

CORE MASTER 12 The ULTIMATE AERATOR



THE CORE COLLECTOR SYSTEM lets one man do the work of four while keeping greens clean and in play!

New Core Collector System

- Removes all Cores during Aeration process.
- Automatically dumps cores when CoreMaster raises.
- Auto-Reset next aeration pass.
- Leaves no tracking.
- Accommodates severe ground undulations.
- Labor Saving-One man does the tasks of four. No need for other expensive equipment to push or take cores off the turf.

- Greens stay in play.
- Provides open hole quick top-dressing.

Connects to all Tractors

Multiple or 540 PTO, Gear Type or Hydro-stat models. Aeration remains vertical with variable pattern feature. No need to wait or look at other aerators. Get the best, most versatile, strongest and efficient aerator on the market today. Use your existing tractor today to get the best performance and save \$\$.

Today-20% Faster

Hi-tech engineering provides "Turbo-Charged" aeration, increased speed and eliminates elongated holes.

New Undulation Suspension

CoreMaster glides across all surfaces.

Quadra-Tines & Quadra-Spikes

The most innovative aeration process available. Up to 144 x 1/4" holes per square foot. Our full range of tine sizes include 1/4", 1/2" and 5/8" in **hollow** or **solid** format. The choice is yours.

Connects to ALL TRACTORS!



GREENCARE[®]

INTERNATIONAL

For more information and your nearest distributor, contact the pros at GREENCARE, they'll be happy to share the news.

(714) 842-6003

FAX: (714) 842-1707

17851 GEORGETOWN LANE, HUNTINGTON BEACH, CA 92647

Circle 113 on Postage Free Card
Come see us at the G.C.S.A.A. Conference, booth no. 2559

SCOTTS REORGANIZES, ESTABLISHES SEPARATE PROFESSIONAL DIVISION

In a move to structure O.M. Scott & Sons for more rapid growth, the company has reorganized to establish a separate division for professional turf products. Formerly, both retail and professional products shared sales and marketing departments. Professional products will now be marketed by a separate sales and marketing staff, said Scotts president and chief executive officer Tadd C. Sietz.

Richard Stahl, Scotts vice president of sales since 1983, has been named general manager of the Professional Division. "The purpose behind the redesign now is to be prepared for the growth we are looking for when the opportunity arises," said Stahl. A Professional Operating Committee made up of Stahl, director of sales Jerry O'Donnell, director of administration Ray Fleming, finance manager Mike Cousino and senior marketing manager Jim Fetter, will be involved in planning and decision-making for the new division. "We are committed to substantial growth in professional markets where we have barely scratched the surface," said Stahl.

The retail division will be structured similar to the professional division, with sales, marketing, administration and financial personnel reporting to a general manager. The



Richard Stahl

company is conducting a national search for a general manager for the retail division.

In addition to the two new divisions, a new position has been created specifically, says Seitz, to "analyze Scotts business, then develop and implement strategies to capitalize on new market and business opportunities." Bernard Ford, vice president of marketing, will occupy this position called director of planning and business development.

Scotts, one of the largest producers of

lawn and garden products in the U.S., has operated from its Marysville, OH, location for more than 100 years. A management group bought the company from ITT Corporation in 1986 in a leveraged buyout.

LINDSTROM ESTABLISHES SPORTS LIGHTING COMPANY

Chuck Lindstrom and Associates, marketers of Diamond Dry drying agent, recently created a company specializing in night illumination of sports fields. "The sports lighting business is a sophisticated niche of the outdoor lighting business," claims Lindstrom. "Most light manufacturers do not have a sales force trained to meet the needs of the sports field manager."

The new company custom-designs lighting systems to provide the required amount of lighting for a stadium or field, mounts General Electric lamps on the necessary cross-arms and installs the light sets on poles up to 60 feet in height. "The important point is to achieve a uniform, specified amount of light across the playing field," Lindstrom explains. "Professional baseball standards are 100 footcandles of light throughout the infield and 75 footcandles in the outfield. More and more universities want to meet these standards for their stadiums."

VALCON®

Brilliant Innovations

*The leading light in stainless steel seated PVC valves.
A beacon in hybrid controller technology.
The torch bearer in computerized irrigation control.
Valcon Innovations.
Brilliant!*

VALCON® Automatic Irrigation Equipment Co.
10837 Central Avenue, South El Monte, CA 91733 • (818) 444-5466 • FAX (818) 444-1112
Florida (305) 295-4711
Texas • Dallas (214) 871-2232 • Houston (713) 529-4026 • San Antonio (512) 299-6747



DON'T GET SOAKED BY RAINED OUT EVENTS

The world's first machine which, through a unique pumping process, can rapidly remove surface water at the rate of 200 gallons per minute.



Problem:

Many millions of dollars are lost every year due to cancelled or delayed sporting events. Every season, playing conditions are unnecessarily bad, and turf is damaged due to soggy or flooded playing surfaces, and very often management is forced to close the facilities.

Solution:

The WATER HOG is a high speed water collecting machine, developed specifically for turf, and can handle anything from a light shower to two inches of flood water. Highly effective for golf courses, stadiums, parks & recreation areas, race tracks, memorial parks, universities, and all other large high traffic areas.

OTHER FEATURES

- Rapid removal of surface water prior to and during tournaments.
- Preparation of greens for cutting in rainy season.
- Firms the turf and lessens potential mower and player damage in wet weather.
- Water removal for the reduction of disease pressure.
- Off green surfaces — water removal from drainage swales, bunkers, cart path edges, primary landing areas, etc.

CAPACITY

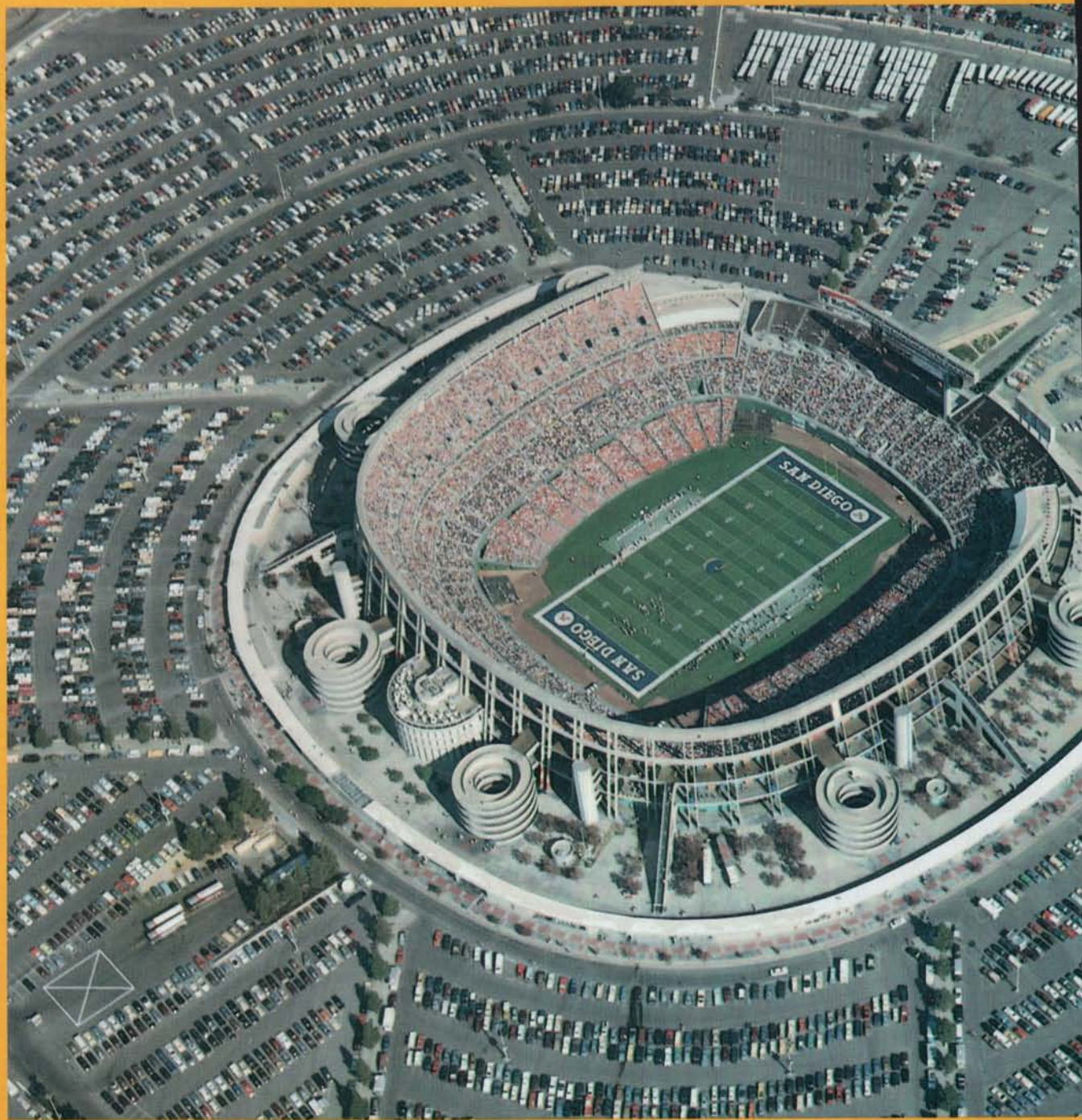
- The only machine in the world which can clear water from grass covered ground at the rate of **12,000 GALLONS PER HOUR** (nearest competitor 800 G.P.H.)

LOW COMPRESSION

- Extremely low compression on the ground drive means that the machine can travel across saturated turf without damage to the playing surface.

WATER HOG

4740 S. Ocean Blvd., Suite 416 • Highland Beach, Florida 33487 • (305) 394-0090



Jack Murphy Stadium

THE ROAD TO SUPER BO



The National Football League placed a tremendous amount of faith and trust in San Diego Jack Murphy Stadium in 1984 when it selected the stadium to be the site of this year's Super Bowl XXII. During the '83 baseball season, some players referred to the field as being "AstroDirt." For the NFL committee to think the stadium field could become one of the top-rated fields in the country by 1988, was a long shot. The "Road to the Super Bowl" for Jack Murphy Stadium is a story that equals any football team's struggle on the gridiron.

Like any city-owned stadium, Jack Murphy Stadium has had its glory days and its embarrassing moments since it was built in 1967. For 21 years, the stadium, home field for the San Diego Chargers, the Padres and the San Diego State Aztecs, has been one of the busiest natural turf facilities in the country. In 1987 alone, the field was the site of 81 baseball games, 18 football games, two concerts and four days of "dirt" events.

The busy season normally ends with the Holiday Bowl on December 31, but this month the stadium could conceivably host a "wild card" game or the division and conference playoffs before the Super Bowl on Jan. 31. The California Interscholastic Federation (CIF) high school football championship, held on a rainy Saturday in December, and unusually cold weather have added to the challenge of getting the field ready for the NFL's major event of the season, the Super Bowl.

Built in a sandy coastal valley, the field started out as one of the best naturally-drained fields in professional and college sports. It was one of the first stadiums in the Sun Belt to install Santa Ana bermudagrass, a hybrid developed by Dr. Vic Youngner of the California Extension Service for its superior low temperature color reten-

tion, wear tolerance, smog tolerance and dark blue-green color. For a long time it was a field that could take about any abuse and bounce back remarkably. To keep the field a players' favorite during the '70s, the Padres frequently consulted Emil Bossard, the dean of baseball groundskeepers.

In 1979, a "100-year flood" inundated the field with fine silt and clay that resulted in problems that took more than four years to resolve. High tide combined with a record-setting downpour sent water over the banks of a nearby canal into the stadium. When the water receded, not only were the stadium's drains filled to the grates, the silt had penetrated the sandy field soil and left a two-inch layer on top. Suddenly there was no drainage. Efforts to remove the silt and to reopen the sandy soil by tilling never brought the field back to its original condition. The field got harder and harder, the roots shallower and shallower and the drainage worse and worse.

The stadium management, trying to avoid the cost of rebuilding the field, called some of the leading stadium groundskeepers for a cure. Efforts to reopen the soil by aerating and sand topdressing could not reach the heart of the problem, the now-plugged soil from two inches to a foot beneath the surface. After four years of disappointment, Fred Conger, the interim stadium manager, decided the field had to be rebuilt and ramrodded a proposal through city government to spend \$400,000 on renovations.

The approval for the improvements came just before the Super Bowl committee met in 1984 to select the site for 1988. David Fleming, superintendent at Singing Hills Country Club in nearby El Cajon, and a drainage engineer worked with Dr. William Davis of the University of California at Da-

continued on page 27

WL XXII



San Diego Jack Murphy Stadium during the 1984 World Series, the first year for the new sand-based field.

George Toma's squad beat the clock at Super Bowl XXI.™



George Toma, Head Groundskeeper for the NFL and Kansas City Chiefs plus all 21 Super Bowls and the AFC-NFC Pro Bowl: "I bring my own Parker Estate Master Sweepers with me."



A pair of Estate Masters makes a clean sweep of halftime cleanup at Super bowl XXI.

Three minutes is all the time George Toma's squad has to clean the field between halves. He won't use anything but Parker Estate Master Sweepers. Why?

"Because," says George, "when there are over 2,000 performers on the field, there's always a lot of debris. The Estate Master is the only sweeper that lets you clean a swath over 8 feet with every pass. That gives me the speed I must have."

"Then, there's the toughness and general quality; I know I can depend on the Estate Master. It's the best equipment of this kind we've used. And, it's versatile. I use it to shade the grass between the lines, to pick up aeration cores before reseeding, to sweep grass clippings and to clean the field after a game."

You can put the same speed, versatility, and reliability to work on your own field. Just see your Parker dealer and ask him about the Parker Estate Master. In fact, ask him about Parker's full line of sweepers and vacuums. Tell him George Toma sent you.



PARKER SWEEPER COMPANY

Box 1728 • Springfield, Ohio 45501-1728 • Phone (513) 323-4901
Circle 135 on Postage Free Card

Super Bowl XXII

continued from page 25

vis, and Conger to draw up plans for a sand-based field. With the plans in hand, a delegation of San Diegoans for Super Bowl XXII and Chargers' owner Alex Spanos convinced the NFL that the city was the best site for the event in 1988. "I think Conger and the plans deserve a lot of the credit for the NFL's decision," says Fleming.

The specifications called for removing the silt-laden top 12 to 14 inches of soil, installing entirely new drainage and irrigation systems, and trucking in thousands of yards of sand. A gate valve was added to prevent any future flood water from entering the stadium through the storm sewers. Both the irrigation and drainage systems were designed to match the configuration of the field for each sport. Drainage pipe was installed in one pattern for football and another pattern for baseball. A similar design was followed for the Rain Bird controllers and Toro heads.

The stadium matched the specifications for the sand as closely as possible. River sand, half in the medium-size range, was substituted for the 60 percent medium-size sand as recommended by the University of California's Davis.

All the work had to be completed in eight weeks starting the end of January 1984. As things turned out, the Santa Ana sod had only three weeks to get established before the first baseball exhibition games. "The Santa Ana sod was actually dormant when it was installed," Fleming remembers. "The field went from straw yellow to dark green in a matter of days as the bermudagrass broke dormancy." Whether the field played a role in the Padres making it to the World Series that year is uncertain, but it had to be part of the reason for the team's success.

A trump card in the quest for Super Bowl XXII for San Diego may have been the fact that Bill Wilson, former stadium manager of the Rose Bowl in Pasadena, CA, had agreed to come out of retirement to take over as general manager of Jack Murphy Stadium. Wilson had worked with the NFL during a previous Super Bowl at the Rose Bowl. He had also been a member of the Los Angeles Olympic Committee in 1984. The veteran policeman and stadium manager had a reputation as someone who could get the job done. "I was going stir crazy after a few months of retirement," he recalls.

Wilson took over during the World Series. With a new field under his command, his first order of business was to hire a grounds manager who knew what the players wanted in a field. "I wanted someone who knew more than how to maintain turf," he recalls. "He had to know what the players and coaches look for in a field, especially for baseball."

A number of major stadium grounds managers flew to San Diego that year to talk with Wilson. The person who got the job had maintained a relationship with San Diego Stadium and the Padres that his grandfather had established years before. Brian Bossard is Emil Bossard's grandson.

His experience with professional sports started when he was 12 at Cleveland Municipal Stadium in Cleveland, OH. He worked beside his grandfather, his father Harold and his uncle Marshall in the lakefront stadium for nearly 20 years providing the Indians with one of the best fields in the American League. His uncle Gene and his cousin Roger had built a similar tradition with the Chicago White Sox at Cominsky Park.

The 1985 baseball season started off with a bang. The winter was colder than normal. The "dirt events" in February gave Wilson and Bossard just three weeks to get ready for the Padres' exhibition games. Although they had hoped to give the bermudagrass time to recover and protected it with ply-

wood sandwiched between two layers of plastic, they realized the only way to preserve the quality they had the year before was to resod. Wilson had included the cost of resodding the field in the contracts with the motocross and off-road vehicle show producers. "We wanted to make sure none of the clay brought in for the events reached the field," Wilson explains.

One of the first things Bossard noticed were patches of turf that were less vigorous than others. He had seen similar symptoms before and called in a turf pathologist. His hunch was correct, nematodes had invaded the sand root zone. After thinking the situation over, keeping in mind the previ-

continued on page 28

GROUNDHOG'S FINEST...

TRENCHER

PROFESSIONALLY DESIGNED WITH THE USER IN MIND



Portable Trencher with Automatic Clutch quickly digs 3-1/2" trench to depth of 12". Professional type Model T-4 is powerful, lightweight and equipped with pneumatic flotation tires, and 5 HP engine.

Designed for sprinkler installation it is also suited for underground cables and gas lines. It is built with the professional in mind, but because of its simplicity of controls, ease of operation and compact size it is well suited to the homeowner as well. The Ground Hog Trencher features oversize pneumatic tires, heavy duty steel fabrication, ball and timken bearings through-out, easily replaced hardfaced blades and a screw conveyor to deposit cuttings at the side of the trench.

Carbide Tipped Blades Also Available



GROUND HOG INC.

For further information write or call . . .

25010 E. 5th Street,
P.O. Box 290, San Bernardino, CA 92410
(714) 888-2818 or 1-(800) 922-4680

ONE FILTER THAT LETS YOU BREATHE AS EASY AS OURS



**OLSON'S STAINLESS STEEL
WATER FILTER LASTS
LONGER THAN CAST IRON
OR PLASTIC FILTERS, YET
IS COMPETITIVELY PRICED.**

You can breathe easy with Olson Filtomat knowing you have an extremely efficient water filter system that will exceed your demands for performance.

The automatic, self-cleaning Filtomat takes out dirt, silt, sand, debris and organic material from virtually any water source. It cleans water in a two-stage, single-pass operation, and back-flushes on demand using only 5 gallons of water. Whether you need a filter with a capacity of 5 gallons to 1,000 gallons per minute, Olson can accommodate you.

For confidence in cleaner water, the Olson Filtomat will keep your breathing easy. For information or dealer location, please write or call: Olson Irrigation Systems, 10910 Wheatlands Avenue, Santee, CA 92071.

619/562-3100

Telex: 697819

FAX: 619/562-2724.



OLSON FILTOMAT



Circle 133 on Postage Free Card

Super Bowl XXII

continued from page 27

ous problems with infiltration, he decided to fumigate the field prior to sodding every spring. The fumigant was injected into the field with a chisel fumigator that cut rows of grooves into soil a foot deep. Not only did the shanks of the fumigator break through any layers beneath the surface, they delivered methyl bromide deep into the field. "The infiltration rate of the field was five and one-half-inches per hour when the field was new," states Bossard. "It drops during the year as the field is used. After we fumigate each spring, it jumps back up to more than four inches per hour."

Bossard has soil samples tested monthly to keep a close watch on nematodes and soil fertility levels. "We do everything we can to discourage a reinfestation of nematodes," says Bossard. At the first sign of nematodes, he cuts back on aeration. "We base nearly everything we do on the nematode counts." Rather than pulling cores and spreading them over the field with a drag every time he aerates, Bossard switches to solid tines to "shatter" the soil when it starts to get hard in certain parts of the field.

One of the toughest parts of the field to control compaction in is the portion of the outfield where portable stands are brought in for football and out for baseball. The 29 seating units, which look like huge wheelbarrows, are rolled onto the field with special towmotors and pieced together like a puzzle. Some of the sections weigh as much as 400,000 pounds. It takes six to eight hours to put the seats in or take them out. Bossard keeps the area dry before the stands are moved and quickly repairs any indentations in the outfield before baseball games.

Approximately two pounds of nitrogen per 1,000 square feet are applied to the field every month during the growing season in both granular and liquid forms. The field also gets spoon-fed weekly with liquid nutrients,

chelated iron and vitamin B-1 applied by a boom sprayer. Wetting agents are applied every other week through the irrigation system. Bossard keeps a close eye on the cation exchange capacity (CEC) of the field soil as well, adding organic products such as GroPower when the level drops. In the fall, he might apply straight potassium to firm up the overseeded ryegrass.

While Bossard keeps on top of soil conditions that affect the turf, he keeps a closer eye on the way the turf affects the players. "When I first came, grounders through the infield were too fast, bounced too low and had a lot of topspin," he points out. "Infielders want the ball to bounce between 15 and 23 inches high no matter how hard the ball is hit." Bossard has been slowly changing the infield grade to make it flatter, the idea being a flat infield cuts down on topspin.

continued on page 30



Brian Bossard.



In 1984, the top 14 inches of the field, choked with silt and clay, were removed and replaced with river sand of a prescribed size. New drainage and irrigation systems were also installed in both baseball and football field configurations.

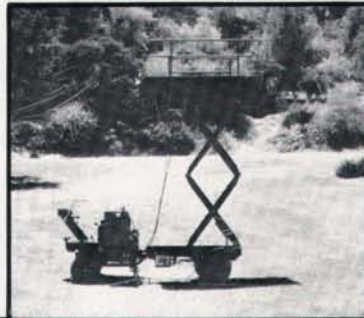
Go With CHIKUSUI And Get Double The Features At Half The Price!

Rugged, Dependable and Versatile Chikusui Turf Utility Vehicles Give You The Power To Transport People & Materials in a Simple, Cost Efficient Way.



MODEL GX-20

- 2-seat Turf Utility Vehicle
- 16hp Twin Engine
- 3/4 Ton Payload
- Hydraulic Dump
- PTO (will accept all Cushman attachments)
- 4 Speeds forward/1 speed Reverse
- Syncromesh Transmission
- Shock Absorbers w/Ind. Front Suspension
- PTO & Hydraulic Dump Operated From Cab
- 3-Year Extended Warranty Available
- MSRP: **\$6,700.00**



MODEL GH-224

- Single Seat Riding/Walk-behind Vehicle
- 10 MPH Top Speed
- 7.5hp Engine
- Standard Features Include: Hydraulic Dump, Hydraulic Scissor Lift (to 8.5 feet), Hydraulic Outriggers, Removable Sides & Tail, Differential Lock
- 3 Speeds Forward/1 Speed Reverse
- MSRP: **\$5,600**



MODEL GX-16

- Single Seat 4-Wheel Drive w/Power Articulating Steering
- 10hp Engine
- 1/2 ton Payload
- 6 Speeds Forward/2 Speeds Reverse
- Hydraulic Dump Standard
- Enclosed Cab Optional (\$495.00)
- MSRP: **\$5,900.00**



MODEL GC-403B

- Rubber-Tracked Walk-Behind Wheel Barrow
- Manual Dump
- 1100 lb. Payload
- 3 Speeds Forward/1 Speed Reverse
- 7.5hp Engine
- 3 Beds Available
- MSRP: **\$4,395.00**

FOR FURTHER INFORMATION PLEASE CONTACT:

TCI EQUIPMENT, INC.

Los Angeles, CA (213) 245-3595

OR THE DEALER NEAREST YOU

STEWART'S TURF EQUIPMENT

9243 Single Oak Dr.
Lakeside, CA 92040
(619) 443-3565

ACTIVE KUBOTA

1809 S. Manchester Ave.
Anaheim, CA 92802
(714) 971-2511

SUSKI & SAKEMI

POWER EQUIPMENT
81-405 Hwy. 111
Indio, CA 92202
(619) 347-3155

FRANKSON'S, INC.

1004 S. Glendale Ave.
Glendale, CA 91205
(818) 247-0306

The Irrigator that follows you anywhere.

Across the playground.
Polo field. Park. Or petunia patch.
It's perfect.

If you have land to irrigate, Rain For Rent has a revolutionary hard hose irrigator engineered for you—the affordable Bauer Rainboy 50T.

No pipe. No pop-ups. No permanent system.

Just a mobile, versatile, efficient and reliable unit that works on water pressure (44 psi), provides uniform, even, adjustable participation, keeps running till the work is done—and stops automatically.

It's lightweight, easy to position and



move, and non-soil compacting.

And it's available for rent or purchase.

There's only one Rainboy. And it's only at Rain For Rent. We promise you'll be impressed. Call or come by, today. We think our Rainboy will follow you home.

Toll Free Hotline, 1-800-272-RAIN
(In CA) 1-800-742-RAIN

Rain For Rent
P.O. Box 2248,
Bakersfield, CA 93303



Super Bowl XXII continued from page 28

He adjusts the infield irrigation cycles and aerates to produce just the right bounce 99 percent of the time. He tests the bounce before every game.

Soil moisture also plays an important role in football. Deep roots are important to the durability of the center of the field during the heavy football schedule. Bossard takes core samples almost daily to check for the depth and uniformity of water infiltration. He applies wetting agents to counteract any areas of hydrophobic soil and keeps the surface on the dry side.

When he overseeds in October, Bossard is also looking for deep roots as fast as possible. Rather than broadcasting the perennial ryegrass seed onto the surface, he first slices the surface in two directions with a stolonizer. The seed is then broadcast, topped with sand and then dragged into the grooves made by the stolonizer with a mat.

Before games, the San Diego crew will frequently broadcast a mixture of ten percent sand, 90 percent Nitrohumous (an organic compost) and seed over the field for the players to work into the soil. If this doesn't keep up with the damage caused by the players, Bossard applies a mixture of pregerminated ryegrass mixed in Milorganite following each game. A two acre sod farm next to the stadium is maintained for resodding seriously damaged turf areas.



Bill Wilson

While San Diego is known for its year-round moderate temperatures, nighttime temperatures can approach the freezing point during football season. To keep soil temperatures up for the young ryegrass the field is covered with six mil vented plastic for periods as long as four to five days. When temperatures drop near freezing, the crew covers the field with a two-piece unvented tarp at night and removes it late the next morning. The dark green tarp absorbs the early morning sun. By keeping the field relatively dry at the surface most disease problems are avoided.

Bossard has been using all his tricks this fall to keep turf on the center of the field. A rainy, cold season has stifled some of his efforts to keep the field dry and the ryegrass roots deep. Games held in the rain also damaged much of the dormant bermudagrass in the center of the field. "In eight days, I can produce almost a new field," he states. The two high school championship games were played in the rain and the Chargers played the next day. That set Bossard back further than he'd like.

Wilson and Bossard have begun preparations for the Holiday Bowl. The New Year's Eve game is sponsored by Sea World.

continued on page 32