

Taking turfgrass to the limit

BY SAM WILLIAMS

“Put me on a highway and show me a sign, and take it to the limit one more time”
-The Eagles, 1975

When you're managing bermudagrass football fields in Maryland and northern Virginia, you find out about limits very quickly. To find out how the best in the business reach those limits, we visited with Jimmy Rodgers, sports field manager in Charlottesville at the University of Virginia; Vince Patterozzi, field maintenance manager for the 2001 Super Bowl champion Baltimore Ravens and PSINet Stadium; and Washington Redskins' director of grounds, Don Follett, who handles FedEx Field in Landover, MD.

UVA upgrades

Harrison Field at Scott Stadium in Charlottesville was artificial turf until 1992 when they switched to Vamont bermuda. This year, rounding out a \$40 million renovation of the Carl Smith Sports Complex, UVA replaced their Vamont with TifSport. Jimmy Rodgers said, “We were having some real problems with the Vamont, but it was damage from a rock concert here last year that was the last straw. That's when we decided to go with a genetically improved bermudagrass.”

Rodgers continued, “I talked it over with Jason Bauman, our associate athletic director for facilities, and we both felt that TifSport was the way to go. We were looking for a more cold tolerant variety. I also knew that TifSport was supposed to be a denser, tougher turf.”



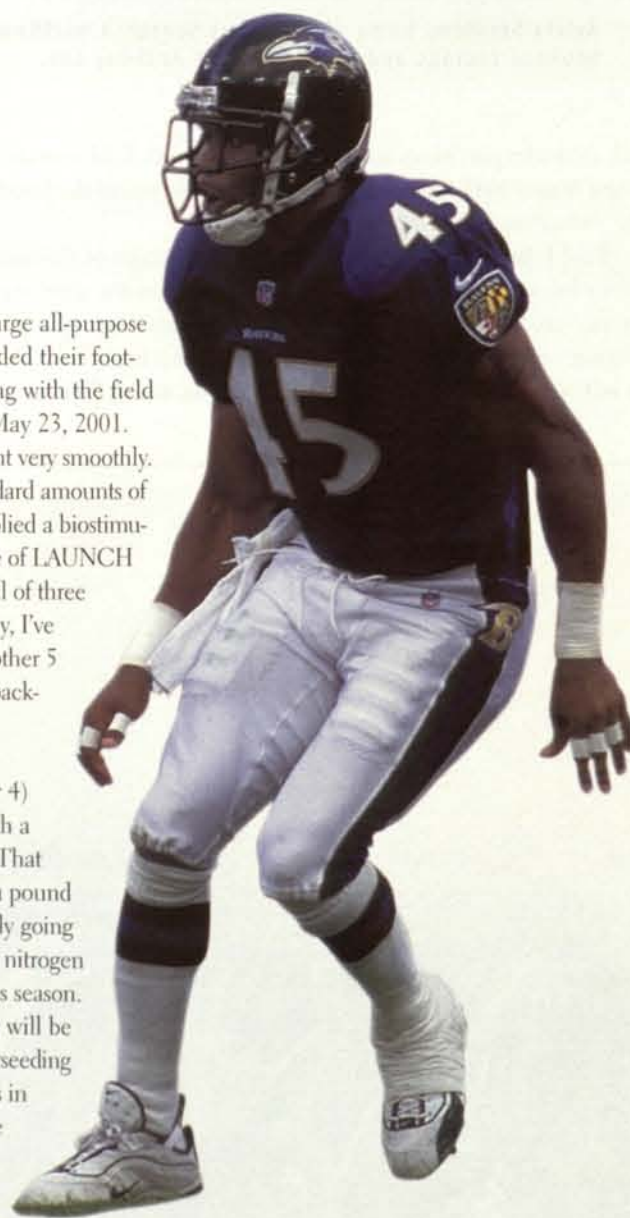
Harrison Field at Scott Stadium, University of Virginia, recently underwent a \$40 million renovation, which included installing new turf.
Photo by David Greene

They sprigged a large all-purpose practice field, but sodded their football practice field along with the field at Scott Stadium on May 23, 2001.

The grow-in at went very smoothly. “I put down fairly standard amounts of nitrogen, but I also applied a biostimulant-11 gallons per acre of LAUNCH every 3 weeks for a total of three applications. Since May, I've probably put down another 5 pounds of N, but I'm backing off of my nitrogen now,” said Rodgers. “Yesterday (September 4) I applied a 14-0-25 with a methylene-urea base. That came to another half a pound of N and that's basically going to be it. That's the last nitrogen I'll put on the field this season. The rest of my fertility will be geared toward our overseeding program, which begins in another 2 weeks. I'll be putting out a little phosphorus and also some potassium for the rest of the fall. We overseed here with a perennial ryegrass.”

Rodgers has been a sports field manager for 12 years, but this is his first experience with TifSport. “So far everything looks real good, but ask me again when our season is in full swing.”

We did. We talked to Jimmy again in mid-September, right after the Wahoos' victory over the Richmond Spiders. “Compared to our old Vamont, there weren't nearly as many divots. There was a fair amount of what I call ‘push up’ from the game, but the TifSport roots seemed to hold a lot better, he said. “And so far everything that I've heard from the players and coaches has been very favorable. Both for the practice field and the game field.”



Ravens safety Corey Harris in action.
Photo by Phil Hoffman.



Vince Patterozzi, Baltimore Ravens.
Photo by Sam Williams.

PSINet Stadium

"When we first got to Baltimore in 1996, and 1997, we played at Memorial Stadium and we brought in GNI. After we built PSI Net Stadium at Camden Yards, we brought that same GNI over here," said Vince Patterozzi. "But the difference between the two stadiums is like night and day. Old stadium designs are more like a 'V,' with the upper deck seats farther away from the field. This gives the turf the opportunity to get full sunlight, even in the dead of

winter—a nice 6 or 7 hours worth of daytime sunlight.

"In the new stadiums, the walls and seats are much more vertical. It's like a box, a true box," Patterozzi said. "By mid-October, the shade on the south side of the field here runs from the wall to the sideline and that's a 20,000-sq. ft. area. By mid-November half the field is shaded. I mean, there's no sunlight whatsoever, even on a bright, sunny day. And by December 1, the entire field is shaded, and it stays shaded until early March when the sun starts to come back north.

"I'm anxious to see how our new TifSport holds up under these conditions. I've seen and heard a lot of good things about it. The Tennessee Titans have it at Adelphia Coliseum in Nashville. They play all of their home games on it along with a full schedule of college games and concerts," said Patterozzi.

Patterozzi is also very interested to see what affect cold weather has on his TifSport. Westminster, 45 miles north of Baltimore at Western Maryland College where the Ravens are about to report for training camp, is about as far north as TifSport has ever been installed except on a test plot. Patterozzi explained, "Right now we're at about 700 to 800 feet above sea level, which is about 695 feet higher than the PSI field in Baltimore. Actually it's a little more because the actual field is 20 feet below street level. So you have two extremes. PSINet is also surrounded by concrete. Not only the stadium concrete, but city concrete. And this creates a dome of warm air that can really affect the microclimate down on the field.

"Here at WMC, where it is wide open for miles

and miles, we're going to get some pretty chilly winds coming in on top of us. And when we leave Aug. 20, the college football team will start practicing here, and the soccer team will start playing on it too, in the fall. That'll continue until late November. Then in February the lacrosse teams start using it, and their seasons don't end until May. That's 3 months of heavy, heavy use, and there's no rougher sport on grass than lacrosse, including football. I can't wait to see how this TifSport holds up under these kinds of conditions."

Nurturer

In reality, Patterozzi has done everything he can to give his field a good environment. "Our root zone is a blend of 80 percent coarse sand and 20 percent loam soil. I believe the combination of a loam soil and sand gives you the stability you need in a football field, particularly at the professional level. We also blended in Axis at 15 percent by volume. Then we put down our phosphorus, and followed that with two biostimulant sprays at the soil surface. In addition to humic acid, both biostimulants were loaded with microorganisms.

"We sodded next. Our sod went down quickly because it was 21 rolls, 110 feet long. Right after we put the sod down, we started watering. Right away. The very next day we initiated our liquid fertility program. Primarily we're trying to stimulate growth through the activity of micro-organisms," he said. "We've had success with this, and I think you're going to see more of this type of approach all over the country, simply because the environmental laws are going to stop us from using a lot of the products that we've been using. We also used a starter fertilizer and a granular 18-24-12. I believe in very high phosphorus rates, especially early in your program. That's what's going to really stimulate your roots."

Patterozzi, who has a degree in soil science and turf management from Southern Illinois University, began his career with ServiceMaster, where he was responsible for the grounds management program over a 14-state region. It probably didn't hurt his reputation that one of his key accounts, Central Missouri State, was voted best-maintained campus and best-maintained field in the nation in 1990.

Right after that, he got a phone call from the Cleveland Browns. "They asked me to come up and be their head groundskeeper." Then the Browns became the Ravens. "It was good to get back into the transition zone, where I was educated and had

Photo Courtesy-
Washington
Redskins



Don Follett, head groundskeeper, FedEx Field.
Photo by Clark W. Day Photo-Graphics.

worked for so long. Cleveland was strictly bluegrass, and I was anxious to get back into the bermudagrasses and the zoysias."

Redskins' Don Follett

Don Follett is also partial to bermudagrass. Fortunately, he doesn't have the severe shade problems that Patterozzi has. "Maybe a little in the late part of the winter, late December when the sun is lowest in the horizon. But I still get full sun on the field for at least for 4 hours," he said.

Follett started out in the business in 1972 as a student at Arizona State University. "They were looking for some help to maintain the football field. I was just student laborer making the minimum wage. I helped the groundskeeper mark the fields, fertilize, and mow. It just kind of grew into a full-time career for me."

It sure did. When the Redskins built FedEx Field in 1998, they hired Don from Arizona State, where he was sports turf manager and in charge of Sun Devil Stadium.

The original turf at FedEx Field was a variety called Tufcoat, a bermudagrass that's unique to the mid-Atlantic region. "Only a couple of growers are still growing it in this area," says Follett. "It's an OK grass, but it isn't really a top quality sod. It's very hard to lift, and it's a bit coarser than the TifSport or the 419 that I was growing at ASU."

And it didn't have a very good aesthetic appeal as far as Follett was concerned. "I wasn't happy with the coarseness and the color," he said. "It's a very light green color. It also grows a little bit slower than 419, and much slower than TifSport. And its winter hardiness wasn't as good as it was cracked up to be. I'm very happy with my TifSport. It held up extremely well for us during this past winter."

So far, Follett is pleased with TifSport's ability to stand up to abuse. "Because of the way it grows together so tightly, I think it has better divot resistance than even the 419 I grew in Arizona, and a lot better than the Tufcoat we first had here. When players make big cuts on TifSport they may shear the green off the top, but they're not pulling rhizomes out, or the thatch layer out. Our players and coaches like it a lot. Everybody says it looks more like a golf green than a football field. They keep asking me if they can bring their clubs out here."

To succeed, overseed

Like Jimmy Rodgers at UVA, both the Ravens and the Redskins overseed. According to Follett, "When it gets into the dormant period, late October, November, I'll put approximately 5 pounds of rye seed down after each game. Not necessarily on a weekly basis, only after each game."

Patterozzi plans on experimenting some. "I've taken bermudagrass through the winter here without overseeding because of our underground heating system, but if we do choose to overseed, for instance up at Western Maryland, we'll overseed probably only 95% of the field. I'm definitely going to leave an area open, just to see what happens. And when I say overseed, I mean overseed. We'll overseed at 60 to 100 pounds per thousand square feet, which is 10 times the rate that most people use. And we'll mow it at the same height as the bermuda."

Patterozzi is borrowing a management practice that is fairly common on golf courses throughout the south. "You want to keep that rye grass in a juvenile stage because it's going to transition out in the spring better. By taking it down to say a 1/16 of an inch in June, and hitting it with Kerb, we should be able to take every bit of that rye grass out. And then we'll come on with di-ammonium phosphate or ammonium phosphate at a couple of pounds per thousand, and burn the rest of the rye out."

He also plans to overseed at the stadium. "We'll overseed during the season. Just have to do it. Especially between the hash marks. There are also a number of high school and college games scheduled at PSINet."

What about re-sodding?

It's no secret that a lot of teams end up re-sodding midway through the season, but Jimmy Rodgers has no plans to re-sod Scott Field unless something drastic happens. Neither does Don Follett. "I hate re-sodding. I do overseed, but I absolutely hate re-sodding," he says. "I work all summer long to make sure my grass has a good root system, a good thick thatch buildup and good rhizomes. I want to make sure I can make it all the way into December or January without losing the field."

Vince Patterozzi hasn't made up his mind yet. "I don't know. We'll see if TifSport is the Superman grass that everybody says it is. I've certainly had to re-sod the last couple of years when we had GNI. We may end up in the same situation as Terry Porch down in Nashville. He has lots of back to back games. He may have a college game on Saturday, and then a pro game on Sunday. And if he gets a rainy weekend, which we all get, he's got his hands full. As relatively inexpensive as sod is, with what's on the line here, it just makes sense to just go in and re-sod. But that raises other questions. How does the new grass knit? How does it react? Is the TifSport even growing? I doubt it. Do we ask the grower to overseed it, and do we overseed it again? If that's the case, how much are we weakening that bermuda? All these questions have to be answered. I just hope I find some of the answers over the next couple of years."

Practically every sports turf manager and every coach has a different opinion about mowing height. At FedEx Field, Don Follett usually starts the season at 1/2 in., and as



Jimmy Rodgers, sports field manager, University of Virginia.
Photo by Sam Williams.

the season progresses he'll add 1/6 of an inch every month. "By the end of the season my cutting height is right at about an inch."

Jimmy Rodgers says he started out at 3/4 of an inch back when the sod was laid in May, stayed at that height pretty much all the way through August, but will move his mowing height up to 15/16 when Virginia's season starts. Patterozzi has been mowing at 3/4 in., but says he plans to lower that down to 1/2-in. by the first game in November.

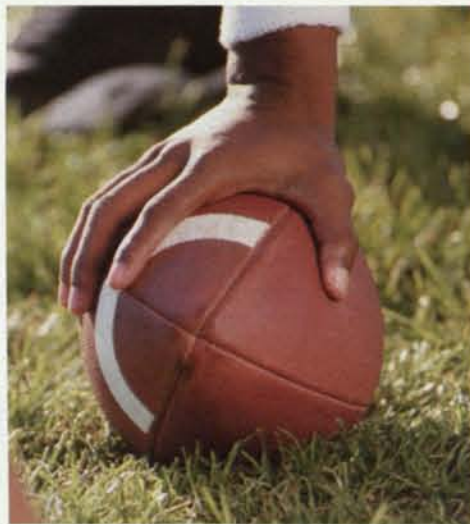
Like all of the new varieties released recently by the University of Georgia, TifSport is protected by a USDA patent and is regulated and inspected by each state's Seed Certification Agency. As a further safeguard, TifSport can only be grown and sold as genetically certified sod or sprigs, and only by a licensed member of the TifSport Growers Association.

Don Follett thinks this is vital. "When I was in Arizona and had to buy 419 from an Arizona grower, and later bought 419 from a California grower, it didn't even look like the same grass. It's nice to have a sense of security that when you're buying a product, you're getting that product and not an off-breed or mutation."

At PSINet, Patterozzi bases everything on tests. "I'm a big believer in the soil micro-biological process. By building that up, you can reduce the amount of chemical fertilizer you have to use. So every 3 months, I have someone come in and take samples from the root zone of my sod, and then 3 inches further down. We send that to Elaine Ingram at Oregon State University, and she does a microbial count. She tells us what we have in the root zone—the good bugs and the bad bugs."

Any drawbacks?

Miles Rush, Vince Patterozzi's stepson, was involved with the TifSport grow-in at PSINet Stadium. He's getting a degree in turfgrass science at Ohio State and has been working with turf since he was 14. Miles recalls, "We sodded the field in early May and had the Super Bowl Ring Ceremony here the first week of June. So we got some leaf blade damage from the tent platforms. They were on top of the grass for 5 days. It was a little worrisome for awhile, but we tweaked our mowing heights and it's just about all cleared up now."



Patterozzi has a long history with bermudagrass, but this will be his first full season with TifSport. "We're pleased so far with the density. As you know, we still have GN1 around the outside of the field, just off the playing surface, and when you look at the two grasses side by side, you can see that the TifSport is much denser. We like that a lot. What we don't like, and it may be due our high phosphorus levels, is the amount of seed heads, at least on this field. They popped up about 2 weeks ago. I don't know when they'll disappear, but I hope soon."

Like all bermudagrass, it's not unusual for TifSport to produce seed heads during the early summer months. It's a temporary situation, and not a long-term problem.

Patterozzi has been a little puzzled that TifSport doesn't seem to respond quite as quickly to phosphorus when he's trying to get a little color enhancement, at least compared to GN1. "GN1 will respond almost overnight to phosphorus-nitrogen applications. But I haven't seen that, either at the stadium or here at WMC. Maybe I just need to up my rates because there's so much more plant tissue with the TifSport. Or maybe it's the watering. It's not that it doesn't respond; it just doesn't respond as quickly as the GN1."

When we contacted Patterozzi again in mid-October, he felt that he had his color problem solved. "We recently started using a product from Opti-Gro called Liqui-Mag, a liquid magnesium source derived from magnesium sulfate. It's unbelievable, this is the first time we've ever been able to stripe the field with our mowers the same way you can stripe a ryegrass field."

Don Follett said, "As somebody once explained to me, it's better to be a groundskeeper than a grounds manager. If you replace your sod every year, you're just a manager, throwing away your problems every year. So I would like to be known as a groundskeeper. I like to keep my grass as long as I can. I'd recommend TifSport to anybody who wanted to put in a sports field, especially if they don't plan to re-sod every season."

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Sam Williams owns a marketing and communications firm in Sautee-Nacoochee GA, and is a free-lance writer for the Georgia Seed Development Commission.

"I work all summer long to make sure my grass has a good root system..."



Alternative Tx for turfgrass health

In the ongoing war against insect pests, fungal diseases, and other threats to turf health, many turfgrass sod producers are exploring nontraditional treatment options to promote vigorous, pest-free crops.

In their continuous effort to provide those who buy and maintain turfgrass sod with the highest-quality product possible, turf growers and researchers are testing a variety of inexpensive alternative treatments, including mineral, herbal and live biological products.

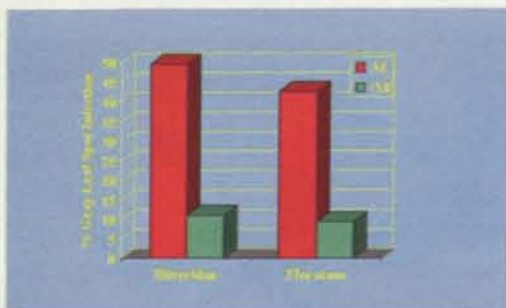
While these alternatives don't replace effective traditional pesticides, turf industry professionals are starting to recognize the value of such materials and reporting important successes in the field.

Mineral silica

For years, rice and sugarcane farmers have used water-soluble silica, a byproduct of phosphate fertilizer mining, to fight fungal disease and promote growth. Now its effects are also being studied on turfgrass, with funding from the International Turf Producers Foundation (ITPF).

Paul Grose, general manager of King Ranch Inc., Belle Glade, FL, has participated in the University of Florida's ITPF-supported silica/turfgrass trial studies for the past year and a half. While it's still too early to report definitive results, Grose said he has seen improvement in root system density.

"We used silica on our sugarcane for many years and had dramatic results," said Grose. "So when the University approached us about trying it with our turfgrass, we were interested."



Red bars represent the percentage of gray leaf spot infection in Bitterblue and Floratam turfgrass varieties not treated with silicon, and green bars represent the percentage of infection in the same varieties treated with silicon.



St. Augustinegrass amended with silica shows little if any gray leaf spot (left), while non-amended grass in the same conditions shows severe gray leaf spot (right). Photos by Dr. Lawrence Datnoff, professor of plant pathology, University of Florida.

According to Lawrence Datnoff, PhD, the Florida plant pathology professor who oversees the study, most soils contain considerable quantities of silica. However, over-planting can reduce the levels that are naturally available to plants. Datnoff has found that spraying turfgrass with soluble silica reduces incidents of *Pyricularia grisea*, or gray leaf spot. Other research has found it to be effective against pythium blight, dollar spot, brown patch disease, and powdery mildew.

"Right now, traditional fungicides are considered the

best method available for managing these diseases," said Datnoff. "But silica, as a complementary solution, potentially offers another disease management option for turfgrass producers and maintenance crews."

Because much of the current research is still not complete, some turfgrass producers are taking a "wait and see" attitude before they apply alternative treatments to their sod. Since producers are constantly looking for ways to further strengthen the turf they provide to customers, alternative materials for disease management are an attractive option, and the initial research results are promising.

In addition to the silica studies, researchers are testing the effectiveness of sulfur, manganese, iron, and other mineral products against pests and disease. Scientists also are studying the health benefits to turfgrass of herbal remedies such as salicylic acid and the bacteria *Xanthomonas*.

Live biological remedies like the bacteria *pseudomonas* have been shown to suppress a variety of turfgrass diseases. And beneficial nematodes (microscopic worms of the phylum Nematoda) are being used to parasitically control insect pests, such as grubs, mole crickets, and caterpillars.

Some innovators also are exploring the value of alternative materials as fertilizers. For example, in an effort to recycle waste while improving quality and yield, one company is manufacturing fertilizer from

used photo and film processing chemicals.

Timing is crucial

For the past 3 years, Myron Kuenzi of Kuenzi Turf & Nursery, Salem, OR, has used a yeast starter containing the beneficial fungus *Trichoderma* to combat the fungal disease *helminthosporium*. Kuenzi says he has experienced "modest" success by spraying it on turf in the early stages of growth.

"The timing of the application is exceedingly important," he said. "You need to be aware of the life cycle that you're working with. If it's too early or too late, there's no benefit."

Most researchers and producers familiar with alternative treatments agree that timing is crucial, and that these products work best if applied before disease occurs. That way they are used to help prevent the problem, rather than cure it. And as is the case with traditional pesticides, these alternative remedies should never take the place of good maintenance practices.

"I always tell my customers, that's the most important part of disease management," Grose said. "Sod producers are doing all they can to deliver the healthiest product possible, but after the grass is installed, the customer can avoid most fungal problems by maintaining turf properly."

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This article was contributed by the Turfgrass Producers International, an independent, not-for-profit association. For more information, visit www.TurfGrassSod.org.



STAINLESS STEEL ROTOR

Rain Bird announces the newest addition to its family of rotors: the 5004 stainless steel rotor (5004SS). With a radius of throw of 23-50 ft., the new rotor is specially engineered for mid-size commercial turf areas. The stainless steel riser provides added toughness to deter vandals in public turf areas. In addition, there is a built-in slip clutch mechanism for added protection of the gear drive.

This rotor comes with a nozzle tree that includes low angle, Radius+ and the patented Rain Curtain™ nozzles. All nozzles are interchangeable from the front of the rotor and arc and radius adjustments are made from the top requiring only a flat-blade screwdriver.

Backed by a 5-year trade warranty, the 5004 stainless steel rotor is equipped with Rain Bird's proven water-lubricated gear drive for durable, reliable operation.

Rain Bird/520-741-6100

For information, circle 162



SOILS LAB UPGRADES

Turf Diagnostics and Design, Inc. has upgraded two of their services. The On-Line Sample Reporting is now available via the Internet; the company says it can set up client-specific data pages on its website to you to instantly access your reports. When the on-line reports are printed, they look as good as the hardcopies that are mailed from the lab, says the company. The on-line reports include letterhead and digital signature. All data on the site is password-protected.

The second upgrade is free listings on SandFinder.com, the site for information on products available from suppliers of quality rootzone materials. The information includes testing data summaries, potential turf and golf usage, and supplier contact information. SandFinder.com also offers quick summaries of materials recommendations for golf and sports turf construction.

Turf Diagnostics and Design/913-780-6725

For information, circle 161

SINGLE APPLICATION PREEMERGENCE WEED CONTROL

To avoid the root damage often associated with the use of herbicides in the dinitroaniline (DNA) class of chemicals, turf-grass managers should examine herbicides with alternative modes of action other than root absorption associated with DNAs. One such product, Ronstar® (with the active ingredient oxadiazon) provides weed control without the harmful effects of DNAs.

The only herbicide in the oxadiazole family, Ronstar is absorbed through the shoots not the roots, allowing for faster turf recovery from winterkill. This mode of action allows for uninhibited and thriving root systems in established plants. For young turf, it allows roots to grow and mature without harm.

A single application of Ronstar provides season-long weed control. Such control can reduce labor for a whole season, resulting in further cost savings, says the manufacturer.

Chipco Professional Products/800-438-5837

For information, circle 165



POST-EMERGENT WEED CONTROL

Drive® 75 DF herbicide is a broad-spectrum post-emergent herbicide for broad leaf and grassy weeds that offers overseeding flexibility to the professional turf market.

Key product features and benefits: eliminates or suppresses a wide spectrum of hard-to-control weeds; unique activity offers greater flexibility for seeding and overseeding operations; the following turfgrasses can be seeded or sprigged at any time before or after application—annual bluegrass, annual ryegrass, buffalograss, common bermudagrass, hybrid bermudagrass, tall fescue, and zoysiagrass; effective residual control for up to 30-45 days with a single application; for the following turfgrasses, Drive application is recommended 28 days after seedling emergence—Kentucky bluegrass, fine fescue (in blend), perennial ryegrass, creeping bentgrass.

Active ingredient uses two modes of action to control targeted weeds without damaging a wide variety of cool- and warm-season turfgrasses.

BASF/800-545-9525

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SHIELDED SPRAYERS

From 52- to 20-ft., ProLawn "aerodynamic" shielded sprayers are a productive, cost effective, and environmentally friendly way to apply liquid fertilizers, pesticides, and herbicides to all your turf areas.

The unique spray shields design helps to protect the operator, and also protects the general public, wildlife, pets, and desirable vegetation from the hazards of chemical spray. And since you can control drift, the spray shields will also help keep you in control of your spray schedule.

Conventional sprayers use large water droplets to reduce drift. When a large droplet hits the a blade of grass, much of the chemical splashes to the ground and is rendered ineffective. As a result many applicators request more chemicals and sometimes sticker agents to feel confident in their application needs.

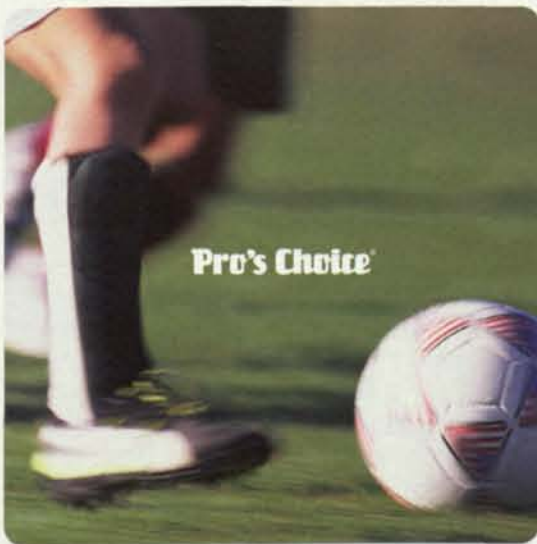
But the spray shields can apply small droplets that "stick" to the vegetation. With small droplets and lower volume, you'll use less chemicals and still get more coverage per tankful. Not only will you save chemical costs but the faster drying time allow the turf area to be re-entered sooner.

With ProLawn shielded sprayers, you'll be able to spray right up to ornamental plants, flower beds, and other landscape features. The product allows faster application, greater coverage, lower chemical usage, and on-target applications.

ProLawn/800-292-3628
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Postemergence herbicides like Finale® provide turfgrass professionals with a greater level of application flexibility than their preemergence counterparts. A non-selective herbicide, Finale controls a broad spectrum of annual and perennial grasses and broadleaf weeds, including difficult weeds like poison ivy, dandelion, dollarweed, thistle, and white clover.

Unlike other non-selectives, Finale's chemistry kills targeted plants in a few days. Its mode of action is both contact and systemic, resulting in rapid, long-lasting control of undesirable weeds and grasses. Plus, Finale works in cooler temperatures that often limit the effectiveness of other non-selectives.

Finale is rainfast in an average of 4 hours, and once applied it stays put. This allows you to clear weeds in straight, predictable lines, without the "creep" commonly found with other herbicides.

Chipco Professional Products/800-438-5837
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MORE WEED CONTROL

PBI/Gordon's new herbicides, marketed under the ProForm™ brand, contain EPA-approved carfentrazone-ethyl in combination with phenoxies and dicamba, which broadens the weed control spectrum and adds systemic activity, the company says.

SpeedZone and PowerZone feature protox inhibitors that result in a different plant response. "It looks different," says Gordon's Doug Obermann. "The carfentrazone-ethyl causes weeds to turn brown and crisp. They just dry up and blow away."

In addition to acting faster, the new products actually perform better in cooler weather, says Obermann. "It's a great product for early spring and late fall." He adds that the fast response especially controls clover and spurge. "It smokes them in about a week. You'll see visual results in 24 hours or less and dead weeds in days."

The EPA classifies carfentrazone a "reduced risk pesticide" and the new products' toxicological profile earned them a "caution" signal word on the packaging.

PBI/Gordon/800-821-7925
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DRILL SEEDER

Classen's DS-20 self-propelled drill seeder features front wheel drive, twist-grip throttle, four-cycle Honda engine, reverse

reel rotation (up milling), can be used with most seeds, and has a shoe injector for more precise seed placement, says the company.

The unit weighs 400 lbs. and its rotor bar and metering device are easily removed for servicing. It has 2-in. spacing between seed outlets, the shoe injector features 10 heat-treated shoes spaced on 2-in. centers for accuracy, and 10 slicing reel blades for longer life.

Classen Manufacturing/888-252-7710
For information, circle 169

YEAR-ROUND HERBICIDE

Having a solution that works on a major weed problem is peace of mind for a sportsturf manager. Having one that offers low use rates, doesn't leave unsightly stains, and handles two additional weed problems that sprout at different times of the year is a real windfall.

For Ted Muench, the golf course superintendent at Stonebriar Country Club in Frisco, TX, Dimension specialty herbicide fills that bill. Fortunately for him, Dimension is labeled for preemergence control of crabgrass, goosegrass and Poa annua as well as early postemergence control of crabgrass.

Muench applies the Dimension-impregnated fertilizer on the course's putting and practice greens in mid- to late-February to provide preemergence control of crabgrass. A second application to those bentgrass greens around the first of May provides early postemergence protection from crabgrass and control of the later germinating goosegrass. This split-application regimen also gives Stonebriar Poa annua control through late August/early September, when Muench repeats the Dimension treatments on his greens for late-season Poa annua germination.

That flexibility for controlling weeds in newly seeded turf is one more advantage for time-pressed turf professionals, according to Scott Eicher, senior product marketing manager. "A user can apply Dimension as soon as 8 weeks after turfgrass germination, once the root system has been well established and mowed at least twice," he says. "Or they can reseed within 10 weeks (except when overseeding Bermudagrass with perennial ryegrass, which allows for 8 weeks), which leaves a busy turf manager to do other things with his time."

Dow AgroSciences/800-255-3726
For information, circle 164



PREEMERGENT CONTROL

Pendulum® herbicide provides reliable preemergent control of most troublesome weeds and is available in three formulations: 2G granular for dry spreader application, 3.3EC emulsifiable concentrate, and WDG water dispersible granule for spray application.

Key features and benefits include the broadest weed control spectrum of any pre-emergent herbicide, the manufacturer says; controls problem weeds including crabgrass, goosegrass, oxalis, henbit, spurge, and nearly 40 other broadleaf and grassy species; provides performance at an economical price; provides season-long control even against the extended weed-seed germination windows in warm-season turf areas; and can be used on numerous ornamental species, including many landscape, field and container-grown plants.

BASF/800-545-9525

For information, circle 167

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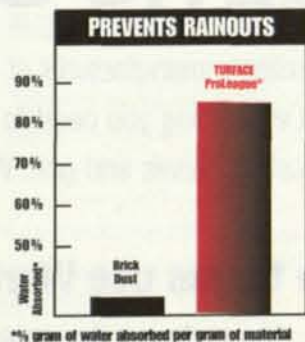
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In & On the Ground



FIELD MARKING MACHINE

Pioneer's gasoline-powered Brite Striper 1500 is easy to use says the manufacturer. With a simple design and handy features, the heavy-gauge welded steel unit is meant to last for years, trouble-free.

A 7-gal. stainless steel tank reduces the number of refilling delays, and a bottom clean-out valve on the tank makes cleaning up easier. Three large, 10-in. wheels provide a smooth roll. You can use the 12-ft. handhose with wand and a fully adjustable spray box on large areas.

Pioneer Manufacturing/800-877-1500
For information, circle 145

CONTROL "UNCONTROLLABLE" WEEDS

Image® 70 DG herbicide provides post-emergent control of problem weeds in warm-season turfgrasses such as bermudagrass, St. Augustinegrass, centipedegrass and zoysiagrass.

The manufacturer says it controls "uncontrollable" weeds that other herbicides cannot, including: summer weeds—purple nutsedge, yellow nutsedge, dollarweed, field sandbur, globesedge, green kyllinga, rice flatsedge and perennial/annual ryegrass (overseeded); winter weeds—wild garlic and wild onion, black medic, buttercup, common chickweed, mouseear, cutleaf evening primrose, geranium carolina, dovertail geranium, hairy bittercress, henbit, knawel, lawn burweed, parsley-piert, purple deadnettle, white clover. Aids in controlling and reducing competition from dollarweed, tall fescue, violets, and annual sedge and Virginia buttonweed.

Product also provides selective weed control and is tolerated by established stands of warm-season turfgrasses as well as many landscape ornamentals and ground covers. Active ingredient is absorbed through root systems of targeted weeds and inhibits the enzymes needed for photosynthesis so food production stops and weeds waste away.

BASF/800-545-9525
For information, circle 148





BEAUTIFUL TURF

Opti-Gro™ is a provider of preemergent, post-emergent, and non-selective herbicides to schools, park and recreation, and athletic fields. We help create beautiful turf reflective of the healthy grounds an organization is proud to own. As the weeds are eliminated, the turf increases its density and durability, becoming aesthetically pleasing to the public. With solutions like these, Opti-Gro matches your needs as well as your budget, letting you spend time working on other projects rather than worrying about the turf.

Opti-Gro/800-527-9919

For information, circle 146

TURF RENOVATION TOOL

Basamid®, a granular soil fumigant, is used for turf renovation to help rid turf of existing vegetation in addition to dormant weed seeds such as poa annua, which can germinate up to 40 years after dormancy. Golf course superintendents have recently discovered its unique benefits of providing long-term and complete control of unwanted pests while establishing new fairways.

Features and benefits include: labeled for lawn and turf renovation, golf course construction and renovation, lawn and turf seedbeds, ornamental field production and ornamental landscape beds; eliminates weed seeds, nematodes, grasses and soil diseases; granular formulation is easy to use, product is activated by soil moisture; offers 24-hour re-entry interval, allows reseeding in as little as 10-12 days; as a non-restricted product, it requires no complicated application equipment or tarps, thereby reducing labor costs and cost of plastic disposal.

BASF/800-545-9525

For information, circle 147



The Ultimate In Field Cover Handling...



1



2



3

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1 TARP MACHINE™ rolls the cover on or off the field in a minimum of time. Can be attached to any 14 HP tractor equipped with a PTO.

2 TARPMATE™ stores any size cover. Strong and lightweight, the 28" diameter plastic roller is complete with safety end caps. In three standard lengths.

3 COVERMASTER® infield raincovers and football fieldcovers are readily available in a variety of colors and weights.

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WHAT THE USERS SAY...

From 1-10, your company is a 10...
Jim Simmons, Facility Mgr., Buckingham Little League, Ft. Myers, FL

Great service... the best...
Chip Baker, Asst. Baseball Coach Florida State University, Tallahassee, FL

Experience with Covermaster has been outstanding... appreciate special attention...
Ray Tanner, Head Baseball Coach, Univ. of South Carolina, Columbia, SC

Excellent quality with competitive prices...
Johnson Bowle, Associate AD, Drexel University, Philadelphia, PA

Covermaster takes extra step to meet customer's exact needs...
Gary Mayse, Asst. Gen. Mgr., Wisconsin Timber Rattlers, Appleton, WI

Response time was great... recommended by groundskeeper of St. Louis Cardinals...
David Hopkins, Alton American Legion Baseball, Alton, IL

Very good... highly recommended...
Dunham Wright, Facilities Supv., Northeast Louisiana University, Monroe, LA

Delivered in perfect condition... best product I looked at...
John Milardo, Supt. of Parks, City of