

# “I SWITCHED TO RAIN BIRD... Because Life's Too Short!”



“I had tremendous problems with my other system. Now, MAXI®-ET is as close to having my own custom control system as there is. It didn't take long to see that the satellite is far superior to the other system. And the central unit is light years ahead of it, too.

“And, there's a big difference in flexibility. MAXI-ET doesn't tie you down to a closed set of parameters. MAXI-ET can solve many problems in irrigation by letting the superintendent use all the innovative tools available to him and letting him make the decisions.

“MAXI-ET is dependable. It works. Repair and maintenance is as much as 3 to 4 times lower per year.

“After installing the MAXI-ET system, we also changed all 27 greens, 5 tees, and 2 fairways to Rain Bird's 51DR rotors and they're here to stay! I'd say we'll save \$3,000 to \$4,000 in repair and labor this year by switching to the DR rotor.

“I highly recommend the Rain Bird system to anyone, anywhere!”

*Gregory W. Graham*

Gregory W. Graham, Golf Course Superintendent  
The Tucson National Resort and Spa, Tucson, Arizona



## Make Rain Bird your first choice.

See for yourself how this complete irrigation and environmental management system with a state-of-the-art, on-site weather station will save you time, energy, money *and* headaches. Remember, life's too short.

**Ask your distributor about convenient Rain Bird financing.**

**RAIN BIRD**®

Rain Bird Sales, Inc., Golf Division  
145 North Grand Avenue, Glendora, CA 91740  
(213) 963-9311

Circle 104 on Postage Free Card

## HEAT, LACK OF TIME CAUSE STRUGGLE AT NEW SOLDIER FIELD

The Kentucky bluegrass sod at Soldier Field looked as healthy as grass can look when the Chicago Bears walked onto the field for their exhibition game with the Miami Dolphins early last month. It was a feat for the sod just to have survived the relentless heat since its installation just seven weeks before. But the cleats of the players quickly found the turf's weakness as the whistles blew and the game began.

The turf tore so badly that the National Football League stepped in to recommend ways to salvage the field for the remainder of the season. The Dolphins were especially concerned since they were to play their season opener against the Bears on the same field five weeks later. In a series of emergency meetings, the NFL, Chicago Park District, Turfgrass Services, Inc., and Huber Ranch Sod Nursery worked out a "temporary solution."

The problem with the turf was linked to many things, starting with the intense heat and the extremely short period of time the sod had to root. The same sod and root zone (PAT) had passed the test two years before at Findlay High School Stadium in Findley, OH, explained Laurel Meade of Turfgrass Services. "We had every reason to believe it would do its job again in Chicago."

But the fact remained that the sod did not root sufficiently to withstand the abuse

of football. To give the sod more time, the Park District and the Bears discussed moving the two remaining exhibition games to either Memorial Stadium at the University of Illinois in Champaign or Camp Randall Stadium at University of Wisconsin in Madison. Such a move would have had created severe complications for ticket holders, concessionaires, the teams and the park district.

George Toma, turf consultant to the NFL, with the assistance of Dr. James Watson, vice president and agronomist for The Toro Company, put his reputation on the line once more by recommending the mid-section of the field be resodded with thick-cut sod immediately. "The situation reminded me of Candlestick Park in San Francisco in 1981," says Toma. "The sod just wasn't rooting fast enough."

Huber cut sod from the same field as before, but this time it was 2½ inches thick in 18 by 36 inch sections. "Huber really went the extra mile to help," Toma said. "Each piece of sod weighed more than 90 pounds. We started laying sod on Thursday and finished noon on Saturday." An 80-foot-wide section of the center of the field from goal post to goal post was installed. Then it was topped with a mixture of sand and calcined clay, fertilized and treated with Bovamura and Ferromec.

The sidelines were heavily aerified with

solid tines ¾ inch deep and overseeded with perennial ryegrass. "We had to break through the silt interface between the sod and the sand to let the roots through," Toma stated.

The park district crew worked two 12-hour shifts for more than five days to complete the repairs. "The center of the field will have to be irrigated separately from the sidelines since the sod is thicker there," Toma added. "I still believe that natural turf is the right turf for professional sports."

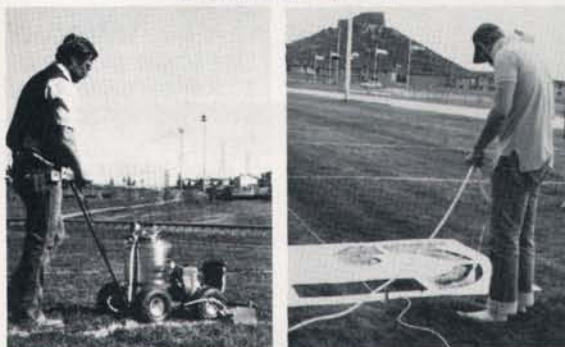
## NCAA CONSIDERS TWO NEW BOWL GAMES

While the National Collegiate Athletic Association (NCAA) does not appear in favor of a "College Championship," it has given conditional approval to two more college bowl games for 1989.

Memorial Stadium in Baltimore, MD, will serve as the site of the Crab Bowl, currently scheduled for Dec. 6, 1989. The event will move to the Twin Harbor Stadium complex when it is completed. Crab Bowl coordinators are seeking sponsors to assure the necessary \$1.5 million line of credit before NCAA or the stadium will ink contracts.

The other bowl game approved, tentatively called the Cactus Bowl, will give Tuc-

## IS YOUR FIELD A "WINNER"?



NEWSTRIPE can supply the products to make your sports surfaces the most attractive in your conference. Our line markers and stencils are being used by major universities, school districts and soccer clubs for field maintenance.

### Check these possibilities:

- Football
- Basketball
- Soccer
- Playgrounds
- LaCrosse
- Shuffleboard
- Baseball

**NEWSTRIPE** Inc.

P.O. Box 440881  
Aurora, CO 80044

CALL  
1-800-624-6706  
For Details

## Measuring Wheel Deal

**IMLER® Measuring Wheel records up to 99,999 ft. without resetting.**

- ★ Solid rubber wheel— 2 ft. circumference, 10¼" diameter; will not backtrack.
- ★ Five digit counter with reset button, measures in one ft. increments.
- ★ 32" welded steel handle.

**Order by stock number. No. 103405A \$79.55**

Price includes shipping and handling charges.

### Central Ordering

**1-800-241-6401** Outside Georgia  
**1-800-241-3136** In Georgia  
**(404) 455-0907** In Atlanta



Prices subject to change without notice.



**Ben Meadows Company**  
3589 Broad Street Atlanta (Chamblee), Georgia 30366  
Telephone 404 455-0907 Cable Address 'Benco' **5220B**

# The Miracle at Jack Murphy Stadium

*Or how George Toma and Ph.D.® Overseeding Blend  
created Super Bowl quality turf in 25 days & 25 nights*



**BEFORE** • January 2, 1988



**AFTER** • January 27, 1988

# The Miracle at Jack Mur



## January 2, 1988



The native turf of Santa Ana hybrid Bermuda grass in Jack Murphy stadium, San Diego, California, is seen here after a hard season of use. As the first step in preparing the field for Super Bowl XXII, George Toma and his famed "Sod Squad" first brushed and vacuumed the holiday bowl game designs at midfield and in the end zone, and shatter-core aerified the field.

## January 6, 1988



The "Sod Squad" sowed Ph.D.® turf-type ryegrass overseeding blend on the bare soil and areas in which there was 50-80 percent remaining coverage of dormant Bermuda grass. Seeding rate was 30 pounds per 1,000 square feet. Ph.D.® has been used in seven Super Bowl games with superlative results. Because it produces superior turf in the shortest possible time, Ph.D.® ryegrass blend is always specified by Toma before work begins.



## January 15, 1988

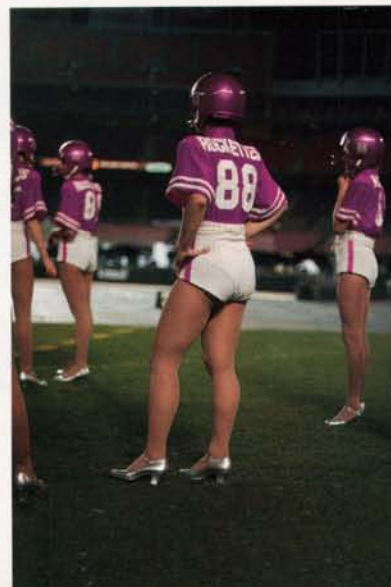


Six days after the Ph.D.® was sown, the thick, dark green ryegrass turf was approximately 1½ inches high and ready for its first mowing. It is being cut here for the *third* time on January 15 with John Deere equipment. While ryegrass will germinate in a matter of 7-10 days under ideal conditions, Toma accelerates the process by pre-germinating the seed.

## January 29, 1988



It's the Friday before the Sunday game. For some 12 hours more than 1,500 participants in the show scheduled for half-time on Sunday practice their routines on the new turf. Not all wore high heels, but the pounding feet of marching bands, drill teams and the heavy stages on wheels used in the half time show means the Super Bowl turf must be able to take plenty of punishment and come right back.



# hy Stadium



## January 31, 1988



It's Super Bowl Sunday! Under the direction of George Toma, the Ph.D.® ryegrass overseeding blend is deep green, deep-rooted and ready for the tearing cleats of the players as well as the pounding it will be given by the half-time performers. It's a demanding role for any grass, but this all-ryegrass mixture has proven equal to the task and is picture-perfect for the television cameras on game day.



Turf wizard George Toma not only prepares the playing surface for all Super Bowl games, he's the groundskeeper for the Kansas City Royals baseball club and the Kansas City Chiefs professional football team.

Most knowledgeable turf experts acknowledge that he is the best groundskeeper in the business.



Toma says that Ph.D.® turf-type ryegrass overseeding blend with its ability to quickly germinate and develop a strong root system, is a major factor in his success in turf preparation.

# Ph.D.®—the Super Bowl Grass.

A history of success in Super Bowls  
XIV, XVII, XVIII, XIX, XX, XXI and XXII.



# Ph.D.<sup>®</sup>

is a product of



## INTERNATIONAL SEEDS, INC.

P.O. Box 168 • 820 First Street • Halsey, Oregon USA 97348 • Telephone: (503) 369-2251, Toll free: 1-800-445-2251

son, AZ, its own bowl game to compete with the Fiesta Bowl in Phoenix. Arizona Stadium at the University of Arizona will be the site of the event which already has sponsors lined up. No date has been set because the Copper State Sports Foundation wants to wait until after this winter to see if any bowl games are dropped. A contest is currently underway to name the game.

## GCSAA CONFERENCE OFFERS 34 SEMINARS

The Golf Course Superintendents Association of America's (GCSAA) 60th International Golf Course Conference and Trade Show, to be held at the Anaheim Convention Center in Anaheim, CA, February 6-13, 1989, will feature 34 one- and two-day educational seminars.

The two day seminars will cover topics such as Basic Principles of Turfgrass Management; Golf Course Design Principles; Golf Course Restoration, Renovation and Construction Projects; Introduction To Soil Science; Plant Nutrition and Fertilizers; and a two-part series on Irrigation Equipment and Technology. Other two-day seminars include Basic Turfgrass Botany and Physiology; Insects on Turf, Trees, and Shrubs—Principles of Control; Disease Identification and Control; and Environmental Considerations in Golf Course Management.

One-day seminars will cover areas such as Financial Management; Calculations and Practical Mathematics for Use in Turfgrass Management; Biology of Turfgrass Soils; and an Introduction to Computers in Golf Course Management. Dr. Alex Shigo will present a half-day seminar on Tree Biology in Practice.

Special sessions have been arranged on motivation and coping with stress on the job. The two speakers are motivator Roger Dawson, on the topic, "You Can Get Anything You Want, But You Have To Do More Than Ask" and Harvey Selverston, on "Coping Skills with the Wizard of Stress." The trade show runs from Feb. 11-13 and will feature the largest display of commercial turf products and services in the U.S. For further information or registration materials write to: GCSAA, 1617 St. Andrews Drive, Lawrence, KS 66046, or call (800) GSA-SUPT.

## PROGRAM RELEASED FOR PGMS CONFERENCE

The Professional Grounds Management Society (PGMS) has released the tentative schedule for the 3rd annual Green Team Conference and Trade Show to be held on November 18-20, 1988 at the Buena Vista Palace at Lake Buena Vista, FL.

The keynote speaker of the opening session will be Kathy Moss Warner, chief horticulturist of Walt Disney World. She will rev-

veal many of the unique maintenance requirements of the theme park. Other speakers include Peter Sclocum, owner of Sclocum Water Gardens in Winter Haven, FL, who will present "Water Gardening" and Kurt E. Bluemel, owner of Bluemel landscaping of Baltimore, MD, who will cover "Landscaping with Ornamental Grasses."

Opening day sessions will also cover irrigation, interlocking pavers, the PGMS certification program, substance abuse, decking and patios, the value of landscaping from the clients' point of view, and new varieties of annual color.

The second day of the conference will feature Dr. Richard Henley, professor of hor-

ticulture at the University of Florida, speaking on "New Plant Varieties for Interiors"; Dr. Jeff Norcini, a specialist in plant growth regulators and herbicides for woody ornamentals, covering "Growth Retardants for Woody Plant Materials" and James England, the president of Paveman, on "Asphalt Maintenance."

Rounding out the list of speakers are Dr. Bert McCarthy from the University of Florida on "Turf Renovation and Soil Improvement" and Dr. Henry Indyk of Rutgers University who will speak on "Natural vs Artificial Turf."

For registration information contact: PGMS, 12 Galloway Ave., Suite 1E, Cockeysville, MD 21030, (301) 667-1833.

## YOU COULD WIN!

Why not enter your baseball field in the **Beam Clay**® Baseball Diamond of the Year Awards contest? No entry fee is required. You could be honored at the upcoming Sports Turf Managers Association Awards Banquet.

The Awards are sponsored by **Beam Clay**,® the **Sports Turf Managers Association**, and **sportsTURF** magazine in recognition of excellence and professionalism in maintaining outstanding, safe, professional quality baseball diamonds. Entries will be judged in three categories: professional diamonds; college diamonds; and school, municipal or park diamonds.

### Send the information below to enter:

1. Age of baseball diamond (year of installation).
2. Geographic location (city and state).
3. Description of maintenance program.
4. Operating budget for baseball diamond.
5. Irrigation: None  Manual  Automatic
6. Total number of maintenance staff for field.
7. Does baseball field have lighting for night games?
8. Number of events on baseball diamond per year.
9. Types and number of events on diamond other than baseball?
10. How many months during the year is the field used?
11. Why you think this field is one of the best?
12. Include an assortment of color slides or prints of the diamond.

**Deadline for entries:** Entries must be postmarked no later than November 1, 1988. Selection of winners will be made by the Awards Committee of the **Sports Turf Managers Association**.

Mail entries to:  
**Beam Clay Award**  
**sportsTURF** magazine  
 P.O. Box 8420  
 Van Nuys, CA 91409



THE PROFESSIONAL'S CHOICE  
SINCE 1932

# Overseeding Without Waste



Large area overseeder assures better soil contact and higher germination.

*With pressure on supplies of perennial ryegrass, overseeding techniques will need to be more efficient than ever before.*

Last month, as huge combines were busy harvesting turf seed from vast fields in Oregon, Washington and Idaho, it appeared as if the ryegrass crop would finally meet demand. The skyrocketing popularity of perennial ryegrass for overseeding golf courses, sports fields and resorts in the previous five years had virtually wiped out reserves and caused shortages in some parts of the country. Seed producers were looking for their first carryover in years.

While nature was kind to the seed growers in Oregon this year, it was brutal to the managers of sports turf in more than half the country blasting turf stands with drought and high temperatures. Water shortages forced many sports facilities to shut down irrigation systems. Turf managers could only watch as their Kentucky bluegrass, fescue or ryegrass went dormant or struggled to survive against the constant summer pressure of diseases, weeds, and insects.

With just a matter of weeks before the start of fall football and soccer seasons, cool-season turf managers need the fastest-establishing turfgrass available to restore their fields to respectability. They can't wait to see how much of the dormant turf will rebound in time. They have to turn to perennial ryegrass and overseed or reseed immediately.

At the same time, the tourist season for southern resorts and golf courses is just around the corner. After a summer of brown turf up North, tourists will be craving dark green fairways, tees and greens. To meet this need, superintendents will be overseeding their bermudagrass with ryegrass beginning this month.

Suddenly, meeting the demand for ryegrass this fall is a question in the minds of seed growers and distributors across the nation. "We doubled our perennial ryegrass production last year," says John DeMato with Lofts Seed, "anticipating sizeable growth. But who could have predicted a drought like we had this summer?" DeMato believes the drought will also put pressure on supplies of Kentucky bluegrass and turf-type tall fescues.

"All types of turfgrass seed in general are in short supply," reveals Craig Edminster, director of research for International Seed. "We've been sold out for a year." To him sold out means there is no carryover by the producer. "Distributors have the seed they ordered, it's just that when they sell that it will be hard for them to get more." In other words, the pipeline is full but the reservoir is dry.

The drought has been hard on sod producers too according to Edminster. Instant sports turf may be hard to locate in some areas of the country.

With such pressure on supplies, overseeding techniques will need to be more efficient than ever before. Not only does this impact seeding methods, it also requires greater uniformity and efficiency in irrigation systems, use of preventative fungicides for *Pythium*, and careful maintenance after

*continued on page 30*





**Citation II • Birdie II • Manhattan II  
Perennial Ryegrass Blend**

*The Rose Bowl at Pasadena, CA, January 1, 1988*

# Ferry-Morse Gold Tag Brand Covers the 1988 Rose Bowl

**New generation ryegrasses provide perfect playing surface on return to the Collegiate Football Classic.**

PASADENA, CA – It's a thrill to earn your way into the Rose Bowl, the oldest and most prestigious collegiate football classic; but to return again and again is a mark of a tough competitor.

The Rose Bowl turf management team needed a fast-germinating, uniform growing and appearing ryegrass blend to overseed the dormant bermudagrass base. Because of its superior performance in the 1986 Rose Bowl, the combination of improved varieties Citation II, Birdie II and Manhattan II produced by Turf-Seed, Inc. were re-called to duty. Seeding

began on November 16, 1987 and was 'perfect' for the kickoff on New Year's Day.

The dark green color and density provided a base that set off the colorful graphics in the Rose Bowl tradition. And after hard use, the playing surface looked great . . . even under television scrutiny. Ferry-Morse gave it their best . . . Gold Tag Blend, and the rest is history.

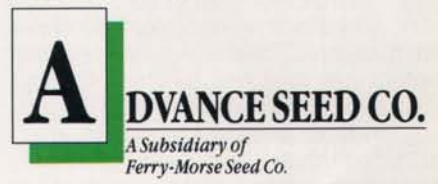
If this blend can look and perform this well under the most critical of conditions, think of what it will do for your athletic field!

Citation II, Birdie II and Manhattan II are products of



PO Box 250, Hubbard, OR 97032  
503/981-9571 TWX 510 590 0957  
1-800-247-6910  
FAX 503 981-5626

Gold Tag Brand is distributed by



1150 N. Red Gum Ave., Suite A  
Anaheim, CA 92806  
714/666-8600 / In CA, 1-800-572-7333  
Fulton, Kentucky  
502/472-3400 1-800-626-3392

## Overseeding

continued from page 28

seeding. Turf managers may also have to accept substitutions for some ryegrass cultivars in both mixes and blends. Fortunately, the number of improved cultivars has risen in the past five years providing a wider selection of quality seed.

The two most critical considerations for any type of seeding are contact between the seed and the soil and water. Heavy thatch, dense bermudagrass or dead matted foliage of drought-stricken turf can prevent seed from coming in contact with the

Commercial seeders are basically doing the work of three types of equipment at one time. Verticutters and aerifiers can be used to remove thatch and open up the soil. To avoid seed from lodging solely in aerifier holes or verticut grooves, this work should be performed two to four weeks in advance. If there is no time to wait, make the aerification pattern as tight as possible with repeated passes. Seed can then be broadcast over the area, followed by dragging and/or rolling.

Disturbing the soil has one main disadvantage, it can bring weed seed to the sur-

voids. A drop spreader is helpful in clearly defining the edges of fields or basepaths. Care should be taken not to track seed onto adjacent areas either on shoes or equipment.

Light topdressing is another option after seeding to improve germination. This is most important in areas where traffic is greatest, such as tees, soccer goal mouths, the center of football fields, bench areas and entrances. Soil cores removed by aerifiers are a good source of topdressing available simply by breaking them up and dragging them over the seeded turf.

Some turf managers under extreme time constraints pregerminate seed to save a few days to a week. In this process seed is soaked in drums for up to seven days until it begins to germinate, evidenced when the radicle grows out of the seed. The tender seedlings are mixed with a carrier such as calcined clay, ground corn cobs or Milorganite, and applied to the turf with a spreader.

Tests at California Polytechnic Institute in Pomona, CA, have shown that the water used to soak the seed should be changed every few hours and aerified with bubblers to obtain the best results. Water temperature should be roughly 70 degrees F. Another option is to mix seed with an organic carrier first and keep the pile of the mixture moist.

If you've never tried pregermination before, experiment with it first for divot repair mixes. When you've mastered that, then advance to larger areas.

Seed rates for overseeding sports turf vary widely, from five pounds per 1,000 square feet to nearly 50. Turf specialists at North Carolina State University recommend a rate between 5-15 pounds for fairways, 10-20 pounds for collars and tees, 25-40 pounds for greens, 10-15 pounds for soccer and football fields, 10-20 pounds for baseball infields and football bench areas, and 5-15 pounds for baseball outfields and sidelines.

Dr. Douglas Brede, director of research for Jacklin Seed, warns that seed size can also vary between cultivars. This affects the seed count for each pound of seed — larger seed having a smaller count per pound. Since each seed is a potential plant and the seed count can vary by as much as 20 percent, it's something to consider.

An option available the past two years is coated seed. While this seed costs about twice as much as uncoated seed, the fungicide, fertilizer, and moisture retention provided by the coating is said to greatly improve germination and establishment. Seed rates can thus be cut nearly in half.

As everyone knows, seed needs to be moist to germinate. After sowing, frequent light irrigation is critical for rapid germination and establishment. This period of excessive wetness is an invitation to diseases, especially *Pythium*. It's important to get the seed up and growing as rapidly as possible so irrigation can be cut back to reduce the vulnerability of ryegrass to disease.

If *Pythium* has been a problem in the area



Broower seeder used for large areas with prepared soil.

soil. For this reason, scalping and verticutting are common before overseeding.

Steve Cockerham, head of the sports turf test plots at the University of California at Riverside, cautions superintendents not to set the blades of their mowers too low. "If you remove too much of the bermudagrass plant in the fall, you may be robbing it of carbohydrate reserves it needs during winter dormancy. This may be part of the reason so many golf courses lost bermuda last year to winterkill."

Nature has provided each seed with a limited amount of energy to germinate and grow. When this supply is exhausted, nutrients in the soil must be there to take over. Nutrient availability in thatch is obviously much poorer than in soil.

Soil provides a reservoir for both water and nutrients. That is why commercial seeders are designed to break through thatch and disrupt soil before seed is sown. Typically they have blades or discs which cut through thatch and open up the soil. Seed is then dropped into the disturbed soil before it is rolled. These measures place the seed in direct contact with the soil and the percentage of seed germination is greater than for simple broadcasting. Since germination is greater, less seed can be used to achieve coverage.

face where it can germinate. If the soil is intensively worked, then an application of the preemergent herbicide siduron (Tupersan) can be made without disrupting the germination of the turf seed. Late summer and fall are peak times for germination of *Poa annua* and winter annuals. Fortunately, ryegrass competes very well against *Poa annua*. This is one advantage it has over fine fescues, rough bluegrass and creeping bentgrass for overseeding.

Where annual bluegrass is a definite concern, fenarimol (Rubigan 50 WP) can be applied no less than two weeks prior to overseeding. A third option for control of annual bluegrass in bermudagrass greens overseeded with perennial ryegrass is ethofumesate (Prograss). This can be applied only to perennial ryegrass and only 30 to 45 days AFTER overseeding. Ethofumesate will harm rough bluegrass or fine fescues. Also, it should not be applied within 60 days of expected green-up in the spring.

Ryegrass is not a spreading turfgrass. If seed does not fall evenly over the area strips or patches without ryegrass will result. To avoid this situation, turf specialists advise that turf be overseeded in two directions at half rate. If a row seeder or drop spreader is used, going over the area a third time with a rotary spreader can help fill in these