Spectrum Technologies ready with chlorophyll meter technology

By ANDREW OVERBECK

PLAINFIELD, Ill. — Spectrum Technologies, Inc., based here, has been awarded an exclusive patent from the National Aeronautics and Space Administration (NASA) to complete the development of and commercialize a plant chlorophyll meter. The hand-held plant stress detection tool has the capability to detect stress up to 16 days before plant deterioration is visible to the human eye.

"Chlorophyll is indicative of plant health," said Mike Thurow, president of Spectrum Technologies. "The meter allows fast measurement that can tell us how turfgrass responds to stress, be it heat, moisture, disease, insects or traffic. The golf course market is the perfect market for it."

The device is smaller than a camcorder and has a laser sighting that is pointed at a spot on a green or fairway. "It is a user-friendly device," said Thurow. "You walk around the green and shoot 10 or 15 spots and get a good representative sample. It takes a second to measure and the read-out keeps an ongoing average.

"If a person takes weekly measurements with the meter they will begin to see trends. It has the potential to show us problems before we can visually see them. Once you can see the problems, you are already in trouble."

Spectrum Technologies is a 13-year-old company that focuses on products for nutrient management, integrated pest management, a golf irrigation technology, and a Global Positioning System applications for turf management. His current projects include Smart Pump software for pump station control and Global Positioning System applications for golf irrigation.

NEW PRODUCT OF THE MONTH

The Gandy Spiker/Seeder overseeds and aeration in one pass and has a 44-inch seeding width, with 1220 replaceable spikes, either 3/8 of an inch by 7/8 of an inch or 1-5/8 of an inch long. The spikes create 693 vents per square yard and are threaded into an 18-inch by 48-inch steel drum. Two brushes are used, one for cleaning the drum and one to assure seed/soil contact. For more information, contact 1-800-443-2476 or www.gandy.net.

Harmony building new organic fertilizer facility

CHESAPEAKE, Va. — Harmony Products, Inc. is constructing a new organic fertilizer plant in Harrisonburg through its subsidiary, Harmony-Shenandoah Valley, LLC (HSV).

The plant will have the capacity to produce approximately 65,000 tons of fertilizer a year. HSV will utilize Harmony's patented technology to manufacture its organic based Bridge fertilizers, which combine organic materials with synthetic fertilizer materials to form a granular, homogeneous, organic base fertilizer. In addition, the facility will manufacture granular, organic fertilizers. The products will be sold to the professional and commercial markets.

"This project will help Harmony meet the demand for our products on a very cost effective basis," said Greg Gill, president of Harmony.

The HSV plant will utilize poultry waste from nearby poultry growers as the primary feedstock for the manufacture of the fertilizer as well as fuel for a waste-to-heat conversion facility. The heat will be used to dry the finished product.

Rocco, Inc., a poultry processor located in Harrisonburg, will be a minority owner in HSV and will have an ongoing role in providing management expertise in the construction and operation of the plant. Rocco will also provide the conduit to local poultry growers, who will supply poultry waste. Funding for the project will be provided by a Rocco equity contribution, a matching grant from the Virginia Poultry Litter Transportation Fund and Duke Solutions, Inc.
GPS on the way

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what has taken place over the last few years. That way he can hit the ground running," he said.

ParView's golf car system is in use on 70 golf courses and Whurr expects that the maintenance equipment GPS system will go into beta testing in the next few months.

"Toro is attempting to take the GPS technology and couple it with Geographic Information Systems (GIS) and take it to another level and apply it to our own equipment," said Chip Engdahl, marketing manager for Toro's commercial division.

"One of the big ideas is precision turf maintenance and management. By coupling GPS, GIS and variable rate spraying technology you can be more precise on rates—tracking where, how much and when you put stuff down," said Thurow.

As a result, Dinelli hopes to correlate the what changes the plant is going through.

"We can put all sorts of bells and whistles on this and show people how clever we are, but that doesn't necessarily mean that a superintendent will find it useful." A GPS system for golf car costs between $100,000 and $300,000 depending upon the number of features and cars involved. While none of the companies have set prices for maintenance-only systems, a total course GPS system would work off the golf car price baseline.

Meanwhile, companies are still working on reducing costs.

"We have to make sure that this is something that courses can afford and find value in," said Meyers.

For communication alone, Bruce Williams, superintendent at Los Angeles Country Club, thinks GPS systems will be very useful on courses.

"This is a communication vehicle. Many courses didn't have radios 20 years ago; now we have radios, cell phones and two-way pagers for upward, downward and lateral communication," he said. "This is another way to stay in touch. It is just as important to know where your staff is if you have four guys or 40 guys."

While Scott Cybulski, superintendent at Falmouth Country Club outside of Portland, Maine, thinks GPS may be a little overly sophisticated, he too sees the potential value.

"Marking out sprayed areas with GPS may be the most handy," he said. "Knowing area sizes and where valve boxes and irrigation heads are would be great... If I could do it, that is why I would do it."

MARKET POTENTIAL

According to those in the industry the market potential is large.

"The industry is booming right now," said Nate Yoder, vice president of marketing for ParView. "We sold more systems in the last quarter than we had in the previous three years."

Of the nearly 17,000 golf courses in the U.S., Engdahl believes that every course will eventually be touched by GPS or GIS.

"At some point the technology will affect every course," he said. "GIS for irrigation, GPS for cars, and at some point it will be everywhere. The management of the golf course will be more unified because of these technologies."

According to Whurr, GPS systems will be well suited to the needs of course management companies. "The biggest concern from a management perspective is monitoring equipment and preventative maintenance," he said. "This would be a benefit to management companies because they'd know that they are getting the best out of their equipment."

Chlorophyll meter

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management (IPM), soil and water quality and environmental monitoring. They currently have a prototype of the meter and are testing it with superintendents and turfgrass researchers this summer. Thurow plans to unveil the meter early next year.

Dan Dinelli, superintendent at North Shores Country Club, in Northbrook, Ill., will be using the meter in a compost study that he is doing this summer.

"We are working with compost and the dynamics of nitrogen," he said. "We are doing a weekly analysis of different plots that have different rates of compost."

Dinelli will be using the chlorophyll meter as an early-warning signal to see what changes the plant is going through. As a result, Dinelli hopes to correlate the compost/nitrogen study with the chlorophyll meter to see if the tool can be used for nitrogen assessment.

Flowtronex

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Turf Feeding Systems, however, will provide technical expertise and support to customers.

Three models of the Nutrifeed system are available and they cost between $8,000 and $12,000. The 1000 is suited to small courses and has a single head for the control of one nutrient at a time. The 2000 is for medium sized courses and has two heads and a 60 gallon-per-minute capacity. The 3000 is for large courses and has three heads and can provide three separate nutrients at once.

All Nutrifeed systems will be fully integrated into the pump system's controls.

PGC launches site

DENVER — Professional Golf Commerce has launched its website (www.pgcgolf.com), an online, one-stop-shop that directly links PGA professionals and golf course superintendents with golf and golf-related manufacturers, distributors and merchandisers.

First previewed as a demonstration at the 1999 PGA Merchandise Show in Las Vegas, the site currently hosts products from more than 40 vendors and is available to buyers and sellers all over the world.

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