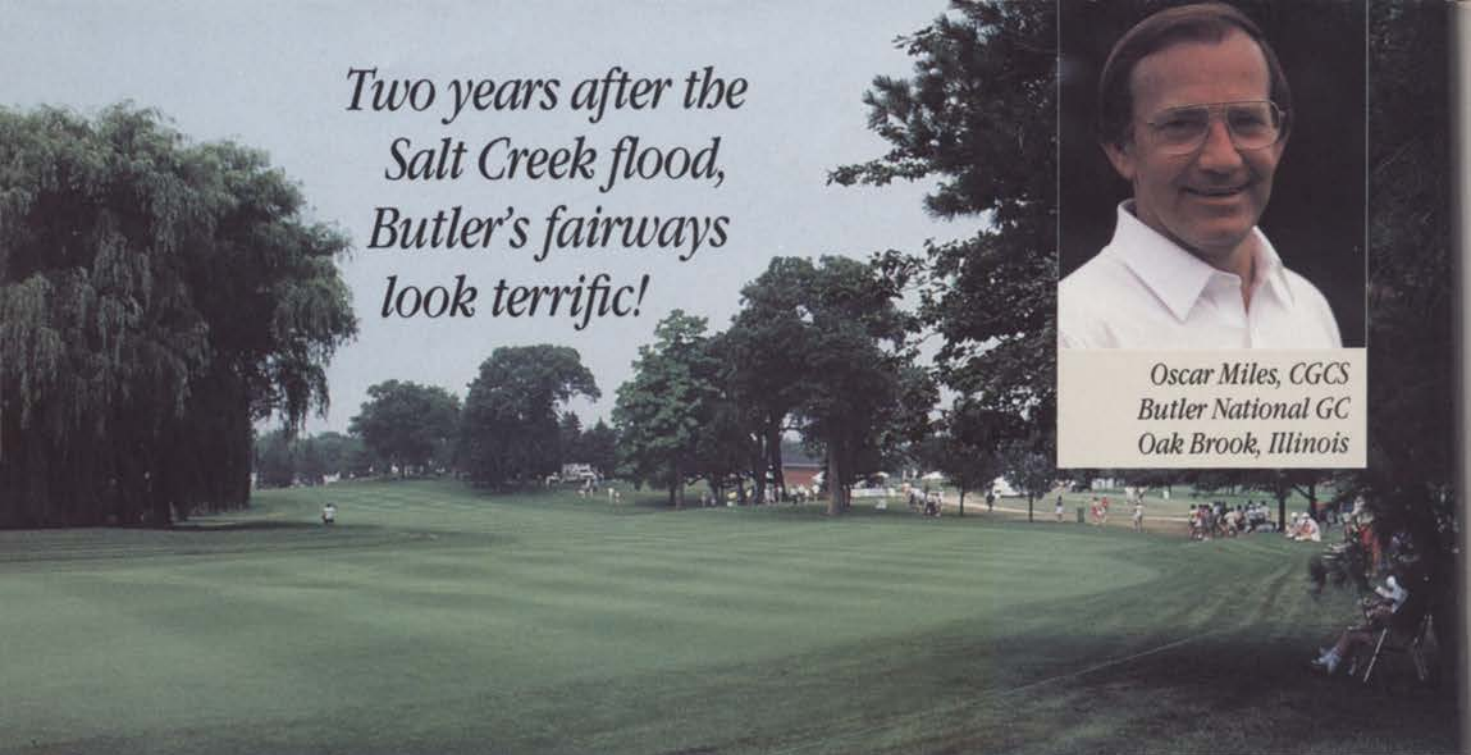


*Two years after the
Salt Creek flood,
Butler's fairways
look terrific!*



Oscar Miles, CGCS
Butler National GC
Oak Brook, Illinois



Seventh fairway during the Western Open, 1989.

Penneagle and Oscar Miles make Butler National GC 'picture perfect' again!

"Before the 1987 Western Open, Butler National was primed and trimmed to perfection for its date with the pros and television cameras" says Oscar Miles, "then 9½ inches of rain drenched the course. The resulting flood deposited tons of silt that dried and destroyed the grass beneath.

"After the cleanup that required thousands of manhours, high pressure hoses, squeegees and helicopters for drying; the process of reseeding began.

"Based on Penneagle's excellent performance before the flood, I chose to reseed with this bentgrass. After two years, the new stand appears better than before. With our time-proven maintenance program, we mow our fairways at 7/16" and have a good working layer of Penneagle with virtually no thatch.



After two years, Penneagle produces a good working layer with no thatch buildup.

"In preparing for the 1989 Western Open, we compared the course to a Van Gogh painting, and the crew's efforts were to enhance the work of art by meticulous touchup on the frame. The result was a 'picture perfect' course that caused the players and announcers to rave.

"Now if I could only get the announcers and writers to call 'Penneagle' by name... you can't plant *just any* bentgrass and expect it to perform like Penneagle."



Seventh fairway before the rain delayed 1987 Western Open.

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LANDSCAPE MANAGEMENT



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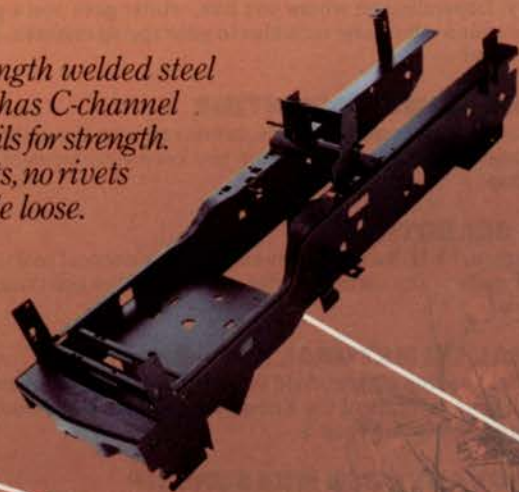
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AS I SEE IT...

LM

Fore-warned is fore-armed in the spring



March has been "in like a lion and out like a lamb," and April showers now promise to "bring May flowers"—as the old sayings go.

But for landscape managers in the northern sections of the country, this month also usually brings some pretty intense migraines. April, traditionally, is either the launching pad for a successful year, or the month that gums up production schedules for the rest of the summer.

You've had all winter to get your ducks in a row, to organize your books, to make those extra off-season calls to clients, to find good seasonal help, to spit-polish the machinery. But this is the month Mother Nature blows the whistle, for better or for worse. (And, for some strange reason lately, it seems for the worse.)

"Spring concerns haven't changed over the years," observes John Buechner of Lawn Doctor, Matawan, N.J.

Thus, April is the month the groundwork is laid for employee burnout, customer complaints and equipment breakdown. And nothing can be done about it. Or can it?

"If you have a plan, it makes things easier," notes Buechner, who has been through enough springs to know the drill by heart. "Anticipation is the key. In the off-season, you should examine all the problems of the previous year, evaluate them and have a plan to deal with them this year. And you should also have a Plan B or C to fall back on."

For instance, Buechner told Lawn Doctor franchisees a couple of months ago, history has shown 14 scheduled application days are lost each spring to weather. If the astute landscaper or lawn care operator can back up his schedule a little extra, some of those days can automatically be reclaimed.

"This is not earth-shattering information," Buechner admits. "You can take any business and apply the same principles."

The point is that—as another old saying goes—"fore-warned is fore-armed." And landscape managers should need no fore-warning other than last year's experiences and a little advance planning to fore-arm them.

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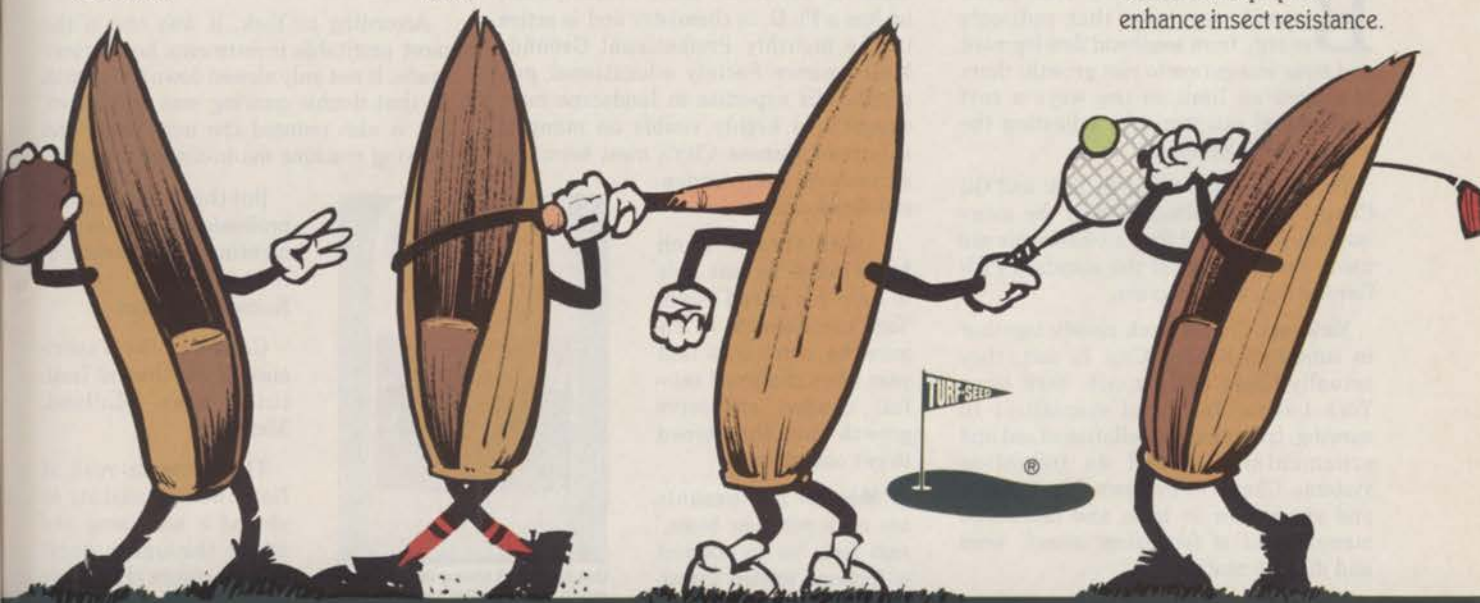
- The number 1 variety in the 1986 National perennial ryegrass trial.
- Dark blue-green colored low growing variety.
- Improved heat tolerance, and resistance to leaf spot, brown patch and stem rust.
- Very good performance in California overseeding trials.

Charger

- Improved resistance to leaf spot, brown patch, stem and crown rust. Tolerance to red thread.
- Good performance under low fertility and improved color and growth under cool weather conditions.
- Early maturity and tested as 2HH.

246 Sunrye

- Very dark blue-green colored turf-type variety.
- Dwarfier growth habit than other varieties in overseeding trials in Palm Springs area.
- Improved resistance to leaf spot, brown patch, and stem rust.
- Contains a moderately high level of endophyte to enhance insect resistance.





Bayard Sheldon, left, president of Silver Creek Landscaping in Sacramento, says that they use Embark as an edger and trimmer to keep Bermuda from creeping into flower beds or growing ragged around tree wells and

fence lines, as well as encroaching on sidewalks, driveways and walls. Center is Nick Subia, general manager of the maintenance division; and, right, is Charles Sheldon, Silver Creek vice president.



Robert McKindles, supervisor of grounds maintenance at Northwood Institute near Midland, Michigan wanted his entrance road to have a manicured look comparable to the ornamental turf on the main campus. He used two

treatments of the PBI/Gordon fine turf program, the first in early spring, and the second in mid-summer. "The roadsides were only mowed twice," says McKindles, "and the color was as beautiful as any turf on the campus."

If you mow or manage ornamental turf, Embark® can help in many ways:

PLANT GROWTH REGULATOR

All over America, professionals are experimenting with ways to improve their business with Embark® Plant Growth Regulator. Read how four landscapers with totally different goals are more successful because of the way they use Embark.

Everett Mealman, President
PBI/Gordon Corporation

Because Embark is a true plant growth regulator that redirects energy from seedhead development and stem elongation to root growth, there is almost no limit to the ways a turf professional can use it by adjusting the rate to fit the problem.

The experiences of Kevin York and Gil Chapel are one illustration of the many ways we have found that professionals are using Embark beyond the standard PBI/Gordon fine turf program.

York and Chapel work closely together in suburban Kansas City. In fact, they actually share office space. York owns York Lawns, Inc., and specializes in mowing, trimming, installation of sod and ornamentals as well as irrigation systems. Chapel owns Lawn Pro of Olathe and specializes in lawn and landscape management of fertilizing, insect, weed and disease control.

Chapel has very carefully followed the development of PGRs since they first

came on the scene. Little wonder, since he has a Ph.D. in chemistry and is active in the monthly Professional Grounds Maintenance Society educational programs. His expertise in landscape management is highly visible on many of suburban Kansas City's most beautiful commercial and residential developments.

...and from such knowledge he was able to help his friend Kevin York use Embark in his mowing contracts last year when abnormal rainfall caused excessive growth that threatened to get out of hand.

"Most of my accounts are on a per-mow basis," says York, "so my mindset is inclined toward investing in mowing machine maintenance and em-

ployee training rather than buying chemicals to reduce growth. But I was willing to try anything that would help me keep up with the avalanche of growth and scheduling problems caused by all the rain."

And thus it was that Chapel applied a low rate of Embark and Limit® on several of the properties York was mowing — to slow down the growth. (A ½ rate of Embark alone may also achieve this at a cost of about \$11.00/A.)

According to York, it was one of the most profitable investments he has ever made. It not only slowed down the growth so that double mowing was eliminated, but it also reduced the man hours and mowing machine maintenance per acre.

But this is just one way professionals are experimenting with low rates of Embark PGR in the Kansas City area.

Consider the experience of Northwood Institute, near Midland, Michigan.

The entrance road at Northwood Institute is almost a mile long and winds through natural ground covers of majestic oaks and pines. The berm tapers off into a ditch on



Use rates and timing vary according to geographical area and with weather conditions, as well as with turf species.

each side that is well turfed but extremely difficult to mow.

Because the entrance road is such a vital element of the overall campus image, the Institute wants it to have a manicured look rather than your conventional highway look.

After considering all of the alternatives, Robert McKindles, supervisor of grounds maintenance at Northwood Institute, elected to treat the roadside with the fine-turf rate of Embark in a tank-mix with Ferromec® AC Liquid Iron — one pint of Embark plus 2.75 gallons of Ferromec AC per acre.

"The first treatment went down in early spring," says McKindles, "and it held the grass in a neat, attractive condition for six to seven weeks. Ten weeks after the first application went down, the roadsides were mowed and a second application went down.

"It held the growth sufficiently that only one more mowing was needed," continues McKindles, "and the color was as beautiful as any of the turf on the entire campus."

While use rates and timing may vary in other geographical areas and with weather conditions, Embark proved an invaluable tool at Northwood Institute.

Embark is also a priceless tool for edging and trimming. Just ask the folks at Silver Creek Landscape in Sacramento, California.

Sacramento has to be the ground cover capital of the world. At least 50% of the landscape consists of creative placement



Kevin York, left, owner of York Lawns, Inc. and Gil Chapel, right, owner of Lawn Pro, show Everett Mealman one of the commercial properties where they slowed the growth

of the grass. "Using Embark to reduce the man hours per acre for mowing is an idea whose time has come for mowing contractors," says York.

of rocks, bark, ivy, and a wide variety of trees.

"We use Embark as an edger and trimmer," says Bayard Sheldon, president of Silver Creek Landscape, headquartered in the suburban Rancho Cordova area of Sacramento. "Sometimes I think we should call ourselves *manicurists*," laughs Sheldon, "because it seems that so much of our effort revolves around keeping Bermuda from creeping into flower beds or growing ragged around tree wells and fence lines, as well as keeping our ivy ground cover from encroaching on sidewalks and driveways and climbing up the sides of buildings. I don't know how we could keep up with it without the use of Embark to keep everything in its place.

The standard program for using Embark on irrigated fine turf

If Embark is a tool with virtually endless applications in landscaping, the standard Embark/Ferromec AC/Trimec® Herbicide program for fine turf is surely becoming the most significant development in recent years for reducing mowing costs, while at the same time brightening up the color of turf and strengthening its root system.

Ferromec AC, because of its patented

nitrogen-iron bonding process, works within 48 hours to fix the color. The Embark kicks in later with its task of suppressing the growth rate of the turf by redirecting the energy from seedhead development and stem elongation to root development.

The Embark/Ferromec AC treatment costs about \$42.00 per acre for the chemical and, since it is applied with a regular herbicide treatment of Trimec, it gets a free ride as far as cost of application is concerned.

The program will save two to four mowings during a seven- to eight-week period and, since the cost of mowing is known to be at least \$45.00 per acre, the savings can be as much as \$135 per acre per treatment.

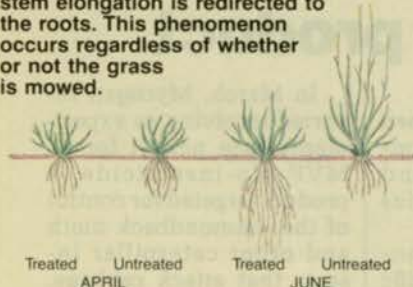
Shouldn't you try Embark?

The evidence is clear that Embark is changing the economics of turf management. As with any PGR, application rates and timing, as well as the condition of the turf and weather, are vital to successful use. To learn more about Embark PGR call our Sales Service Group. Ask for a free copy of the Embark PGR Professional Vegetation Management Applicator's Guide.

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Why Embark-treated grass develops deeper roots:

Research shows that when grass is treated with Embark, the energy that would naturally produce seedheads and stem elongation is redirected to the roots. This phenomenon occurs regardless of whether or not the grass is mowed.



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PRODUCTS

Toro unveils unique new greens aeration equipment

ORLANDO, Fla. — The Toro Co. introduced a revolutionary aerator that uses high velocity water to aerate putting surfaces.

The HydroJect 3000 "has the potential to cause significant change in the way cultural aeration practices are performed by superintendents today," says Mike Hoffman, director of commercial marketing. The aerator delivers water at 5000 psi to penetrate deeper into the soil than conventional hollow tine aerators with less injury to the plant and root, without disturbing the playing surface.

"The key is that play does not have to be interrupted," adds Hoffman. "In the past, aeration was generally limited to spring and fall application...because the HydroJect 3000 does not disturb the surface, you no longer have the problem of mixing golfers with aeration. Now both can occur on the same day."

The HydroJect is capable of reaching depths of four to eight inches with a single shot of water and depths of beyond 20 inches if multiple shots are used. The aerator uses about 150 gallons of water to aerate a 7,000 sq. ft. green. It has an aeration width of 33 inches, with 11 nozzles spaced every three inches. It is powered by an Onan four-cycle, air-cooled, 24-hp engine capable of four hours of operation without refueling. □



The Toro Company's new HydroJect 3000 (seen here) "has the potential to cause significant change in the way cultural aeration practices are performed by superintendents today."

RESEARCH

Company buys bio product

SAN DIEGO, Calif. — Mycogen Corp. recently acquired the patent rights from Michigan State University for development of a biological control product for *Poa annua* (annual bluegrass).

The bacteria is called *Xanthomonas campestris*. Paul Zorner, director of bioherbicide research, says, however, that the pathogen has not yet been identified.

"We have all of our permits submitted to the federal government and to each state where we want to release the organism," says Zorner. The company plans a 10-state/13-site

field testing program.

Current testing has been conducted in the company's San Diego and Ruston, La. laboratories and greenhouses.

Zorner says the xanthomonas is "very specific to annual bluegrass. Very few other species of plants are susceptible to this particular disease. That's the idea of bio weed control; it's very, very specific."

Zorner says that if all goes well, Mycogen would consider obtaining an experimental use permit next year, which would allow it to treat several acres of poa-infested turf.

In March, Mycogen reported receiving an experimental use permit for its MVP bio-insecticide, a product targeted for control of the diamondback moth and other caterpillar insects that attack cabbage, broccoli, lettuce and a range of other crops.

Based in San Diego, Mycogen also markets M-One insecticide, a *Bacillus thuringiensis* product for control of Colorado potato beetle larvae.

In January 1990 Mycogen purchased the Commercial and Agricultural Products Divisions of Safer, Inc. for \$2.25 million. □