger gate lag time, and optimizing base supports to increase the stability of a fully loaded bin for Interlake soil.
- Recommend adding monitoring features (such as cameras, windows, and scales) to accommodate the HIVE Motherbin's size and capacity.



Innovation spotlight

The largest Elmer's Manufacturing HIVE Motherbin model 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 and protein. This allows producers to decrease staffing needs and idle time, increasing efficiency during harvest.

Learn about Elmer's Manufacturing

Elmer's Manufacturing is a Manitoba-based farm equipment manufacturer.



“EMILI's Innovation Farms integrated our HIVE motherbin prototype into their harvest and collected data that proved the product's potential to improve harvest logistics. EMILI's year's of historical data at Rutherford's operation gave a baseline for comparison that boosted us forward.

**Rheal Boileau, P.Eng, Product Development Manager,
Elmer's Manufacturing**

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