# CONSERVATION THROUGH INNOVATION

*Measurable insights lead to effective management.*

Water shapes every decision on Bestifor Farms in Belleville, Kansas, a small community in the north-central region of the state that receives about 28 inches of rainfall annually.

For decades, irrigation wells in Kansas have had meters that measure water use, and farmers receive permits or water rights for specific amounts. This helps protect groundwater supplies but also makes growing crops a complicated puzzle as farmers must stay below their allocation — or face fines.

Chase Larson, CEO of Bestifor Farms, knows he won't get more water for his hay, forage and grain crops. Instead, his focus is on using the same or less water to irrigate more acres.

"We can raise excellent corn in our area, but our No. 1 issue is drought," he says. "If we could time the rains, we're great with 28 inches. The problem is it doesn't come during our main growing season sometimes, so we need to supplement it with irrigation."

> *Water is my most precious resource. I start with how much water I have and then I work backwards and determine my crop, plant population, fertilizer, etc.*
>
> -CHASE LARSON

FARM JOURNAL'S TOP PRODUCER FINALIST

For years, Larson sent dozens of people out across Bestifor's 12,000 acres to take meter readings on irrigation wells during a twenty-week irrigation season. He knew there had to be a better way. He combined his in-the-field experience with his interest in software to found VandWater, a software platform that he and his team developed to manage water usage from every well in his operation. His water usage hasn't changed, yet his yields have increased.

"With VandWater, I can use the same or less water to irrigate more acres. Part of it is technology and part of it is knowing and managing your resources correctly. When you can merge those two together, it's instant sustainability."

Larson completed all the VandWater beta testing at Bestifor Farms. After he knew it worked and was a valuable tool, he made it commercially available to other farmers in 2023. VandWater is compatible with all water meters, which means every sector of agriculture — from irrigated farms to livestock and dairy operations — can more accurately measure and plan water usage as well as better manage risk. VandWater also can be used by municipalities and water districts.

"Our goal was to build something that went from meter to report," he says. "We didn't want to manipulate the data in any way so we could protect the integrity of the data."

"Also, our software would be the third-party verifier for sustainability practices, detailing exactly how much water it took to grow a crop. Hopefully down the road our customers will be compensated for putting a system like VandWater in place."

VandWater works by attaching a token with a unique identifier to each water meter. Once the token is scanned with the VandWater app to enter a reading, data starts flowing into the system. VandWater users can see everything from irrigated acres in a field to water use history to how many gallons per minute a pump is running via VandWater's app or desktop system. That data, Larson says, is a powerful management tool.

"It's a little bit like working out. If you work out, you eat healthier," he says. "And if you look at your water balances continuously, you manage them differently. That is what happened with us. We started seeing the numbers, and I realized I could raise better crops now that I understand that I can spread the same amount of water to more acres."

Larson's confidence in the product was boosted by being named one of 15 Kansas Water Technology Farms through the Kansas Water Office. By participating in the program, Larson is helping develop and test modern irrigation technology. Bestifor Farms was also a tour stop for the program, allowing other farmers to learn from his personal research and subscribe to VandWater.

"We sign up people all the time," he says. "I haven't advertised yet, so all of our customers come from farmers telling their friends. Essentially our customer base is anyone who has a water meter and wants to track their water."

As a sixth-generation farmer, Larson is on a constant quest to make his operation grow and continue into the future.

> *I always thought I was short. But on one farm, I went from irrigating 370 to 780 acres – using pretty much the same amount of water.*

> *Sustainability is passing these resources on to the next generation. Farmers are labeled as water users, which can be seen as negative, especially if you hear the word 'groundwater.' We want to be proactive. Sustainability is not always doing less; it's making more productive acres.*
>
> -CHASE LARSON