IRRIGATION SHOWCASE

Alprene Pipe Tapping Saddles



Reliable • Durable • Economical Pipe Tapping Saddles by Alprene make connecting pipes and installing valves, gauges, and sprinklers quick and easy. They require no cutting or gluing, and that saves you time and money. Made of copolymer polypropylene (PP), Alprene Pipe Tapping Saddles are impact resistant down to -20 degrees F, and chemically resistant to solvents, acids, and other organic chemicals.

Iowa Export-Import Trading Co., 601 Locust St., Suite 1400, Des Moines, IA 50309. (515) 245-2464, (800) 345-0327, Fax (515) 282-1038.

Circle 112 on Postage Free Card

Flowmeter



Data Industrial 1400 series flowmeter is a battery-powered insert-style flowmeter that displays rate and total. Display is housed in a rugged aluminum enclosure built to Nema 6P submersion specifications, allowing the unit to operate fully submerged in a flooded meter pit for extended periods of time. The 1400 can be cal-

ibrated in the field for any size or type of pipe.

Data Industrial Corporation 53 Portside Drive, Pocasset, MA 02559 (508) 563-7196

Circle 113 on Postage Free Card

Aerator



Font'N-Aire combines the beauty of a romantic fountain with the benefits of an efficient aerator. Nothing moves water like a propeller...Air-O-Lator has been involved in propeller design and the technology of aerating since 1967. Font'N-Aire incorporates the Franklin electric, water-cooled, water-lubricated, submersible motor. We believe we have the most energy-efficient fountain on the market. Video available.

Air-O-Lator Sales Office-Plant/Service Center, 8100-04 Paseo, Kansas City, MO 64131 (800)-821-3177

Circle 114 on Postage Free Card

Self Cleaning Water Filters



Orival-Filtomat® filters protect sprinklers, mini-jets, drippers, etc. by removing sand, gravel, algae, pollen, silt, leaves, snails, mussels, and other dirt particles down to 15 micron from all types of water. Self-cleaning without interrupting system flow. Require only routine maintenance, no changing of media. Single units handle flow rates to 4800 GPM. Easy to install. Payback usually less than one year. For a free video cassette, contact:

Orival, Inc., National Sales Headquarters 40 North Van Brunt St., Englewood, NJ 07631, Phone (201) 568-3311, Fax (201) 568-1916

Circle 115 on Postage Free Card

PRESIDENT'S MESSAGE

Dr. Gil Landry, Jr.

Providing for better and safer sports turf areas is a common goal of sports turf managers and athletic directors. As most athletic directors in modern times will tell



you, a quality playing surface is a critical part of any athletic program. However, finding cost-effective ways to develop safe, high-quality playing surfaces is an obstacle that requires a team effort.

Team Approach

Good channels of communication between the athletic director and the sports turf manager will improve the awareness of needs and methods of solving playing surface problems. We must develop a team approach. Some of the best high school and college playing fields I've seen in the past 12 years were those where the administration

Some of the best high school and college playing fields I've seen in the past 12 years were those where the administration took a special interest in the field.

(principal, athletic director, and coach) took a special interest in the field. They recognized that playing field conditions were an integral part of their program.

The need to understand the basics of turfgrass management (irrigation, fertilization, and mowing) are as important to quality playing surfaces as knowing how to block and tackle is to a successful football team. As spectators develop a better appreciation for any sport they have played, the same holds true for athletic directors understanding what kind of professional effort goes into making better and safer sports fields.

Focus On Facility Safety

We have seen how college athletics have taken on a nearly "professional" emphasis among the athletes and their careers. This trend is beginning to show up in high school athletics as well. With amateur athletics receiving this much scrutiny, more attention is now being paid to the athlete's safety and the need for a quality playing surface.

Sports turf safety technology has developed greatly over the past decade. It is an ongoing project which requires a team effort by both sports turf managers and athletic directors.

National Conference

One function of organizations such as STMA is the forging of relationships with organizations around common areas of interest. Such an opportunity is the Fourth Annual STMA Conference and Exhibition. Holding our annual conference concurrently with the National Federation of High School Athletic Directors enables each group to better serve its members, educationally and professionally. As Doug Pedan, past president of the



Colorado High School Athletic Directors said at the Colorado Sports Turf Institute this past June, "There is a need for a solid working relationship and communication between the athletic director and the turf grass manager." This concurrent conference allows for just that—interacting and networking.

Although both conferences have entirely separate programs, registered delegates from either organization are welcome to attend any STMA or National Federation events. The trade show is a combined effort of both organizations. Hopefully, this joint venture will cultivate communication professionalism—all staples of the STMA mission.

I encourage all sports turf managers to take this opportunity to meet with athletic directors from across the country. It's an excellent chance to build relations and openly discuss and share ideas regarding sports turf.

Sports turf safety technology has developed greatly over the past decade. It is an ongoing project which requires a team effort by both sports turf managers and athletic directors.

STMA IN ACTION

ASSOCIATION NEWS

STMA CHAPTER NEWS

STMA Florida Chapter #1: Hurricane Andrew made its presence felt at the south campus of Florida International University in South Miami, forcing cancellation of the September 9 seminar. Luckily, there were few injuries. It will take some time to restore conditions to normal as tree damage was massive and mobile homes are currently parked on the athletic fields.

Special Reminder—Plan now to attend the "Get Dirty Seminar" November 4 from 9 a.m. to 3 p.m. at Pompano Stadium in the city of Pompano (The North Fort Lauderdale area). Registration begins in the stadium at 8 a.m. Sessions will include: "Making of Pitchers' Mounds and Home Plate;" "Dragging Fields;" "Turface Use on Ballfields;" and "Stenciling: How To Make and Use."

Looking Ahead—An all day event is scheduled for January 13, 1993, with STMA of Florida and Regal Chemical Company. C.E.U.s (Continuing Education Units) will be issued. Further details will be announced soon.

For information on the South Florida chapter, or for details on meetings and chapter activities, contact: John Mascaro (305) 938-7477 or Ed Birch (305) 938-0217.

Midwest Chapter: STMA -Special Reminder — October 22 marks the date of the Collegiate Sports Turf Management Workshop to be held at Illinois State University, Office of Physical Planning and 9100 Operations, Grounds Maintenance Department, Normal, IL. ISU's Redbird Field was awarded the Beam Clay Award as 1992 College Diamond of the Year.

Registration for the Sports Turf Workshop opens at 9:30 a.m. at the Redbird Arena. At 10 a.m. MC:

STMA President, Mike Trigg, and ISU athletic director, Ron Wellman, will welcome attendees. Presentations include: "Illinois State University Campus Maintenance and Working Relationships with Coaches and Players," by Charles Scott, ISU superintendent of grounds; "Working Together on Field Maintenance," by Jeff Stewart, ISU Baseball Coach: "Award Winning Field Maintenance," by Mike O'Grady, ISU athletic turf specialist; and "Plant Tissue Analysis," by Dr. Hank Wilkinson, plant pathologist, University of Illinois. Lunch will be served at noon. From 12:45 to 2:30 p.m., the program will conclude with ISU athletic field tours and field maintenance demonstrations.

For information on the workshop, contact Don Michaels or Kathy Counley at (708) 526-0007 or Mike O'Grady at (309) 438-2032.

For information on the Midwest chapter and other chapter activities, contact: Mike Trigg, Waukegan Park District, (708) 360-4750.

Colorado Chapter Sports Turf Managers Association — The Colorado chapter is asking their general membership to submit nominations for next year's officers and executive board. Two new positions of board-member-at-large are being created, opening up even more opportunities for those who want to serve in this active organization.

Plans are progressing for the annual meeting, which will be held in late November or early December. This meeting will serve as a review of the past year's events and a kick-off for 1993 activities. Details will be announced shortly.

For information about the Colorado chapter and its activities, or for details on submitting names for nominations, contact Bill Whirty at (303) 221-6660.

Chesapeake Chapter: STMA — The Chesapeake chapter is finalizing plans for their early January annual meeting and banquet. This event will be held in Baltimore, in conjunction with "Turfgrass '93," presented by the Maryland Turfgrass Council. Further details will be announced soon.

For additional information on the chapter and its programs, contact: Ray Flood at (301) 405-3320.

Iowa Sports Turf Managers Association — Plans are underway for the Iowa Sports Turf Managers Association annual meeting. This event will take place January 19, at the Des Moines Convention Center, Des Moines, IA in conjunction with the Iowa Turfgrass Conference. Details will be announced soon.

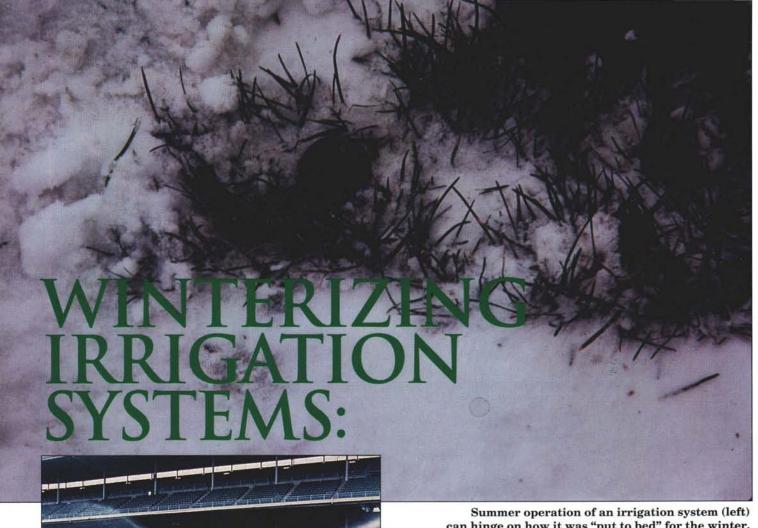
For information on the Iowa chapter, its goals and activities, contact: Gary Peterson at (515) 792-6433.

Carolina Chapter: STMA — Planning sessions continue for the Carolina chapter as newly elected president, Joe Wilson, works with the board to outline future events.

For information on the Carolina chapter and its activities, contact Marc Farha (Facility Manager of the Charlotte Knights) at (704) 332-3746.

New England Chapter: STMA — At the first official board meeting, the New England chapter appointed committee chairmen and moved towards formal incorporation and the adoption of bylaws. The board also reviewed last August's workshop and began planning for educational and other activities for 1993.

For details on the chapter and its activities, contact Mary Owen, University of Massachusetts Cooperative Extension System at (508) 831-1225. □



can hinge on how it was "put to bed" for the winter.

Photo courtesy, Rain Bird Sales.

BEATING THE ELEMENTS

By Eric Pollard

Then discussing winterization of irrigation systems with professionals in the field, the only constant seems to be the diversity of opinions.

However, everyone does agree on two points—winterizing or removing the water from system components is crucial to the long-term reliability of a system and it must be considered during design and installation.

The first thing to evaluate is who should winterize. While some believe it depends on the type of pipe continued on page 26

Crushed Bricks



Landscaping Specialists will welcome this new innovation in grounds maintenance. **BRICK CHEXS**, a cost effective, low maintenance indestructible product which retains its red luster regardless of weather. It is without a doubt the Rolls Royce of landscaping beautification, and modification. It replaces mulch, and gravel, and is ideal as a soil substitute, in granular, chip, pebble, and nugget form.

A.A. Goode Enterprises, Inc.

P.O. Box 456, Colonial Heights, VA 23874 (800) 542-7107, (804) 526-5923, Fax (804) 520-6393 Circle **124** on Postage Free Card

IRRIGATION SHOWCASE

Filtration Systems



Removes algae, sand, silt, clams, and other contaminates. Amiad automatic, self-cleaning, filtration systems dramatically reduce irrigation system maintenance caused by poor water quality. Amiad's only business is filtration, therefore, provides the most extensive line of filtration products in the industry. Offering 3/4" to 3" Plastic filters, 2" through 14" Steel filters, and 2" through 16" automatic self-cleaning filters. Systems for all flow rates and filtration down to 25 micron (450 mesh).

Amiad Filtration Systems 14141 Covello St., 7C, Van Nuys, CA 91405 (800) 969-4055, (818) 781-4055, Fax (818) 781-4059.

Circle 116 on Postage Free Card

Water Reels



Kifco has introduced two models to their popular line of Water-Reels. The new B110 and B180 extend the product line to ensure there is a Water-Reel to fit your needs. Machines are compact, easy to use, operate unattended, and shut off automatically. They are suitable for all types of sports turf and are easily transported from one area to another. Water-Reels combine outstanding features that come from more than 25 years of traveling sprinkler engineering.

Kifco, Inc., P.O. Box 367 600 S. Schrader Ave., Havana, IL 62644 (309) 543-4425 Fax (309) 543-4945.

Circle 117 on Postage Free Card

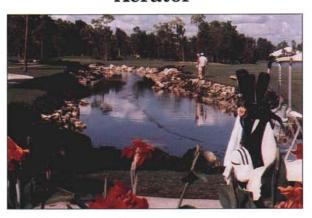
Permanent Landscape Borders



Creative Curb machines produce continuous concrete curbs and landscape edging without the use of forms or precasting. The average cost is approximately one-fourth that of other conventional methods. Root systems are controlled, lawns and flower beds are separated, and edging is simplified, which reduces future maintenance costs. Creative Curb machines are easy to use, and can be a profitable addition to your business.

Creative Curb Marketing
26041 Pala, Mission Viejo, CA 92691
(800) 292-3488, Fax (714) 951-2656
Circle 118 on Postage Free Card

Aerator



E.P. Aeration utilizes the powerful oxidant ozone in conjunction with subsurface fine-bubble linier air diffusion. This combination breaks up thermal stratification and reduces organic nutrients. Linier diffusion exposes the maximum volume of water for oxygen transfer efficiency. One horse power systems circulate up to 48 million gallons of water a day.

E.P. Aeration

946 Griffin Street, Grover City, CA 93433 (805) 489-4218, Fax (805) 489-3235.

Circle 119 on Postage Free Card

Winterizing Irrigation Systems continued from page 24

used (PVC versus polypropylene) and how deep the freeze line is, the prevailing opinion is that if the area gets freezing temperatures for more than 24 hours, winterization is necessary. Some areas of the country, such as Albuquerque, NM, get freezing temperatures but stay dry enough to warrant irrigation throughout the winter. In these situations, the system won't freeze because water is kept running through it, though care must be taken to protect the backflow preventer.

Methods Vary

Described by many as the "weak link" in the winterization process, the backflow preventer requires special attention. It must be protected during freezing weather, even if the system is to remain active, and it is crucial to make sure all water is removed from the backflow preventer when winterizing.

The process can be tricky. Code

restrictions vary from county to county, so it's always best to check with the local water company to verify acceptable procedures.

For the rest of the system, there are two basic ways to winterize. The first is draining. While there are conflicting attitudes about the practicality of this method, there is agreement that it is still highly effective if the system was installed properly. It

doesn't take a lot of gravity to drain lateral pipes-only about a 1/2-inch elevation change in 10 feet. However, problems can arise depending upon installation procedures.

"Back when all systems were trenched, it was easier to install an automatic draining system," explains Tom Lee, owner of Indianapolis Irrigation in Zionville, IN. "But when you plow or pull poly pipe, you may hit highs and lows without knowing it, which can disrupt the downhill flow and cause water to get trapped in the lines."

Lee believes blowing out a system is the most effective method.

Blowing out a system basically means

taking a large volume of air pushing it from the point of connection through the lines, through each zone and out the sprayheads or rotors. And while the process is fairly straightforward, there are a number of variables to consider.

Air Amount Key

Opinions vary as to the right size of compressor (from 100 to 1,200 cfm) and the ideal amount of air pressure (from 20 to 70 psi) necessary to effectively blow out a system. The size of the system has a lot to do with these variables. But consensus seems to be that the volume of air is far more important than the air pressure.

"It takes a lot of air to push out a large column of water," Lee says. "And as you go down the line, you lose air. So if you don't start out with enough air, the compressor will run out and the water will start coming back at you."

Air pressure also must be carefully monitored when blowing out a system.

TOO MUCH PRESSURE CAN **BLOW EQUIPMENT** RIGHT OUT OF THE GROUND, CAUSING SERIOUS DAMAGE TO THE SYSTEM AND POTENTIALLY INJURING SOMEONE.

> Too much pressure can blow equipment right out of the ground, causing serious damage to the system and potentially injuring someone. Another point to consider is air temperature. Lee suggests using an air cooler, which will prevent the risk of ballooning or melting poly pipe and fittings.

> Once these items have been considered, the process is relatively simple. First, the main water supply must be shut off, either in the water meter pit or in the facility. Then, if there is a drain valve, it should be opened. Next, the compressor hose is hooked into the line as close as possible to the point of connection. Finally, starting with the zone

furthest from the compressor, the first valve is opened either manually or by using the clock. The compressor then is turned on and pressure gradually increased until the heads pop up. The system should be blown out until only a fine mist appears—no more than two minutes at a time per valve—then the next zone can be started.

Adequate drainage of the lines can be assured by repeating the cycle two or more times. And while most suggest using the controller to open valves, manual operation allows more than one zone to be blown out at a time.

The Controller Controversy

Another area of debate is what to do with the controller. For solid-state controllers, one idea is to set outdoor clocks to the auto/off mode and disconnect the common wire to the valves—this prevents a lengthy power outage or power surge from causing the unit to go into the backup mode and send electricity to the valves. Indoor-mounted models can be simply unplugged.

Conversely, some believe that it's good to keep power running to the controller, especially outdoors. This keeps the cabinet temperature higher and limits condensation, which can be damaging to the controller.

For mechanical controllers, it's generally advisable to set them for very short run times (one to two minutes) every 10 days or so. This keeps the motors lubricated and gets some heat to the solenoids. Of course, it's important not to run the controller longer than two minutes or so at a time because the solenoids could burn out.

The best time to winterize depends on geography and local weather patterns. There is no substitute for experienceknowing the time of year to which the first freeze will likely occur is vital. If you're new to the area, check with other sports turf professionals and extension agents to learn the region's seasonal tendencies.

Despite differing opinions on procedure, timing, and equipment, it is commonly believed that winterizing is crucial. It's cheap irrigation insurance against winter's icy blast and provides you with piece of mind in that when spring comes, your system will be ready for action.

Editor's Note: Eric Pollard is the program manager, contractor division for Rain Bird Sales, Inc.

LASORDA TO KEYNOTE NYSTA EXPO

Tommy Lasorda, manager of the Los Angeles Dodgers will be the keynote speaker at the Turf and Grounds Exposition November 10-13 in Rochester, NY. The exposition is sponsored by the New York State Turfgrass Association.

David Frey, Cleveland Stadium Corporation, will present a seminar, "Basic Planning in Field Construction and Operations." Other speakers will include Dr. Michael Agnew, Iowa State University; Dr. A. Martin Petrovic and Dr. Norman Hummel, Cornell University; Dr. Donald Waddington, Pennsylvania State University.

One focus of the educational program will be irrigation. David Davis will present a one-day seminar, "Irrigation and System Design: How Each Is Changing." Other topics will include irrigation system servicing, and troubleshooting and maintenance.

For further information, contact NYSTA at (800) 873-TURF, or (518) 783-1229, or P.O. Box 612, Latham, NY 12110.

SUTCH JOINS TURF DIAGNOSTICS

Turf Diagnostics & Design in Olathe, KS, has added Jennifer Sutch, a soil scientist, as manager of its technical operations laboratory. Prior to her new post, she served for eight years as research agronomist for the Okeelanta Sugar Corporation.

She earned her master's degree in soil science at Purdue University. She was responsible for the operation of the Purdue Soil & Plant Analysis Lab.

CMAA SPONSORS "CLUBS COLLECTING FOR COMMUNITIES"

The Club Managers Association of America is sponsoring the "Clubs Collecting for Communities" national campaign. The three-step program was created to aid local communities across the country during the holiday season. Each chapter will designate two charities and the "Toys for Tots" program as beneficiaries of the donations.

The food drive, or Phase I is scheduled to begin this month and run through midNovember. Phase II, the clothing drive starts in mid-November. The "Toys for Tots" drive, or Phase III, is scheduled to start at the beginning of December.

In 1991, CMAA club members raised \$83 million for charity.

YAMAHA GOLF CARS FACTORY SCHOOL

Yamaha Golf Cars has introduced its factory school for both current and prospective customers. The three-day program will focus on golf course management issues, including golf car fleet control and maintenance procedures. It will include a tour of the \$60 million, 340,000-square-foot facility. Gas and electric car schools will be offered and conducted separately.

The first class begins this month. Five more classes are planned for the upcoming fall and winter seasons. The company's field service department members will conduct the training. PGA and apprentice members can receive up to 20 hours of credit for continuing education.

For more information, contact your local Yamaha USA Golf Car Dealer, or call (800) 843-3354 ext.



Managers Association

SCORE BIG! Join the Sports Turf **Managers Association.**

Are you ready to make the move up to the big leagues? If you are, then it's time to become a member of the Sports Turf Managers Association. We're an organization of professionals representing all segments of the sports turf industry. Our members are responsible for the safety of both natural and synthetic athletic fields. We help you-the sports turf manager-understand how to do your job better. We seek to instill professionalism into our industry and strive to improve the scientific and practical knowledge of our members. We have national awards, scholarship and research programs which recognize leaders in our industry. So, if you are ready to play with the big-leaguers and score big professionally, join the Sports Turf Managers Association!

Membership Categories Please send check or money order (U.S. dollars only) to Please check one SPORTS TURF MANAGERS ASSOCIATION 401 N. Michigan Ave., Chicago, IL 60611. \$75 Professional sports turf facility managers For more information, telephone, (312) 644-6610. Additional members from same facility \$45 2. Four-year colleges /universities \$75 Name: ____ Additional members from same facility \$45 Title: ____ 3. Other schools, parks, ext. agents, municipal \$50 Additional members from same facility \$30 Employer: ___ 4. Students \$20 Type Business: 5. Commercial Affiliates (U.S. & foreign) \$150 Address: Additional members from same company \$30 City: _____ State: __ Zip: _ 6. Persons outside U.S. other than commercial Phone: affiliates (must be in U.S. dollars) \$50 Signature: ___

BANNIGAN JOINS HYUNDAI

Edward V. Bannigan has been



Edward Bannigan

appointed vice president and division manager of Hyundai Golf Cars, USA. Before joining the company, he was vice president for E.-Z.-Go, a division of Textron, Inc., in its western region. He is

a graduate of Gilford College in Greensboro, NC.

NATIVE TURF COMPLETES PLANTINGS

The Native Turf Group has finished the first planting of its new seeded turftype buffalograss cultivars at Stock Seed Farms in Nebraska and Johnston Seed Company in Oklahoma. A different cultivar has been planted at each location, one adaptable for cooler climates, one for warmer climates.

The focus and goal of the company is to produce new turf-type buffalograsses to fill the needs of those searching for a high-quality, dark-green, low-maintenance grass.

DINAH SHORE TO RECEIVE OLD TOM MORRIS AWARD

Dinah Shore has been selected to receive the Old Tom Morris Award from the Golf Course Superintendents Association of America. She will be honored at the 64th GCSAA International Golf Course Conference and Show on January 30 in Anaheim, CA.

The award is presented to those who have made lifetime contributions to the game. It is named for Tom Morris (1821-1908), greenkeeper and golf professional at the Royal and Ancient Golf Club of St. Andrews, Scotland. Shore joins other distinguished recipients, including Arnold Palmer, Bob Hope, Gerald Ford, and Chi Chi Rodriguez.

LOFTS PAY ROYALTIES TO URI

Lofts Seed has given more than \$25,000 in royalty payments to the University of Rhode Island. The money was generated from the 1991 sales of Jamestown and Jamestown II Chewings Fescues as well as Georgetown Kentucky bluegrass, three of Loft's proprietary varieties developed at the university.

The money will serve to further the study and development of turfgrass varieties for the future.

GARICK HELPS CONSTRUCT PARK

The Garick Corporation and Landscapers Wholesale, Inc. assisted the city of Cleveland, OH, by expanding the Cleanland Commons program to construct a park site at Playhouse Square. Support for the plan was also provided by the Cleveland Foundation and many Garick customers and suppliers.

Construction began in May under Dino Trinetti, Garick vice president of sales. More than 40 local firms made contributions of materials and labor worth more than \$65,000.



A Bed Guaranteed To Give Your Back A Rest.

With Carryall by Club Car, you're working smarter instead of harder. And whether you select our exclusive gravity-tilt cargo bed or the hydraulic-powered option, you'll get a durable vehicle that'll save time and money. Not to mention your back.

Call your nearby authorized Club Car representative for details on how Carryall can do it all for you.

Club Car Drive It To Work.

2981 E. Blue Star Street, Anaheim, CA 92806 714-630-9190



ROOKIES

PRODUCT UPDATE

BLOWER



The ProBlow debris blower is designed for debris removal in delicate areas such as greens, tees, bunkers, as well as fairways and roughs. Its reduced vibration and noise eliminates operator fatigue.

It attaches easily to sand trap rakes and utilizes the fuel and battery from the rake.

SELBRO, INC.

Circle 131 on Postage Free Card

EXERCISER

The Nordic Track cross-country skiing exerciser tones and conditions all major muscles in the upper and lower body in a smooth, natural, non-jarring way. Twenty-minute daily workouts can help users manage their weight, improve their aerobic fitness and muscle tone.

NORDIC TRACK

Circle 132 on Postage Free Card

KENTUCKY BLUEGRASS

Turf-Seed Four Aces Kentucky bluegrass resists leaf-spot and other diseases. It has a dark-green color and good heat tolerance.

Four Aces is recommended for fairways, roughs, as well as parks and athletic fields. It blends well with other Kentucky bluegrasses, and mixes well with strong creeping red fescues, Turf-Seed's II series, and BrightStar perennial ryegrasses.

TURF-SEED, INC. Circle 133 on Postage Free Card

STRIPER

The Brite Striper 2000 has a threehp Briggs & Stratton engine with a Thomas Diaphragm-Type compressor. The heavy gauge-welded steel frame rolls smoothly on three large, fully pneumatic 10-inch tires. The unit drives in forward and reverse and speed is fully adjustable up to four miles per hour.

The fully adjustable spray box switches line width in seconds from two to eight inches. The 12-foot handhose with wand can spray an area as large as an end zone, out-of-bounds, and yard-line numerals.

PIONEER MANUFACTURING CO.

Circle 134 on Postage Free Card

ENGINES

Kohler's Command Pro Series of 11-, 12.5-, and 14-hp horizontal and vertical engines have a new Kohler Smart-Choke system for one-pull starts. The system includes a self-relieving choke carburetor that assures faster starts and instant response to load variations, while eliminating over-choking. The high-inertia flywheel contributes to quicker starts, smoother idling and provides greater rotational force for superior torque.

The hydraulic valve lifters reduce valve train noise and eliminate the need for valve adjustments. A computer-designed balance shaft reduces noise by canceling first order forces while inhibiting engine vibration.

KOHLER CO.

Circle 135 on Postage Free Card

SPRAYER

The Electric Spot Sprayer from Lesco, Inc., has a 25-gallon polyethylene tank with a five-inch fill well, bottom sump, and tank sprayer, which is coupled to a 1.8-gpm at 60 psi, 12-volt diaphragm pump.

The 25-foot, 3/8-inch, 100 psi hose has a nozzle that can be adjusted from a fine mist to a stream of 25 feet. The unit also features a 10-amp fuse link and 10-foot, 12-volt lead wire with alligator clips.

LESCO, INC.

Circle 136 on Postage Free Card

AERATOR



The HydroJect 3000 water-injection aerator has been approved for the use of liquid soil wetting agents that can be applied directly through the machine. Along with helping isolated dry spots, green-up rates in early spring are enhanced and there is a better overall appearance throughout the summer.

THE TORO COMPANY

Circle 137 on Postage Free Card

UTILITY VEHICLES

The Kawasaki Mule Models 2510 4x4 and 2520 Turf Specialty Model have 617-cc twin-cylinder engines. They are liquid-cooled for quieter operation and greater durability. Each vehicle can carry an 800-pound load in its cargo bed and haul up to a 1,100-pound trailer load.

The 2510 is equipped with 22x11-10 all-terrain tires and travels up to 25 miles per hour. It has a 10.7-foot turning radius to enable it to maneuver into tight spaces.

The 2520 is equipped with 20x10-10 smooth-tread, low-pressure tires, two-wheel drive, and dual-mode differential. It is able to travel up to 15 miles per hour. *KAWASAKI MOTORS CORP.*, *U.S.A.* Circle 138 on Postage Free Card

PUMP

The WMP20X multi-purpose pump is suitable for both water and chemical applications. Powered by a 5.5-hp OHV commercial engine, it has two-inch suction/discharge ports, 220-gallon-per-minute discharge capacity, and EPDM seals.

AMERICAN HONDA MOTOR CO., INC. Circle 139 on Postage Free Card

SCOREBOARD

CLASSIFIEDS

Classified Advertising Rates: \$55.00 per inch payable in advance. One inch minimum (about 50 words). Send copy with check for \$55.00 at least four weeks prior to issue date to: sportsTURF, P.O. Box 8420, Van Nuys, CA 91409 or fax to (818) 781-8517. Blind box numbers are available. Special borders and rules will be billed at display advertising rates. Classified ads are not commissionable.

Tulip Colorblends-Nature's Fireworks. Orchestrate Your Spring.

Carefully coordinated, cool season color collections, in quantities for 1992. New ideas and Competitive Prices. Pictures that help you convince your customers. We guarantee our bulbs to bloom.Three generations wholesale flowerbulb industry. Our Roots are Bulbs. Top quality, Top size. No substitutions. Call Tim Schipper at 1-800-877-8637 or write to: Schipper & Co., P.O. Box 7584, Dept. ST92, Greenwich, CT 06836-7584

Experienced head groundskeeper looking for a change in venue.

Background with the NFL, Major League Baseball, all phases of planning and construction. 29 years experience in the turfgrass industry. Reply to: sportsTURF C-33, P.O. Box 8420, Van Nuys, CA 91409.

PENNSYLVANIA GROWN SOD

PENNCROSS Bentgrass (available soil-free) shipped up to 1,000 miles via our trucks-forklift unloaded. Fourway blend of Bluegrass and Bluegrass/Ryegrass shipped up to 300 miles. Quality products and prompt deliveries - Twenty five years of experience.

VICNOR FARMS, INC.

Connoquenessing, PA 16027 1-800-842-0461

ATHLETIC FIELDS REBUILT

Baseball, Football, Soccer Fields rebuilt and sodded with BLUEGRASS SOD. COST: a 160' x 360' Football field is \$20,000 plus or minus 20% depending on local conditions within 150 miles of Pittsburgh. CONSULTING on improving and maintaining existing fields.

VICNOR FARMS, INC.

Connoquenesing, PA 16027 1-800-842-0461

ADVERTISING IS LIKE THE WINNING HOMERUN OR TOUCHDOWN.

Call Pam to place a classified ad, and see how you score.

(818) 781-8300

ADVERTISER INDEX

A.A. Goode Enterprises, Inc2	24
Air-O-Lator2	
Amiad 2	25
GordonBannerman Ltd1	8
Carlson Industries2	28
Club Car	
Creative Curb Marking2	25
Data Industrial Corp2	
E.P. Aeration	
Full Coverage Irrigation2	
Golf Course Management	
Greenstate International, Inc3	
Iowa Export Import Trading Co2	
Irrigation Association	
Kifco, Inc2	
McCord Auto Supply, Inc3	
Ohio Turfgrass Foundation	
Orival, Inc2	
Partac/Beam Clay11, 15, 1	9
PDS Prodrain Systems2	
Rainiet Fountains/	
Hardie Irrigation2	0
Reef Industries1	
Regal Chemical Co1	7
Stamos Tool2	0
STMA27, 3	

ROOKIES

PRODUCT UPDATE

KENTUCKY BLUEGRASS

NuStar Kentucky bluegrass is a moderately dense, dark-green bluegrass that stands up to powdery mildew and summer patch. It has excellent resistance to leaf spot, melting out, and leaf rust. It also resists wilting caused by drought.

JACKLIN SEED COMPANY

Circle 140 on Postage Free Card

UNIQUE PRODUCTS FOR THE GOLF COURSE AND TURF INDUSTRY

- * Level-EEZ Raise Sunken Sprinkler Heads
 - No Digging
- * Infiltrometers
- Aqua Quick Couplers
- Soil Profile Samplers
- Moisture Sensors
- * Penetrometers
- Digital Thermometers
- * pH Meters



Aqua Quick



P.O. Box 21663 Fort Lauderdale, FL 33335 1-800-654-8492 FAX 305-524-6431

Circle 122 on Postage Free Card

BLOWERS



Tempest Technology power blower models CAS1800 and CAS2100 produce large volumes of air that deliver an "air blanket" over wet or problem greens. The blowers are portable and can be moved from one spot to another. They are designed to produce a gentle breeze to a powerful wind.

The CAS1800 has seven blades and an 18-inch impeller with a 1/2-hp motor. The CAS2100 also has seven blades, with a 21-inch impeller and a one-hp motor. Both have protective shrouds and "off-road" tires. The blowers come electric- or gas-powered.

TEMPEST TECHNOLOGY CORP.

Circle 141 on Postage Free Card