The Flickner Farm

Project partners

Innovation Farm
Growing for the Future

1923 Arrowhead
Moundridge, Kansas
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About the farm
The Flickner Farm has a long history, with family ancestors farming here in Moundridge since the 1870s. Ray Flickner is the 5th generation to farm this land, which now consists of more than 850 acres with 10 individual water rights. The farm, spread across eight different sections, utilizes various technologies to improve water conservation, water quality and soil health for the entire operation. The Flickner family uses sub-surface drip irrigation (SD) and precision mobile drip irrigation (PMDI) to grow corn, wheat and soybeans. Many fields are no-till or limited strip till; soil conservation work, such as rebuilding terraces and constructing new waterways, is ongoing. The family’s commitment to improved soil health and sustainable water use makes the Flickner Farm a perfect location for testing new technologies and innovative solutions for these issues.

Inspired to innovate
This project sprouted from a desire to use experimental design on a large-farm setting while harnessing the expertise of a team from the local farming community, industry, university specialists, state agencies and other stakeholders. Current work on the Flickner Innovation Farm combines the use of:
- Irrigation technologies, including sub-surface drip and precision mobile drip systems
- Precision agriculture using soil moisture and cosmic-ray neutron sensors, irrigation scheduling, and plant sensors
- Imagery provided by satellite, fixed-wing aircraft and automated drone system
- Research projects focused on soil health, fertilizer response and nutrient losses

What can we accomplish?

| With advanced irrigation technologies, this project hopes to reduce irrigated water use by 15%. |
| Field trial will help us develop interpretations for the newest types of soil and tissue tests to evaluate nutrient availability and plant uptake. |
| Research on the farm will develop new state nitrogen fertilizer recommendations to minimize environmental impacts and maximize productivity and cost savings. |

Our Vision
With key partners in place, we will fine-tune existing technologies while exploring new innovations that improve soil health and conserve water on Kansas farmland.

We hope to harvest the advantages of new technology and current research with our comprehensive team of experienced growers, agronomists, watershed specialists, university researchers and industry specialists. Together, we will extend the reach of standard agricultural practices while improving yields and preserving natural resources.