

Crops

Link farm equipment, data

By JOSH FLINT and
WILLIE VOGT

THE wonders of precision agriculture have been on farm since the early 1990s, but it wasn't until auto-steering tools became available that the use of GPS mated to tractor and combine cabs really grew. In the past five years, the use of autosteering systems, variable-rate application and yield mapping has boomed, but one hassle remains: data transfer.

No matter how new and sophisticated your tractor, sprayer or combine setup, someone would have to slog a flash drive or compact flash card from office to machine to transfer the latest A-B lines for guidance, prescription information for spreading or other data. And once the task was done, that card or memory stick was making the round trip back to the office, again.

Those days may be ending as new network farm technologies come on stream. Farm Progress got a look at one system, Trimble's Connected Farm, at work on two different farms recently, and we found that the farmers using the tools like what they see.

"The key advantage of these systems is the seamless deliver of data," says Ian Harley, Trimble business unit manager for information management. The company is leveraging its Farm Works acquisition as the tech backbone for a system that links office to field machine and back again.

"With the system, you're getting effective use of that data," Harley adds.

How it works

The Connected Farm concept will become more common in the future, but Trimble is launching the tech in 2010. Other companies will be playing in the space as well. We'll use the Trimble approach to describe the basic principles.

The system works by using communication technology — either a cellular modem or a Wi-Fi connection to move data between office and machine, and back. However, you're not sending the information directly to either point. Instead, the information moves over the Web to a server in the "middle," and from the server to the end point.



OBSOLETE? The latest precision agriculture technology means you won't have to use cards or sticks to move data from the office to farm equipment anymore.

Key Points

- Linking farm office to field machine offers efficiency for operation.
- Communication technology makes it easy to set up the system.
- Time savings can cover the cost for many farm operations.

Say you want to send an A-B line to an operator's tractor 20 miles away that's ready to plant. You simply select the guidance data for that field and tell the software to send it to the designated machine (each tractor, sprayer or combine is individually identified in the software).

The operator will see that he or she has information available to the terminal in the cab when it's available, they simply download it and go. The process takes only a few seconds.

When the operator is done planting a specific field, that data can then move back through the Web connection to the main office. The raw data is preserved in the server, but any processing or map making you do on your end resides in your office system. Essentially, it's pretty simple.

"We were able to leverage the Farm Works system with this program. All we're talking about adding is an additional module to the software; the

farmer already knows how to use the tool," Harley says.

Paying the bills

There is a cost to the Trimble system and it comes in three parts.

Part 1 is the Connected Farm, including Farm Works, which is \$500 per user per year for all data storage and transfer, software support, upgrades and service.

Part 2 is the FmX terminal; it's \$50 per month to support, or \$600 per year. You can use a hand-held with Site Mate Scouting, too, which would require \$30 per month to support.

Part 3 is the communication tool. For some using Wi-Fi Web hookups to transfer data, the service would be free. If you use a cellular modem, that has a monthly service charge per modem, operators using that system see the immediate payback in saved time and instant access to information.

"The response we've had shows that farmers see the value in this service," Harley says. "We've found that the value of the solution is quickly recovered by the successful delivery of the data."

If you're looking into the networked farm concept, start with your local dealer to get the lowdown on the system that will work best for you. You can learn more about the Trimble system at www.trimble.com/agriculture.

Taking wireless to next tech level

DOUG Chaffer first got into the tech game 10 years ago when he installed a yield monitor on his combine.

Like most farmers, he's been adding more tech gadgets to his operation over the years. He took things to the next level this year with Trimble's Connected Farm system. Rather than worrying about transferring and maintaining field-work data, all of his planting, tilling and harvest specs are uploaded via his



DOUG CHAFFER

wireless network to Trimble's secure server. This year, whenever Chaffer finished planting a field, his FmX receiver packaged up the data and sent it into a queue, to be uploaded to his home office. Chaffer's fueling station is about an eighth of a mile from his home, within the reach of his home office's wireless network. Once his tractor pulls within range, the FmX automatically uploads the data to Trimble's secure server, where it is accessible via his office computer.

For Chaffer, a wireless hot spot made more sense than purchasing a 3G wireless Internet card and the monthly plan. The farthest field is only four miles from the farmstead.



CLINT CHAFFER

This system has multiple advantages. First and foremost, Trimble can troubleshoot technological hiccups a lot faster. Doug's son, Clint, works for Trimble. With data uploaded daily, he can keep tabs on planting season even halfway across the country.

Doug says this came in handy in planting season, when he had many "What about this ..." questions. Even if Clint didn't work for Trimble, there's probably a lot of farms where a dad would like having a son's tech help.

The most basic convenience is, no more manually inserting USB flash drive for data retrieval. Doug says it's a small thing that makes life a whole lot easier.

— Josh Flint

IN THE FIELD

with expert knowledge and innovative equipment,
COMMITTED TO CORN RESIDUE.

Forty years. Inventing. Improving. Focusing exclusively on the needs of round bale producers and progressive farmers. Harvesting Biomass crops from corn residue to lush alfalfa to brittle wheat straw and peanut stubble. Continuously improving and adapting to the conditions of customers. Designing different products and new innovations to fit the needs of today's farmer. Vermeer is committed to corn residue harvesting and offers the CCX Cob Harvester and Super M Cornstalk Baler to lead us towards energy independence. For more information on corn residue harvesting contact us today.



Pella, IA
800-370-3659
Contact us today
or visit Vermeer.com
to learn more.

Vermeer and Vermeer logo are registered trademarks of Vermeer Manufacturing Company in the U.S. and/or other countries. ©2010 Vermeer Corporation. All rights reserved.