

Minnesota turkey farmers say expanded rural broadband could help detect bird flu sooner

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Just over 5 miles from where folklore has long claimed Vikings scribbled Scandinavian etchings on a runestone, Erica Sawatzke surveys

thousands of chirping baby birds in her long barn.

Automatic feed and water lines hum. A monitoring system—hooked up to a landline—alerts Sawatzke's phone when barn temperatures, normally kept above 90 degrees, drop precipitously.

But there's one thing missing in these barns that could bring them into the 21st century: high-speed internet.

Sawatzke, a sixth-generation farmer, can't adjust the temperature with a tap of her phone. She doesn't have cameras to livestream the turkeys—which could be a game-changer as the industry fights bird flu.

And for the mother of two who runs between school, the [post office](#) and statewide meetings as the president for the Minnesota Board of Animal Health, that internet connection could afford her something equally rare—peace of mind.

If her barns had high-speed internet, she might not feel so tethered to the farm.

"You can maybe have a little more of a life off the farm," Sawatzke said.

Despite political momentum for rural broadband buildouts, many Minnesota farms still lack the [internet technology](#) that might otherwise ease the arduousness of working a farm.

This summer, Minnesota politicians touted record investments in broadband infrastructure, including more than \$700 million in federal and [state funding](#). The goal: wiring the entire state with high-speed internet, much like last century's expansion of rural electrification.

At a June news conference in St. Paul, Lt. Gov. Peggy Flanagan said the

state aims to hook up families with faster connectivity, whether they live in Minneapolis or the farthest "reaches of the north woods."

"As equipment becomes more advanced, our farms, our soybean fields, our cornfields, and our [transportation systems](#) are increasingly relying on strong internet connection," Flanagan said.

'A set of eyes'

Poor internet connection on farms causes a range of problems—from minor lifestyle inconveniences to more meaningful limitations.

Sawatzke recounts trying to testify remotely to the Legislature in St. Paul during the pandemic as part of her role with the Board of Animal Health.

"I first logged on with Wi-Fi, and my screen just froze," Sawatzke said.

She had to quickly turn on her cellphone's hot spot—relying on a wireless signal—to sign back in to the meeting.

On Minnesota's nation-leading and often generational turkey farms, practices are inherited from parents and grandparents. Poultry husbandry looks largely similar to what it did a half-century ago.

Young birds, called poults, are brought in and raised in long barns and fed for about three months before being shipped to slaughterhouses.

"The first day [the poults arrive] can be a challenge," Sawatzke said. "I literally babysit poults all day long."

The last two years have presented acute challenges for the industry.

Since February 2022, bird flu has torn across U.S. farms, and farmers have culled some 60 million birds. In an era when animal diseases threaten to wipe out entire herds or flocks, biosecurity could be improved with robust internet capabilities.

Abby Schuft, a poultry educator with University of Minnesota Extension, said farmers' hearts will drop when they enter a barn struck by [bird flu](#)—because of the silence.

But, "literally laying a set of eyes on the birds," Schuft said, is the first way to detect possible infection.

While a luxury for many livestock farmers, the addition of cameras could help give producers like Sawatzke the ability to remotely monitor their animals for concerning signs—from a school event or even at the house during supper.

"If I had cameras in the barn, that might be able to help me just keep an eye on them," Sawatzke said.

But cameras require a strong [internet connection](#) and can be costly, putting the upgrade, for now, out of reach.

Rural Minnesota's disconnected limb

Nearly 90% of the state is covered by broadband with 100/20 megabits per second, according to 2022 state maps. But in rural areas, that coverage number drops to 62%.

Farmers across Minnesota have their own battle stories about technology.

In rural Carver County, where suburbs encroach on dairies, farmer

Christine Leonard said she films her online cheese and charcuterie classes in a nearby U Extension building for faster upload speed.

Outside Marshall, hog farmer Mike Boerboom installed an expensive point-to-point router, connecting a nearby fiber optic line to his sow barns. The increased speeds now allow him to operate a [monitoring system](#), tracking which sows have eaten for the day, something that can also indicate potential sickness.

Sawatzke's husband, Eric, grew up on a Wright County dairy farm and now teaches agriculture classes at West Central Area school in Barrett. He marvels at the internet's potential to transform life for those who make their living from the land.

A student monitors combines during harvest from her phone. In a new school greenhouse, a sensor reads sunlight and temperature and can automatically open or close vents.

Someday, Eric hopes the technology will help anticipate shifts in weather.

"Predictive weather will tell us there's a massive storm coming," Eric said. "That's when my tech will really come into play."

'We can help them'

In her shop and office, nestled against a lake, Erica Sawatzke keeps a black-and-white photograph of her great-great-great grandfather, a mustachioed Norwegian immigrant, who started the farm after returning from fighting in the Civil War.

Today, that office and the Sawatzke farmhouse are hooked up to fiber optic cable via Runestone Telecom Association, but the barns are not.

The cost of delivering [high-speed internet](#) to a barn can vary widely. A router from Amazon can cost as little as \$100. That plus installation fees of about \$500 might bring Wi-Fi to a barn.

But the capacity necessary for video-streaming and other system-wide applications for a campus of barns housing thousands of animals would be equivalent to a rural clinic or school in its requirements.

Such strength of signal might cost as much as \$10,000 for a heavy-duty backhaul, and also require a Federal Communications Commission license.

Runestone is a small outfit, selling internet to 5,300 purchasers, said Kent Hedstrom, the telecom firm's CEO.

"We can help them out if they've got an out building or grain dryers they need to keep an eye on," Hedstrom said. "I look at that fiber-optic as a 50-year investment."

As a younger, more tech-savvy generation of farmers moves to take over family operations, they're increasingly exploring how to take advantage of the networks that, in some cases, have already been built to the edge of their gravel roads.

Brent Christensen, CEO of Minnesota Telecom Alliance, said the state's first pioneering, if relatively rudimentary, home internet service arrived in 1994.

"You go from that to 29 years later, and we're talking about 1 gig[abit] and 10-gig service to homes," said Christensen, the owner of a telecommunications company in Lewisville. "That's a big change."

The challenge will be filling in the last gaps.

"Our goal should be to cover 100% of people who want it and need it," Christensen said.

On Sawatzke's farm, Erica and Eric are looking to improve their own work-life balance, hopefully one day with cameras, while also preparing their children—the seventh generation—to one day know the birds as they do.

Erica Sawatzke pushes open the door of her brood barn, and the chirping of poults grows louder. She'll raise them for 12 to 13 weeks before sending them off for processing in Marshall. On the barn wall hangs a pair of rainbow-colored boots—her daughter's.

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