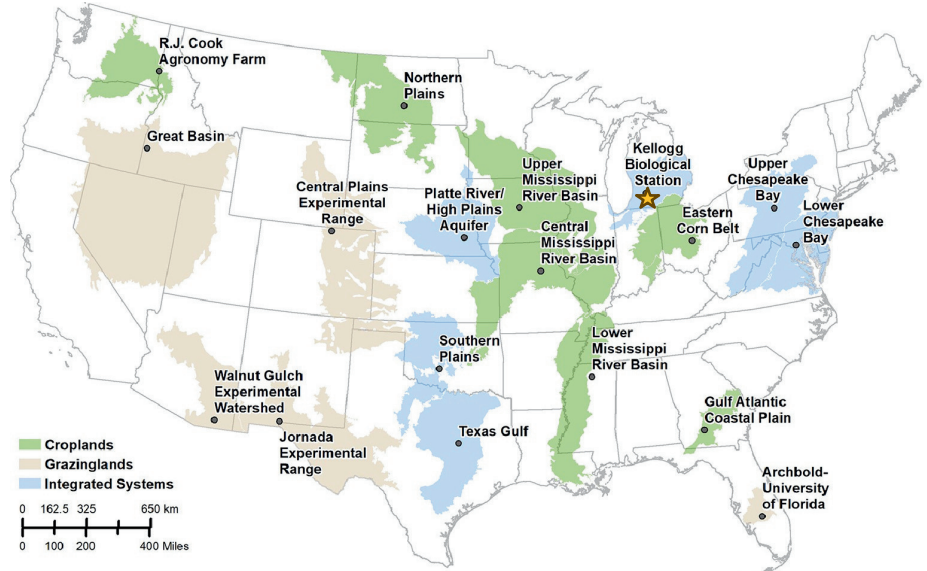


The KBS LTAR site is part of the USDA's LTAR network, established to develop national, long-term strategies for sustainable agricultural production.

Research addresses:

- What practice changes are needed to increase farm resilience to weather extremes and fluctuating markets?
- Can we design production systems that sustain natural resources and ensure rural prosperity?
- How can modern crop and livestock systems be better positioned to contribute to inter-generational farm success?



Network website
ltar.ars.usda.gov

Can Michigan agriculture support farmers in the long-term?

- We use research and stakeholder input to compare conventional agriculture (Business as Usual) to a system for the future (Aspirational Cropping System) designed through collaboration with leaders in Michigan agriculture to represent “what Michigan agriculture could look like in 30 yrs.”
- This Aspirational System aims to maximize stable profits and positive environmental outcomes by incorporating advanced technologies that target crop diversity, nutrient circularity & efficiency, animal integration, active root growth, and soil protection.

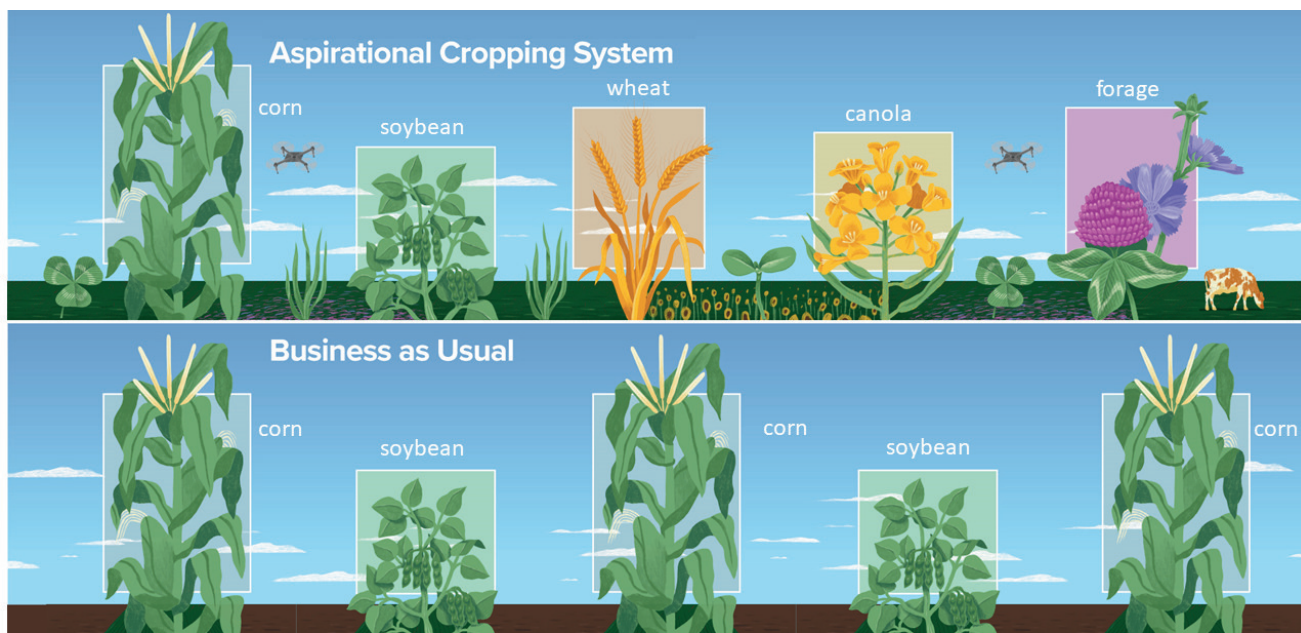


Illustration showing the main experiment at KBS LTAR, established in 2022. Credit: Trevor Grabill

We collect data over the long-term.

- Long-term, field-scale research ensures the likelihood of durable solutions to the economic, environmental, and social challenges that face present and future farms and rural communities.
- Datasets that span decades capture changes in plant, soil, water, and pest interactions in response to episodic events like periodic droughts, pest outbreaks, and market volatility.
- A team of interdisciplinary scientists and stakeholders collect data every year to identify and compare the success of the Business-As-Usual vs. Aspirational Systems.



Priority measurements at the KBS LTAR and across the network:

- Economic Returns
- Productivity
- Soil health
- Water quality
- Air quality
- Biodiversity
- Farm family well-being



Researchers use drones to study precision nutrient applications and monitor for beneficial insects.
Photo credit: Rich Price (top), Nick Schrader (bottom)

We collaborate with stakeholders to ensure research is relevant & useful.

Research at the site is a partnership between scientists and stakeholders to improve economic and environmental outcomes for Midwest farms and farm families, with a unique long-term outlook.

Our stakeholder advisory board guides the direction and priorities for research at the KBS LTAR and includes leaders in Michigan agriculture across many sectors: farmers, NGOs, agribusiness, and state and federal agencies.

Scientists and stakeholders developed our shared purpose of
Bridging the gap between the agricultural systems needed by present and future generations.



LTAR stakeholders and scientists collaborate during winter meetings and summer field workshops to discuss the design, results, and needs for the experiment.

Visit our website to learn more:

ltar.kbs.msu.edu



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