NEW PRODUCTS

Airborne unveils lightning detectors

Airborne Research Associates has begun marketing its M-01 and P-1 lightning detectors that can predict lightning strikes 15 to 20 minutes before they occur.

The hand-held, battery-operated M-01 Intracloud Lightning Detector senses intracloud lightning activity, that is lightning from cloud to cloud or within a single cloud. Ninety percent of all lightning is intracloud.

As thunderstorms develop, intracloud lightning begins. The human eye doesn't see it during daylight hours. But it does see cloud-to-ground lightning that occurs 10 to 20 minutes later.

Airborne M-01

The M-01 detects the earlier intracloud activity and can give a superintendent a jump on getting people safely off his course before cloud-to-ground strikes, the type that kill and injure many golfers, spectators and golf course employees every year.

The P-1 Atmospheric Potential Probe compliments the M-01, searching for raised electrical fields generated by thunderclouds that can reach up to 10,000 volts per meter. Installed on a clubhouse and connected to a personal computer with special software, it permits a course official to monitor thunderclouds within five miles. Yellow warning and red alert levels display information or can automatically trigger alarms and sirens.

The M-01 and P-1 overcome shortcomings of existing lightning detection systems. According to Airborne, those shortcomings include:

- U.S. Weather Bureau forecasts are updated only every six to 12 hours based on information from airports 30 to 100 miles apart. They are not site specific.
- Radar is updated every 15 to 30 minutes. But radar tracks rain, not clouds or lightning. Thus radar doesn't provide up-to-the-minute information on developing thunderclouds.
- Lightning mapping systems are of two types. The first is a national network relying on information from stations hundreds of miles apart that only track cloud-to-ground lightning, not the more useful intracloud variety. The second is self-contained and can be used at the course, but cannot determine distances of lightning strikes.

Using the M-01 to detect intracloud lightning and P-1 to determine the distance of lightning activity "will insure a combined detection capability providing the maximum in lightning awareness," according to company literature.

The USGA invited Airborne to assist in lightning detection at last month's U.S. Open at Medinah (Ill.) Country Club. For the past few months, Airborne has loaned 20 M-01 units to the United States Golf Association, Professional Golfers Association Tour, PGA Senior Tour, Ladies Professional Golf Association, PGA of America and numerous other golf organizations and clubs.

PGA of America Director Ken Lindsay served on the rules committee during May's SEC Golf Championship at Annandale Golf Club in Jacksonville, Miss. He monitored storm clouds that began showing up at mid-morning of the second round.

"I am happy to report that your equipment helped us determine the right time to suspend play (2:12 p.m.) and evacuate the golfers," Lindsay wrote. "By 2:30 everyone was off of the golf course and at 2:37 the lightning began..."

The M-01 permitted officials to extend Saturday's play 10 to 15 minutes longer than they might have otherwise and the device seemed to calm players and coaches, he added.

Both devices will be available by mid-July, said Bergh. The P-1, including computer. software and electronics costs $12,500. The hand-held M-01 is $300.

For more information contact Airborne Research Associates, Inc., 46 Kendall Common Rd., Weston, Mass. 02193 or call 617-890-1588. **Circle No. 301**

Finn product makes mixing faster, easier

The 300-gallon capacity TL30 is the newest addition to the line of Finn Corporation Hydroseeders.

Designed with economy and performance in mind, the skid-mounted TL30 includes many features unique to larger hydroseeders.

Powered by a Briggs and Stratton 18-hp gas engine, it has a centrifugal pump and both a mechanical paddle agitator and liquid recirculation for fast and easy mixing of seed, fertilizer and fiber mulch. Many options are available.

For more information contact Finn Corporation, 9281 LeSaint Drive, Fairfield, Ohio 45014 or call 513-874-2818. **Circle No. 303**

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The Solid Tine Aeration Kit converts your Ryan GA™30 or Greensaire® 24 to a supplemental aerator with adjustable depths up to 3" and variable spacing on the GA30. The kits include holders and 1/4" solid tines which easily mount in just minutes. There's no mess to clean up after aeration. No hoses to drag around. No high price to justify.

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For free information circle #134

Fibergrids improve sub-grade soils

Fibergrids is a new development from Synthetic Industries, Inc. for the treatment and improvement of sub-grade soils.

Manufactured of engineered polypropylene fiber, it combines with cement/flyash and native soils to form an all-weather construction platform.

This stabilizes active clay soil permitting construction equipment to move and work on job sites sooner.

Paving may begin earlier or later without hindering traffic flow.

Fibergrids and other additives are blended into the soil with a stabilizer/mixer. The resulting stabilized clay soils exhibit greater load-carrying capacity and impermeability.

For more information contact Wayne Freed, Construction Products Division, Synthetic Industries, Inc., 4019 Industry Drive, Chattanooga, Tenn. 37416 or call (615) 892-8080. **Circle No. 302**

Plant and insect control made easy with new software

Automata, Inc. has introduced a powerful software program allowing rapid calculation of accumulated degree days. Development stages may be predicted for both plants and insects.

The degree-day option to Automata's basic data acquisition and control software calculates and stores hourly average temperatures from any number of sensors in the system.

With a few key strokes, the operator selects start date along with lower and upper threshold temperatures for the target insect or crop.

Any temperature data file may be reprocessed with a range of parameters to easily develop a model if one is not available.

The degree-day package used in conjunction with Automata's automated insect counter is a powerful insect management tool.

The degree day calculation is based on real-time temperatures, more accurate than averaging, triangulation or sine linear approximations.

For additional information call (916) 273-0380. **Circle No. 305**

Smoke generators check liner leaks

Easy-to-use, disposable smoke generators for testing the integrity of pond liners during initial construction and post-installation trouble shooting are now available from Superior Signal Co., Inc.

To conduct the test, smoke is forced with a blower beneath the liner. Smoke generators are more reliable than visual detection for locating leaks. They are an inexpensive way to eliminate callbacks, significantly reducing labor costs. They are ideal for locating tears and leaks at overlap sections and where pipes extend through the liner.

Superior smoke generators are also used for testing repairs and transfer piping networks leading to secondary containment areas.

Each unit is a compact 1-1/2-by-6 inches and creates 40,000 cubic feet of smoke in a three-minute cycle. The Superior 3C Smoke Generator has single-wick construction. The model W3C has a wick at each end for tandem attachment (with supplied slide ties) to generate smoke on a continuous basis for as long as required.

For more information contact Superior Signal Co., Inc. P.O. Box 96, Spotswood, N.J. 08884. **Circle No. 306**

Golf Course Marketplace

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GRAYSON COLLEGE, Dennison, TX. 2-year technical program in golf course & turf grass management. 18-hole golf course on campus. Dormitories, placement assistance, financial aid & scholarships avail. Contact: **GCC, 6101 Grayson Dr., Dennison, TX, 75020. (214) 465-6030, ext. 253.**

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