

Nebraska Smart Farms Drive Technology Adoption

[HOME](#) > [RESOURCES](#) > [ANNUAL REPORT 2021](#) > [RESEARCH AND PROJECTS](#) > [NEBRASKA](#) > [NEBRASKA SMART FARMS DRIVE TECHNOLOGY ADOPTION](#)



Photo: DWFI

Technology drives change and is often a force that changes lives for the better. But there is often a big gap between invention and widespread adoption in any industry. To close that gap in agriculture, DWFI and the Nebraska Water Center (NWC) helped establish two “smart farms” in Nebraska: the Eastern Nebraska Research and Extension (ENREC) farm near Mead and the Paulman farm near Sutherland. The farms are equipped with high-speed wireless internet for data access, cutting-edge sensors and precision application equipment that helps to improve water, nitrogen and other input efficiencies, as well as soil health, carbon sequestration and technology development.

These farms not only test the equipment’s real-world ability to increase yields and improve sustainability outside of a controlled environment but also allow researchers and farmers to better understand their practicality. An important factor driving adoption is making sure equipment is durable and future-proof enough to benefit a farm long-term, including providing affordable broadband internet access, which is still missing in many rural areas. With the smart farms and other initiatives, the goal is to increase producer adoption of these systems from current levels of about 10 or 15 percent to 50 or 60 percent, according to smart farm host Roric Paulman.

Before anyone feels comfortable adopting new technology, they want to see it in action. COVID-19 restrictions prevented in-person events related to this work in the last fiscal year, so NWC worked with Paulman to host a virtual tour: “A Day at Roric’s: Connecting the Acre.” The tour demonstrated how technologies from both UNL research and industry partnerships had improved results and resource use.

Of course, results can’t be achieved by one piece of equipment. It’s the wide network of systems working together that allows producers to achieve significant outcomes. Putting all of the equipment to use in the same place on smart farms is helping farmers, who might otherwise be reluctant to change, see concrete benefits of adopting the new technologies—and this, in turn, can lead to more sustainable resource use across the board.

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