

Precision Auto-Steer

Systems evolve for farming operations

BY JIM DICKRELL

GPS-guided auto-steering has not caught on as fast for dairy farmers as it has for their corn and soybean brethren who farm tabletop-flat prairies. But that's changing, as pioneering dairy producers try to squeeze every advantage out of this constantly evolving technology.

Skip Hardie of Lansing, N.Y., has been at it for the past eight years. He dairies with partners John Fleming and Steve Palladino, milking 1,000 cows, raising 900 heifers and farming 1,400 acres of corn and hay.

"We have compactible soils, and GPS is great insurance to make sure we're running on the same wheel tracks with our tillage, planting, spraying and forage chopping operations," he says.

But Hardie is the first to admit the learning curve can be steep—and frustrating. Hardie Farms started with the technology with a simple lightbar system. "There were a lot of issues. It was like trying to use an axe to perform surgery," Hardie says.

He then went to a commercial auto-steer system. It was much better than the lightbar and performed to within the tolerances the company said it would. But it still didn't provide the nearly dead-on, pass-after-pass accuracy Hardie felt he needed for strip-till operations.

In October 2008, Hardie worked with his crop consultant to test a new system that utilizes the state of New York's CORS (continuously operat-



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ing reference stations) network, which is also used by land surveyors and highway construction crews.

"It was amazing," Hardie says. His crew used the Leica mojoRTK auto-steer system to guide a Veris soil mapper (with a 6'-wide straight disk) and repeated passes. The least accurate pass was $\frac{3}{4}$ " off the previous pass—a level of accuracy Hardie says he needs for strip tillage and planting.

Last summer, Hardie decided to use the mojoRTK system in his hay mowing. "Before, we had two 18' windrowers with two operators. A good day was 125 acres," he says. He thought he could do better—and with one operator—by going to a 32' Poettinger Novacat mower.

The auto-steer system allowed the operator to monitor the overall operation and not worry with each pass about overlapping portions that were already cut. "We mowed nearly all of our hay at 15 mph; it was scary how fast we were cutting," Hardie says.

This past fall, Hardie used the system to apply manure. He uses a drag hose, and says it's uncanny how straight and even the results are, with no overapplication or misses.

Next up: silage packing. Hardie says that like most farmers, he's frustrated with the uneven silage densities in his bunkers. But with the advanced auto-steer system, he thinks he can be much more precise in packing—including at bunker edges. "We should be able to program it to get correct spacing across the bunker," he says.

In fact, he envisions the day he'll be able to take the driver out of the packing tractor altogether and operate it on remote control. No word yet from his partners on how they feel about that. **D**

Auto-steering allows John Marcotte, a Hardie Farms employee, to mow a 32' width at 15 mph.



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