

We've got a reason to smile, again.

We are proud to announce that *Golfdom* magazine was named a winner in the 2003 Folio: Editorial Excellence Awards.

The Folio: Award, one of the highest national honors in publishing, is awarded to magazines that are judged outstanding in achievement of their editorial missions. *Golfdom* was named the top national business-to-business magazine in our category for the second time in three years!

Please join us in congratulating our entire editorial and design team.

Golfdom

Don't Let Bunker Maintenance
Become a Trap...

Master It!

TRAP
MASTER™

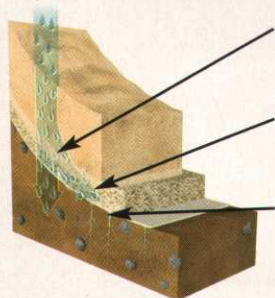
It's a constant battle: erosion, sand loss, contamination from dirt and debris, clogged drains. Keeping your bunkers playable and attractive costs you money and wastes your valuable time! But it doesn't have to!

Dramatically reduce your bunker maintenance costs when you install TrapMaster™

TrapMaster™ erosion control fabric solves your toughest problems. It's 2 layers – a thick, non-woven polyester “blanket” that absorbs and holds sand in place AND an innovative polyester spunbond fabric that adds durability. Together, the patent-pending TrapMaster™ 2-layer design:

- Holds sand on steep bunker faces - up to 60°
- Prevents erosion and washout
- Keeps water draining and sand from clogging drains
- Functions as a weed block
- Greatly minimizes bunker maintenance costs!

With TrapMaster™, you'll save yourself and your crew time, money, and a lot of work!



• Upper blanket layer allows water to penetrate and drain evenly – drastically reducing the incidence of erosion.

• Sand fills the blanket layer, keeping it in place – even on slopes with up to 60° angles!

• Spunbond underlayer is porous enough to let water pass through but dense enough to keep troublesome weeds and debris out.

For more information,

Call TOLL-FREE 1-866-273-9280

OR Mail This Coupon

and we'll send you an information packet along with the full **TrapMaster™** story!

Your Name _____ Course Name _____

Address _____

City _____ State _____ Zip _____ Phone (optional) _____

of bunkers you'd consider testing _____ Average size of each bunker _____

Mail to: **TrapMaster™**, 16224 Surfview, Wildwood, MO 63040

GOL0503

A Product that Demonstrates

'Merit'

Hallmark insecticide is 10 years old
and going strong

By Larry Aylward, Editor

It was 1996, the year that Cantigny Golf and Tennis Club in Wheaton, Ill., was hosting the prestigious Illinois Amateur Championship. In preparation for the event, certified superintendent Scott Witte decided it was time to integrate Merit insecticide into his turf maintenance program.

At the time, Witte had heard about the benefits of Merit, manufactured by Bayer Environmental Science, which had been on the market for two years. His peers were impressed with Merit's long residual control at low applications rates.

“When you have a big tournament like that, the last thing you want to think about is having black turfgrass atenius and other grubs infest your fairways or high-profile rough areas,” Witte says.

Eight years later, superintendents remain equally impressed with Merit, which celebrated its 10th anniversary in March. They're still talking about the product's significant staying power. Michael Whitehead, superintendent of Pawtucket Country Club in Seekonk, Mass., says he still regards the product as “revolutionary” to the industry.

“When it came out, there was definitely a lot of excitement about the product — especially after people saw its results,” Whitehead says.

“The science of Merit is sound,” Witte adds. “It's an intelligent approach to controlling grubs.”

Bayer discovered Merit in 1988. The product was granted an accelerated registration because its active ingredient, imidacloprid, provided a reduced-risk alternative to organophosphates and carbamates, according to Bayer. Imidacloprid, in the chloronitrocinyl chemical class, interferes with the normal nerve impulse transmissions of many insects. Merit is regarded as a more environmentally friendly product because it provides long residual control at low applications rates.

In the early '90s, there was a smorgasbord of insecticides, but none had the residual control of Merit, says Mike Ruizzo, marketing manager of Merit. At the time, with environmental regulations increasing, the golf industry needed an insecticide that didn't have to be applied several times a season.

“There were some good active ingredients, but they didn't offer season-long control,” says Ruizzo, who has been with Bayer for 15

Continued from page 84

Time is Money



We can help you save both.

You'd love to have the convenience of a long-term surfactant – if you could find one that really worked. That's why we've developed Aquatrols Sixteen90. It's safe to use on all fine turf and remains effective in the soil for 90 days, reducing water repellency and promoting turf uniformity. And unlike other long-term surfactants, Sixteen90 can withstand stressful climatic or environmental conditions without losing efficacy.

Sixteen ounces. 90 days. Guaranteed.



*We have the tools
you need for
your masterpiece.*



5 N. Olney Ave. Cherry Hill, NJ 08003 • USA • (800) 257-7797 • www.aquatrols.com

'Merit'

Continued from page 82

years. "That was a real issue. [Merit] filled a gap and a need."

Before Merit arrived, Whitehead says superintendents couldn't do a lot preventatively to control grubs. "You pretty much tried to knock them back once you scouted out a problem," he adds.

Merit also controls mole crickets, billbugs, lace bugs, aphids, adelgids, soft scales and others pests. "It provides a proven solution to many different insect pests in many different climates," Ruizzo says.

Witte says Merit has reduced his stress level when it comes to worrying about grubs and other pests, not to mention the skunks and raccoons that have dug up turf to feed on the insects. Witte knows that as long as he applies Merit correctly and at the right time — usually in late June — he doesn't have to worry about insect or animal damage to his fairways and roughs for the season. Merit's low use rates impress Whitehead and Witte.

"Consider that 1.6 ounces will treat 8,000 square feet to 11,000 square feet," Witte says. "It's astounding that it works so well at such a light rate."

Superintendents also like Merit because it's flexible. Each formulation — wettable powder (75WP), flowable (Merit 2), water-soluble packets (75WSP) and granular (.5G and 2.5G) — has a large application window and can be drenched, injected or sprayed as a liquid, or spread in measured amounts as a granular. "From an applicator standpoint, it's a pleasure to work with," Whitehead says.

Ruizzo remembers researching Merit back in the early '90s. He says Bayer's research, as well as university research, revealed that the product worked exceptionally on grubs. He knew Bayer had something good on its hands. "It has more than 90 percent efficacy on the major grubs species," Ruizzo says.

Merit has exceeded Bayer's expectations,



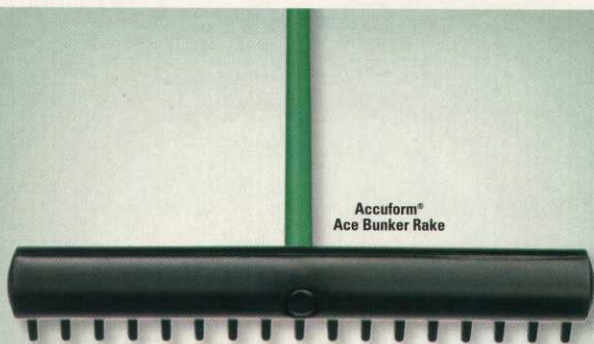
Ruizzo adds. "You don't expect a product that's 10 years out to be growing at the pace that Merit is growing," he says.

And that growth has come with few complaints, Ruizzo notes. "Our complaints averaged less than 1 percent for every year in the 10-year period."

Bayer is using Merit's 10th anniversary as a promotional tool with various promotions and giveaways. "We don't do that for every product," Ruizzo says.

Bayer and Merit will be facing some challenges, though. Merit's patent expires in 2006, meaning that post-patent or generic products featuring Merit's characteristics will be available.

Ruizzo, who's in charge of Merit in the post-patent era, says Bayer is already planning for the day. There will probably be new formulations and new uses and applications for Merit, although Ruizzo couldn't be specific because he says the information is confidential. ■

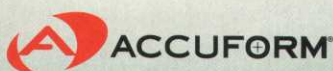


**SMOOTHES OVER A BUNKER
LIKE ROSES SMOOTH OVER A
MISSED ANNIVERSARY.**

Short tines for raking and a special surface for smoothing make this the preferred rake among top superintendents. To learn more call 1-888-893-2433 or visit www.paraide.com



WHEREVER GOLF IS PLAYED.



**THE HOME (PAGE)
OF GOLF.**



www.golfcourse1.com

PRESENTED BY THE
AMERICAN SOCIETY
OF GOLF COURSE ARCHITECTS



**WE'RE ROLLING OUT A NEW WAY
TO GROW GRASS THAT'S SO REVOLUTIONARY,
YOU COULD GET CARRIED AWAY.**



INTRODUCING BLUEYELLOW™ THE SMARTEST WAY TO GROW GRASS.

This amazing new engineered turf system contains a mixture of high quality grass seed and fertilizer in a lightweight biodegradable roll. Nothing works better to prevent seed migration - especially on slopes and steep surfaces. It even suppresses weed growth. The simple one-step application works for all types of grass seeds, providing precise seed and fertilizer distribution. No calibration or clean-up is required. We can even custom blend seed and fertilizer combinations, making BlueYellow™ ideal for new course construction or renovation projects. All you do is rake, roll, water, and relax. Just try not to get too carried away.

**FOR MORE INFORMATION, CALL 1-866-473-3602
OR VISIT US AT WWW.BLUEYELLOWPRO.COM**



The smartest way to make green.™

The Many Faces of Surfactants

Superintendents are finding new and creative ways to take advantage of the benefits wetting agents and penetrants offer

BY DAVID KRONMAN



FILE PHOTO/DOUG OSTER

John Zimmers, superintendent of Oakmont Country Club, uses wetting agents as a broad-spectrum solution.

The days of using surfactants only as a spot treatment for localized dry spot (LDS) is a thing of the past. Today's superintendents are finding new and creative ways to take advantage of the benefits surfactants can offer. Products such as wetting agents and penetrants are not only alleviating turf stress during periods of drought, but are also helping solve problems of everyday course maintenance.

More and more, surfactants are becoming known as a superintendent's modern-day "Swiss Army Knife" for their ability to fix so many different problems. This article will discuss a few of the creative ways surfactants are currently being used on golf courses.

Through fertigation

Many superintendents have learned of the benefit of using a steady program of surfactants through their courses' fertigation systems. Most recent studies show that courses lose between 40 percent to 60 percent of their water

application through evaporation and run-off. By applying both wetting agents and penetrants uniformly, superintendents can not only reduce surface tension consistently, but also reduce the amount of water lost during application. By improving the overall quality of the soil, courses will see LDS disappear and the effectiveness of applications improve.

"When the weather calls for it, I use wetting agents on a broad spectrum [of problems], including greens, tees and fairways," explains John Zimmers, superintendent of Oakmont (Pa.) Country Club. "I will also inject the wetting agent directly into my system at the pump station."

With sophisticated irrigation systems, which are located on many of today's courses, combined with a variety of injection systems, both spot treatment and blanket coverage with surfactants has become a much more manageable task.

Not just during dry weather

Whether your course is too wet or too dry, a surfactant may be the answer to the problem. There is a misconception that surfactants are only useful in dry conditions.

This, however, does not seem to be the case. "During periods of wet weather, a penetrant can help to move water through the soil," Zimmers says.

Again, penetrants maximize infiltration by lowering the surface tension of water. With improved water penetration, disease can be minimized because water is getting through the surface and soil profile.

Courses also become much more playable during times of wet weather. Several courses note that the ability to allow golf cars out sooner after heavy rains created greater rev-

Problems

Got turf stress during periods of drought? Are you having problems with the effectiveness of your spray applications?

Solution

Surfactants, including wetting agents and penetrants, are becoming more popular to help correct a variety of problems on golf courses.

enues than the costs associated with applying penetrants to saturated areas.

Wetting agents, on the other hand, are a great tool during drought conditions. Wetting agents will increase the effectiveness of irrigation by getting water into the root zone and holding it there before it evaporates or runs off. The wetting agent will also help to distribute the water evenly to the root zone.

Todd Raisch, certified superintendent of Ridgewood (N.J.) Country Club, is now using wetting agents as part of his regular greens, tees and fairway programs during the hot and dry summer months. Raisch has found that by using wetting agents in conjunction with regular irrigation, he gets at least a couple extra days out of each watering. In addition, preliminary research at the University of Georgia has shown substantial water savings when wetting agents are applied to water-repellent soils.

Penetrants as an adjuvant

Mixing a penetrant with insecticides, fungicides, herbicides and liquid fertilizers can optimize the effectiveness of spray applications because of a surfactant's ability to greatly lower the surface tension of water. The applications become more efficient because surfactants allow the products to spread uniformly and penetrate the soil profile.

"I add a penetrant to every spray application that goes out on the golf course," says Gregory Nicoll, certified superintendent of Maplewood (N.J.) Country Club. "For example, mixing a penetrant with my insecticide will help it get through the thatch to the target organism."

Superintendents are finding a cost savings by making better use of their chemicals and liquid fertilizers in conjunction with penetrants because they are relatively inexpensive.

Maintained rough program

As drought conditions persist in much of the country for the past decade, superintendents are finding turf in the rough having a more difficult time competing with trees for valuable water. By applying a wetting agent along the tree line, moisture is better held in the turf's root zone and allows the rough a greater chance of staying healthy.

"I have definitely found success in applying wetting agents to my rough areas,

especially in the tree lines and high-traffic areas," Zimmers says. "After an application, you are able to see a difference in the quality of turf."

During times of extreme drought, the possibility of losing trees also exists. To help solve this problem and increase the chances of tree survival, some superintendents, such as Nicoll, have begun injecting a wetting agent directly into the tree's root zone. This allows for greater availability of water for the trees.

Bunker management

Bunker faces begin to get topdressed and dry out quickly because so much sand often ends up outside bunkers. Eventually, the sand becomes part of the soil and forms hydrophobic areas that won't hold moisture at all.

Wetting agents help maintain moisture in the bunker faces by allowing water to reach the root zone through the sand and holding it there for the plant.

Another use of surfactants that is becoming more popular in bunker management is spraying the sand with a wetting agent. A wetting agent will help firm up the bunker and make conditions more playable.

Aeration

When holes are opened up on the greens and fairways, the soil tends to dry out much faster because of the increased exposure to the air. When the topdressing that fills these holes becomes lined with surfactant, more moisture becomes available to the plant, and the turf doesn't dry out as fast. The water will stay near the root zone rather than draining down through the holes in the surface.

Additional uses

Truly, the number of uses for surfactants appears to be limited only by the superintendent's creativity with the products available.

"I spray wetting agents on all my sand, dust and gravel cart paths and on the surface outside of our maintenance area," Nicoll says. "With the paths able to stay more moist, dust is reduced and members and guests are able to enjoy a more pleasant experience on the golf course." ■

David Kronman is director of business development for JADA Corp., a manufacturer of surfactants.

Another use of surfactants that is becoming more popular in bunker management is spraying the sand with a wetting agent.

Every morning holds the opportunity to work out of the center of a shiny new box, roomy and spacious, with plenty of open windows. For some greenkeepers (I use the term “greenkeepers” out of respect for tradition), this box remains comfortable all day long. Everything seems to be at your disposal so you can easily handle whatever challenge is thrown your way. The windows always stay clean and open, cared for by the 20 or so window washers that make up your staff. Answers to questions never seem out of reach.

In fact, there are some situations where you never have to go outside the comfort of the box.

Dues are paid every month, so needs and budgets go hand-in-hand. Even operating hours are set in stone, eliminating early-morning surprises by dew sweepers and unannounced outings. It's life on Easy Street to some extent.

For other greenkeepers however, life is very different. Oh sure, we wake up in the center of the same new shiny box, but as the day goes on the box becomes drastically different, metamorphosing from a place of cozy comfort into a veritable holding cell.

Our well-thought-out plans for the day go awry, and all of the sudden things aren't looking good for the home-team.

This is when we suddenly realize that if we remain inside the box we'll be crushed by the dreaded Hands-Tied-Behind-Your-Back Syndrome and the day's plan will be lost.

Little by little, the walls start closing in and the windows begin slamming shut. For example:

- You need to spray greens, but two groups have been given the green light to start before the clubhouse opens ... slam!

- A 4-inch main has let go and shut the pumps down, so sprinklers on the tees didn't run to water in the high-nitrogen fertilizer you put down yesterday evening ... slam!

- Two people have called in sick this morning, cutting your staff by 20 percent ... slam!

This looks like a job for ... Outside-the-Box-Man! Ducking into the nearest porta-potty for some privacy and a quick 10-count to gather your thoughts, you emerge victorious with a new plan in one hand, crushed box in the other, knowing full well that all is not lost and the creativity of thinking outside the box will prevail.

When It's Time to Get Out of the Box

BY JIM BLACK



WHAT IS CREATIVE
IS FACING A
CHALLENGE HEAD
ON USING ONLY
WHAT YOU ALREADY
HAVE TO WORK WITH

Against all forces of box logic, you send the mechanic out to spray greens and have your tee-mowing guy help mow greens instead of keep ahead of the spraying mechanic. Meanwhile, you pull one of your fairway mowing guys to help change cups on the back because you didn't know about the 16-man shotgun (“Oh, it was only a small group. I didn't think you needed to know about them.”)

Now the only guy you have left to handle today's surprise irrigation break is the one you hired yesterday to rake bunkers. “I know it's hard to shovel mud. Be careful of the wires, I'll be back in a minute.”

Back to the barn you race to assess the puddle of hydraulic fluid under the rough unit. Wishing your mechanic was actually two people, you grab an adjustable wrench and tighten down on a couple of dripping connections in hopes that you can get some of the north forty cut before lunch and the impending afternoon thunderstorm.

Whew. Now that you have your entire crew out the door, you can go jump on the other fairway unit for a little peace and quiet.

I must say that, among the choices of solutions to the myriad of challenges that greenkeepers face, I've never counted filling in blank checks or ordering up a shiny new fleet of turf equipment to be among the most creative. (I will give creative credit, however, to the ability to convince board and committee members to give you the blank check in the first place.)

What is creative is facing a challenge head on using only what you already have to work with. No one does this as well as the greenkeeper and crew at a public course.

The key to opening up that creative vault is to think outside the box.

Black, a veteran public golf course superintendent, can be reached at greenkeeperjim@yahoo.com.

TURF QUALITY HINGES ON TURF HEALTH

As competition for golfers continues to intensify, superintendents are facing increased pressure to maintain the highest turf quality possible, despite weather or play challenges. Many are finding that keeping turf strong and healthy year-round is the best way to ward off disease and deliver playing surfaces golfers demand.

Jason Manfull, superintendent at Crow Valley Golf Club, Davenport, Iowa, balances typical transition zone summer stress with the members' high expectations for excellent playability. This Quad City golf course underwent a major renovation during the late 1990s. As the fairways were converted from *Poa annua* to bentgrass, Manfull decided to add Chipco® Signature™ to the maintenance program.

"We were looking for a way to keep plants healthier and control disease," Manfull recalls. "We added Signature to the program in 1996 and have been using it ever since. I'm seeing overall healthier turf with a greener appearance and better shoot density."

Manfull makes his first Signature application in early June and treats every 14 days throughout the season. He adds other contact fungicides to his tank mix as conditions warrant.

"Not only do we see good disease control with Signature," Manfull says, "but by making plants healthier overall, the turf has better heat, stress and wear tolerance."

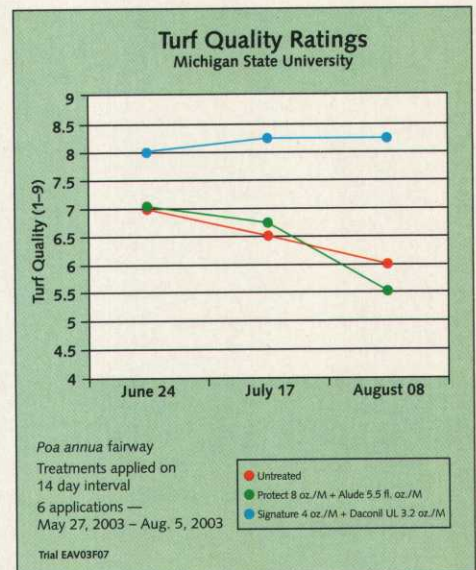
Weathering the Extremes

For Valley Green Golf and Country Club Superintendent Larry "Hank" McLean, extreme weather in his Greensburg, Pa., location has tested his ability to provide golfers with his trademark unblemished greens. Despite extreme heat one year and excessive moisture the next, McLean defended his reputation for providing spotless greens.

"Since I started using Signature nine years ago, I haven't had *Pythium* on my greens or tees," McLean says. "Even during tough weather conditions, our turf remains strong and healthy. I attribute that to Signature."

While McLean doesn't scrimp on

turf maintenance, he needs to watch his budget carefully. "When you compare my course's fungicide budget with others in the area, I'm probably spending less," he explains. "But because I consistently stay with my Signature program, I have fewer disease problems and better-looking greens than many courses."




Stress Prevention Crucial

The key to consistently healthy turf is to start a maintenance program before problems begin, explains Karl Danneberger, professor of turfgrass science at The Ohio State University.

Danneberger's research on stress management for golf course greens showed that Signature in combination with Daconil® or 26GT® measurably improved turf quality. "It's become common for superintendents to use some type of Signature program," he adds. "It's a good fungicide for its labeled uses."

"When you use a Signature tank-mix program, it's important to begin applications before stress starts and continue until the stress period is over," Danneberger notes. "Once disease takes hold, you have fewer options to recover healthy turf." ■

 Bayer Environmental Science

To learn more about Signature, call us at 1-800-331-2867 or visit BayerProCentral.com.

Bayer Environmental Science, a business group of Bayer CropScience | 95 Chestnut Ridge Road, Montvale, NJ 07645. 26GT, Chipco, and Signature are trademarks of Bayer. Daconil is a trademark of Syngenta Professional Products. Always read and follow label directions carefully. © 2004 Bayer CropScience

The Company Line

■ PRODUCTS & SERVICES



▲ Gang rotary mower

National Mower introduces the I-Gang3 trailed rotary mower, which features an innovative design that allows the operator to trim problem areas around the golf course without worrying about scalping.

The I-Gang3 concept was shaped by a superintendent who wanted to help improve the efficiency of cutting grass on difficult areas such as hilly roughs, and around bunkers and other undulating areas. The machine is customized to go where other trimming mowers can't reach or are less effective.

The I-Gang3 features three cutting decks (two forward, one back), linked by pivot points to a central frame. A 12-volt battery starts all engines and a 5-gallon fuel tank provides four hours of running time. The unit provides a 56-inch cutting width and weighs just 450 pounds.

As each of the I-Gang3's three independent 21-inch cutting decks conforms to slopes and undulating areas, a more uniform cut is ensured.

For more information, contact 888-907-3463 or www.nationalmower.com.

Turf system

BlueYellow, a new engineered turf system from **Georgia-Pacific**, provides a one-step solution for turf establishment, the company says. BlueYellow combines a cellulose-based substrate with a calibrated distribution of high-quality grass seed and fertilizer in the form of a lightweight, 100-percent biodegradable roll. It can be custom manufactured with any variety of commercially available seed and fertilizer for a prescription turf for new construction and renovation projects.

BlueYellow adheres to the soil once it is watered, reducing seed migration and erosion. The cellulose-based substrate

secures the seed and fertilizer in place and helps retain water, which enhances germination.

For more information, contact 800-667-3268 or www.blueyellowpro.com.

▼ Soil measurement Stevens Water Monitoring Systems

introduces its patented Hydra Probe soil measurement solution,



which provides superintendents with thorough soil moisture content, salinity and temperature information. The Hydra Probe system also helps course personnel manage optimal watering and fertilization effectiveness.

The Stevens Hydra Probe sensor is permanently placed underground and measures the electrical response of soil types by two parameters: dielectric constant and conductivity. The dielectric constant is most indicative of water content, while conductivity is dependent strongly on soil salinity. A thermistor is used to determine soil temperature. Sensors are placed just below the root zone at about 3 inches and at 8 inches in the same plane below the surface. The lower sensor placement will confirm both excess moisture and nutrient overloading.

By measuring soil characteristics at these two levels, the Hydra Probe allows superintendents to understand the conditions of the subsurface soil better and improve the subsurface drainage patterns, according to the company.

For more information, contact 800-452-5272.

Surfactant

Precision Zone Surfactants from **Precision Laboratories** is a portfolio of root-depth specific surfactant chemistries that work together to give turf professionals increased control over water placement in the root zone. It's comprised of four surfactants that are designed to deliver water to different levels of the root zone.

Duplex is a multipurpose irrigation surfactant that sequesters hard-water contaminants and reduces the surface tension of the water to allow it to flow freely through

thatch and water-repellent soils.

Vivax targets the upper level of the soil so that seedlings and new roots get the moisture they need to germinate.

The chemistry of Magnus keeps moisture in the top 2 inches of the root zone to optimize growing conditions for shallow-rooted turf species or turf experiencing summer decline.

Cascade Plus provides proven irrigation efficiency, water infiltration and control of localized dry spots for deeper-rooted turfgrass in wet or dry conditions. For more information, contact 800-323-6280 or www.precisionlab.com.



▲ Topdresser

Turfco introduces new design enhancements to its WideSpin 1530 Truck Mount Top Dresser that allow the unit to fit on to more utility vehicles. The WideSpin 1530 Truck Mount can now be attached to John Deere Pro Gator and Toro Workman utility vehicles. Using a few mounting brackets and connections, the WideSpin 1530 Truck Mount Top Dresser can be easily attached to a standard utility vehicle, including the ProGator, Workman and Cushman Turf-Truckster. The truck mount unit gives superintendents another option when their greens require a truck-mounted topdresser.

The WideSpin 1530 allows superintendents to implement a light, frequent topdressing program.

For more information, contact 763-785-1000 or www.turfco.com.