

Crops



New monitors end cab clutter

YOU'VE seen it. Running all these new-fangled machines in the field means having a separate monitor for each of them and learning how to run each device. It's a challenge that Nate Weinkauf says is going away for the ag industry.

Weinkauf, marketing manager, AFS Precision Farming Products, Case IH, explains that farmers need to pull a lot of information together, and a centralized monitor can make that happen. The company has launched the AFS Pro 600 touch-screen monitor, which uses a new international standard, ISO 11783, to "talk" to different pieces of equipment; more implement makers are using that standard as well.

Weinkauf notes that a single monitor can control the guidance system and the planter and can even offer other features.

"We're also tying in performance logging ... which is becoming more important as well," he says. "And on our combines — the 7010 and 8010 — it is the vehicle dashboard."

Using the common communication standard, a farmer would be able to use a single cab monitor to operate a sprayer or planter in the spring, a baler in summer and then move it to a combine for the fall. A common-interface approach means there's less training for the operator and the controls are similar from implement to implement; that can boost efficiency.

Sprayer equipment maker Tee Jet Technologies has also launched an ISO 11783 controller system that other machinery makers can use on their tools to interface with these newer monitors. It's a trend you'll be seeing more of in the next few years.

those readings when a plant is 10 to 12 inches tall can give a grower important information. After a wet fall and spring, the 2007 season will offer an opportunity to find out just how N levels were impacted, he adds. At that shorter plant level, a farmer would have time to top-dress a final application of N before the crop canopies over.

With crop prices higher than they've been in years, farmers will be looking at a range of technologies to improve yields. Enhancing in-field activities after plants emerge could offer a significant payoff.

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CASE IH

Tackle crop issues postplant

By WILLIE VOGT

A SMALL plane flies above the countryside, perhaps a little lower than normal. The pilot is not a concern to the authorities since the plane is there to record critical crop information.

As producers work to maximize their investment in technology, they're turning to new ways to get information for their farms. Taking to the skies can be an important tool.

What can be seen from above allows for improved crop management on the ground, whether it's better water allocation, more efficient nitrogen use or more effective fungicide application. Impacting the field after the crop is planted is gaining interest, and consultants and companies want to take advantage of that.

"There are two things that drove us to use aerial photography," says Curt Ross, who works with Cal Mar Consulting out of Remington, Ind. "The primary use is to locate tile lines; the second is measuring crop health."

For Cal Mar Consulting, flyovers are often done with a conventional airplane, but the consultants have also pioneered the use of a remote-control

Key Points

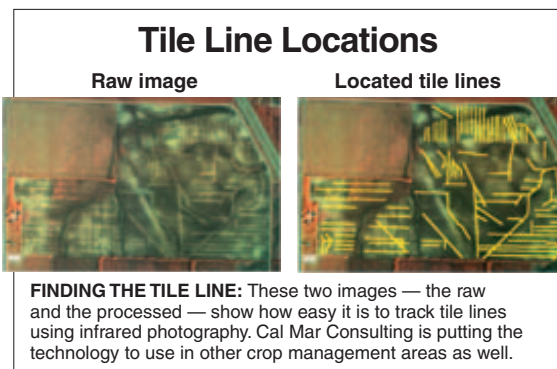
- In-field monitoring of crops has added value in 2007.
- Knowing what maps show is important to best management.
- New technologies offer improved equipment efficiency.

plane to gather images. The remote-control plane is often used either when there's little time to capture a field image or a full-size plane isn't available.

Ross says tile lines are an important opportunity due to a simple fact: "In the pecking order for a farmer, water management is still No. 1." Ross notes that finding those lines is pretty easy right after planting, aiming for a bare-soil image.

He explains that tile lines stand out well soon after a rain since they move water more efficiently," he says. And that's evident in the sample images he provided for this report.

Aerial photography also helps farmers manage N use. At least one major manufacturer has started its own ag consulting operation to take advantage of this opportunity,



FINDING THE TILE LINE: These two images — the raw and the processed — show how easy it is to track tile lines using infrared photography. Cal Mar Consulting is putting the technology to use in other crop management areas as well.

and private consultants have been offering the service in various forms for some time.

Improving N use

Postemergence images of early crop development can give a producer a leg up with N decision making. The key is to reduce initial application, then gather data on in-field needs once the crop has emerged.

In a year when N costs are high, even with high corn prices, managing inputs can put money on the bottom line.

Growers will find new services from a range of suppliers, from equipment companies to fertilizer marketers, in 2007 and beyond. Success with such services depends on matching an aerial image to what's actually

happening on the ground. This "ground truthing" is crucial to making these systems work.

The high-level images measure crop reflectivity using infrared techniques. Reflectivity can change for a variety of reasons, including lack of N or pest damage. If a problem detected can be corrected, growers can put more bushels on the bottom line.

For Cal Mar's Ross, getting growing-plant images can be very helpful, but he notes there's nothing like the value of field-checking the information. "And that's very important because different hybrids offer different levels of reflectivity," he says. "You could use a [chlorophyll] meter, but those can cost \$2,300." Ross explains that farmers often rely on consultants for that information.

If the crop needs that final N application, a high-clearance sprayer is needed to get in and hit the crop with the appropriate N boost.

Ross notes that getting

Mate GPS system, yield monitor for top returns

MOST combines leaving the factory these days go out with an onboard yield monitor. With enhanced displays already built in (see related story), farmers have the chance to gather information on the crop while in the field. Yet, there's a wide-ranging disagreement about how many of those new harvesters are also outfitted with GPS antennas.

Todd Peterson, manager, Emerging Technologies, Pioneer Hi-Bred International, says his company has al-

ready stopped using the term "precision agriculture" since the practices once thought "special" are such a large part of what farmers do. Yet, he says, there are still a lot of combines rolling with yield monitors that don't have GPS attached.

"That's just in-cab entertainment," he quips. "Without the GPS information attached to the yield data, you can't get the maps. The maps will tell you a lot about what's going on in the field at harvest." The key is making the investment in a GPS system to mate to the

yield monitor.

Pioneer has rolled out a system that provides farmers free yield maps from their monitors mated to satellite images of their farms. "We've found these maps, along with the farm images, are very popular," Peterson notes. Average turnaround for the maps is two weeks after the data arrives at the company's processing center in Johnston, Iowa.

Best way to learn more about these maps is to talk to your local Pioneer seed dealer.

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