



November 24, 2009

GreenSeeker aids precise application of nitrogen

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When a crop consultant told Herb Oehlke about GreenSeeker, he figured if half of what he said about it was true, it was worth trying.

GreenSeeker helps producers determine the amount of nitrogen their crops need and apply that amount.

Oehlke, who farms near Ledger, started using the technology two years ago and has been impressed by the results.

Green Seeker consists of sensors mounted on a nitrogen application rig, in Oehlke's case a sprayer. As the sprayer drives across the field, the sensors shoot infrared light at the crop, then take readings from the light that bounces back. These readings are fed into an onboard computer, which analyzes the readings and changes the nitrogen application rate based on its assessment of the crop greenness and biomass. All of this happens in real time as the rig moves across the field.

Oehlke has found that the equipment saves him a large amount of money because it's allowed him to use less fertilizer than he used in the past.

"This year we had fields where it didn't put any on," he said. "Two years ago when (nitrogen) prices were so outrageous, it was excellent."

GreenSeeker also has helped to improve protein levels in his crops, which helps with profits.

"Protein is where the money is this year," he said.

Oehlke saw his yield increase by 8 to 10 bushels per acre.

"That's huge," he said.

Oehlke grows wheat, barley and some camelina. He's been experimenting with GreenSeeker on his barley the past couple of years, and likely will start using it on wheat as well.

"It's proven itself to us," he said.

Most producers apply the same amount of nitrogen fertilizer year after year, said William Raun, who is a professor at Oklahoma State University and co-developer of GreenSeeker.

However, weather patterns, which change year to year, have a large impact on how much nitrogen plants need.

"The N cycle is like a leaky gas can," Raun said.

In hot years, winter wheat can lose 40 to 50 pounds of nitrogen per acre.

"It conserves it in wetter and cool years," he said.

Applying the correct amount of fertilizer can save producers money.

"If farmers are applying nitrogen it's their single largest input expense," Raun said.

GreenSeeker developers have introduced the technology in Mexico, Argentina, China and other foreign countries.

The makers of the soil-sensing device also are working to develop a hand-held model, which producers could use to take biomass and greenness readings by hand to calculate the correct amount of nitrogen to apply.

Additional Facts

More info

For more information on GreenSeeker, visit GreenSeeker.com.
