

"GPS Provides Farmers with Another High-Tech Tool"

When Tate von Eye starts up his tractor to spray a weed-killing herbicide in this South Dakota soybean field, he waits for its GPS navigation system to boot.

When you first start the machine it takes prob two three minutes to get the satellites to get your signal down your receiver.

Then, he just follows the tractor's nose, where a display panel is mounted like an oversized hood ornament.

It shows him when he's aligned with his last thirty-meter-wide pass through the field, so he can spray the swath right next to it.

Now at the end you just turn in the direction you want to turn, and it will count down. And now we're heading back across the field.

Before purchasing this technology, he would have to sort of "eyeball it" coming back the other way - hard to do in a sea of green. Even the most experienced farmers had to overlap their passes to avoid missing any spots.

Now Mr. von Eye gets it right within twenty centimeters, thanks to GPS satellites.

Since he's not spraying crops twice, he estimates he uses at least five percent less herbicide. Just on this small field, that's about fifty dollars worth.

He can save every time he uses the tractor, whether it's planting seed or applying costly fertilizer.

At this rate, he will have paid for the system in two years.

The basic GPS system Mr. von Eye uses was designed and manufactured less than an hour away from this field, at Raven Industries. At the company's manufacturing center in downtown Sioux Falls, a machine with robotic arms is placing chips on the computer card that's at the heart of the navigation system.

The machines have been busy. Raven's sales of GPS guided systems have more than quintupled in the last three years.

The company's competitors are also doing well. Raven Marketing Manager Troy Schraeder says agriculture production costs are rising faster than grain prices, and that's driving the industry of precision agriculture.

Because people can incorporate it into their operation and build efficiencies, and if you know more about your operation and you're able to manage it more effectively, that definitely results in better profits at the end of the season.

And because precision farmers are planting, spraying and harvesting more efficiently, they spend less time in the tractor.

Raven's basic system costs just over three thousand dollars. At the other end of the spectrum with a list price over forty thousand dollars, is one that actually steers the tractor, lining up passes through the field within a centimeter or two.

It can also vary the application rate of the fertilizer or herbicide and keep computerized records. That way farmers don't have to apply as much product where it's not needed.

It's a new way of doing business, and like all new technology, it takes some getting used to.

But Mr. Schraeder says Raven tries to design products that are easy to understand and use, and that nowadays many farmers are already familiar with computers and automation.

Part of it may be the demographics of the farmer are changing slightly. They come to the table with more computer background.

However I think generally as a population, people are more familiar with technology.

You see GPS in your automobiles, you see it in handheld equipment. So people are more familiar with it and it's not black magic.

Troy Schraeder predicts that one day soon, GPS antennas will be as common on tractors as radio antennas are today.

