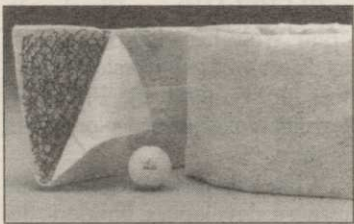


Akzo unveils new landscape water drainage system

ASHEVILLE, N.C. — Akzo Industrial Systems Co. has introduced Enkaturf Drain, a landscape drainage system designed to eliminate standing water from areas such as golf courses, sports fields, parking areas and lawns.

Akzo has also unveiled Fortrac Geogrids, interwoven polyester yarns covered by a protective layer of PVC, and Enkamat "S," a reinforced erosion control matting.

Enkaturf Drain is a three-dimensional nylon matting wrapped in a porous filter fabric that forms a high-capacity drainage duct. The



Enkaturf Drain matting

one-piece prefabricated system, measuring 6 inches by 0.4 inches, requires only a narrow trench to install. The filter fabric keeps soil particles out of the drainage medium. After passing through the fabric, water flows within the open

core of nylon matting Enkaturf Drain is considerably less expensive to install than traditional drainage designs using sand, aggregate, gravel or pipe as a drainage medium.

Fortrac Geogrids are designed to reinforce earth-fill structures such as slopes, retaining walls, landslide repairs, earth dams and roads. They form an interlocking bond between fill and grid to achieve greater strength and cohesion. They are available in a variety of strengths and mesh sizes to suit a wide range of appli-

cations.

Enkamat "S" combines Enkamat, a three-dimensional nylon matting, with a PVC-coated high tenacity polyester geogrid. Enkamat "S" is ideal for erosion-control projects where high-tensile strength is required. The high-tensile strength of the reinforced grip layer matting, up to 7,545 lbs./ft., will withstand the stress of fill materials like gunite, gravel and soil.

Contact Akzo Industrial Systems Co., P.O. Box 7249, Asheville, N.C. 28802; 704-665-5050.

CIRCLE #325

Echo lightweight edger has many extra features

LAKE ZURICK, Ill. — Echo Inc. has introduced its new lightweight, hand-held Power Edger PE-2400.

The edger's newly added features include a larger, more powerful 23.6 cc engine and newly designed cutter head for improved performance. The unit is lighter and more portable than conventional walk-behind models.

Ideal for commercial application, the PE-2400 has an 8-inch blade for deep cutting applications and a pivoting mechanism for easy depth setting, making the tool especially effective for lawn and flowerbed edge maintenance.

Its large, steel wheel with ball bearings and solid rubber thread maintains the PE-2400's consistent depth over rough terrain.

The 13-pound unit is equipped with a 23.6 cc engine, Pro Fire Electronic Ignition and purge pump-equipped carburetor for faster, easier starts.

Contact Echo Inc., P.O. Box 775, McHenry, Ill. 60051-0775; 815-363-0909.

CIRCLE #326

Hopper designed for professionals

Model 76-22 is a new addition to the Spyker Spreader line of big box built plastic hoppers designed to survive professional use and abuse.

Thirteen-inch by five-inch turf tread tires ensure easy operation and good flotation under most operating conditions — even with a full hopper.

A see-through cover ensures protection from rain, wind and accidental dumping damage.

The Accuway R product metering and spread placement system ensures exact spread rates with exact spread pattern placement — dead to the center of the spreader.

Tractor hitch, pull behind spreaders have the same features.

Spreader are shipped set up — ready for handle attachment.

Contact Spyker Spreader Works, P.O. Drawer 210, N. Manchester, Ind. 46962; 219-982-8105.

CIRCLE #327

Super absorbent polymer available

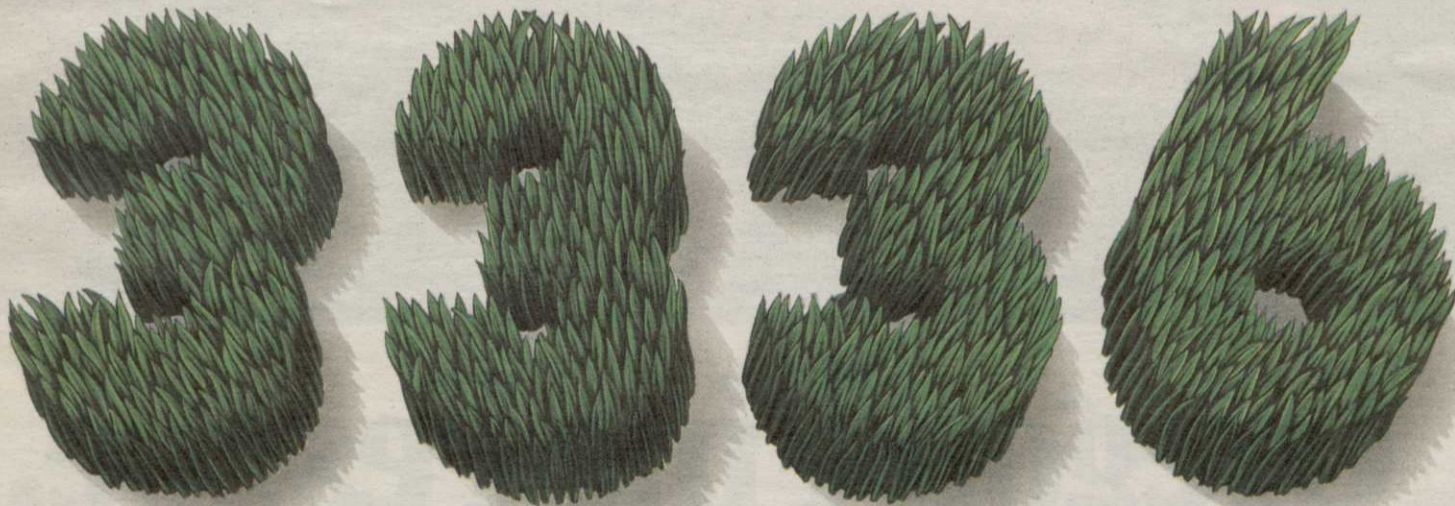
PHOENIX, Ariz. — A new polymer is now available and manufactured by Dow Chemical USA and distributed by Aqua Gel International, Inc.

This super absorbent polymer absorbs 1,000 times its weight in water. It reduces water consumption by 40 to 50 percent on turf grass. Predictable results based on type of soil and water and application rates of polymer. Application and material will pay for themselves in water savings within the first year, proven by recent testing with documented results.

For information call 602-569-1133.

CIRCLE #328

From Tees To Fairways To Greens, We've Got Your Number



A Broad Spectrum Systemic, Thiophanate-Methyl Fungicide

In 1991 many turf professionals turned to Cleary's 3336™ as an alternative for Benomyl. Before long, our new customers discovered that Cleary's 3336, a Benzimidazole systemic fungicide, effectively controls a broad spectrum of major turf diseases. In fact, many state universities recommend 3336 as an ideal substitute for Benomyl.

Even more importantly, these new customers soon realized what other turf experts have known for more than 50 years — that no supplier is more reliable than W.A. Cleary Chemical Corporation for quality and performance. And dependability counts when you're protecting your turf investment.

Once turf professionals tried 3336, they discovered the



convenience of using our fungicide in a water soluble bag. With 3336 WP, you simply drop our pre-measured bags in water — no mess, no applicator exposure and no container disposal. In addition,

our 3336 is available in a flowable liquid suspension which offers a fine particle size for uniform distribution and availability to turf.

If you would like to receive more information on Cleary's 3336 and make 1992 *your* best turf season yet, please contact your local turf chemical distributor or contact:

3336^{WP}™

W.A. Cleary Chemical CORPORATION

1049 Somerset Street, P.O. Box 10
Somerset, NJ 08875-0010 908-247-8000

1-800-524-1662 East of the Mississippi
1-800-524-1663 West of the Mississippi and FL

3336 is a trademark of the W.A. Cleary Chemical Corporation

CIRCLE #169/GCSAA BOOTH #3328-3332

Columbia ParCar introduces new vehicle

DEERFIELD, Wis. — Columbia ParCar has introduced its new ParCar Eagle golf car. Available in gas or electric models, the Eagle offers maximum performance and safety.

Ergonomics have been a priority in designing all features found in the Eagle. An exclusive tilt-to-open clam shell rear body is a time-saver for service personnel. The clam shell was specifically designed to expose the entire drivetrain and undercarriage for ease of scheduled maintenance and cleaning. The Eagle's bag rack holds clubs vertically for

excellent visibility and provides low bagwell height for ease of loading and removal of clubs. The Eagle has a comfortable bench seat with optional bucket seats and rear seat kit.

A new 2-cycle gasoline engines have been redesigned for higher compression ratios and improved fuel/air combustion, which generates 15 percent more horsepower with greater fuel economy. The new combustion chamber, in conjunction with new CleanAir Plus engine lubricant eliminates smoke, spark plug fouling and dramatically ex-

tends the engine life. The electric powered Eagle features Columbia ParCar's Soft Start system which eliminates jerky starts and damaged turf.

You can customize the Eagle with any of ParCar's standard options. The company now offers an all-weather cab for the Eagle. Designed for complete driver visibility and flow-through ventilation, the cab is both functional and comfortable.

Contact Columbia ParCar, P.O. Box One, One Golf Car Road, Deerfield, Wis. 53531; 608-764-5474.

CIRCLE #329



Columbia ParCar Eagle

Program eases maintenance

Lake Forest, Ill. — The Superintendents Compliance/Management System by Environmental Compliance Systems Inc. makes optimum use of "one-time" entered data and has the ability to "transform" that data to environmental-type reporting.

Superintendents can build spray plans and create work orders with pop-up menus of employees and chemical lists, automatically adjust inventories, track equipment and personnel. Full scheduling, tree inventory, financial reporting and much more are available in the program.

The SCMS program generates an extensive HAZCOM program unique to the facility. Operators can create application reports, Tier II reporting, full training records, and more.

The SCMS program includes modern software to allow communication with professional services. Optional features include up to the hour weather maps from WeatherBank Inc. and architectural drawings of your course on screen and printable.

For more information call 800-472-8882.

CIRCLE #330

Vacuum cleans airborne powder

MALVERN, Pa. — Nilfisk of America's portable GS 81 vacuum cleaner is being used by ground managers for safe and effective cleanup of fine powders and dusts that fill the air during mixing, storage and spreading of pesticides.

The Nilfisk GS 81, equipped with a special HEPA (high efficiency particulate air) filter, is capable of capturing 99.97 percent of particles down to 0.3 microns in size. To put a micron in perspective, a human hair has a diameter of 80 to 100 microns.

The GS 81 can also be equipped with polyliners so that spilled powder can be disposed of or re-used. In addition to collecting spilled powder, the vacuum cleaner should be used to clean loose powder which often attaches itself to workers' clothing.

Contact Nilfisk of America, Inc., 300 Technology Drive, Malvern, Pa. 19355; 800-NIL-FISK.

CIRCLE #331

The

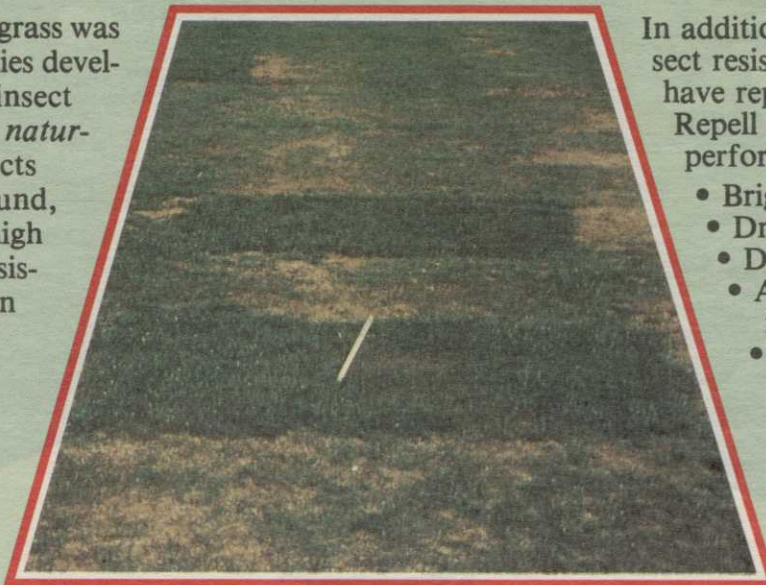
PERENNIAL RYEGRASS

repell

Difference...

No Insect Damage... Naturally

Repell Perennial Ryegrass was one of the first varieties developed especially for insect resistance. Repell is *naturally* resistant to insects that feed above ground, because it contains high levels of an insect-resistant fungus called an 'endophyte.' So a Repell turf doesn't need costly insecticides to control insects like sod webworms, chinch bugs, billbugs or cutworms.



The dark green turf plots contain high levels of endophytes and thus have not been damaged by insect infestation.

In addition to its natural insect resistance, national tests have repeatedly proven that Repell is an all-round top-performing ryegrass:

- Bright, dark green color
 - Drought tolerance
 - Dense, persistent growth
 - Attractive low-growing turf
 - Adapted to conditions ranging from full sun to moderate shade
- Try Repell — the perennial ryegrass with natural insect resistance.



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(503) 928-3100 or
(800) 547-4063

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(800) 522-7333

To locate the Lofts' distributor nearest you, call
(800) 526-3890 (Eastern U.S.) • (800) 547-4063 (Western U.S.)

CIRCLE #170/GCSAA BOOTH #2610

New blender hits the turf

GRAND FORKS, N.D. — Pioneer Peat, Inc.'s Dakota Blender Model 2200 is now available with fertilizer applicators.

Contractors can mix fertilize with sand and peat in one operation.

Model 2200 is specifically designed for golf course contractors. It has an output of approximately 200 tons per hour. It is one-third the size of other commercial blenders and can be towed easily by a pickup truck. It is PTO-driven, with 100-percent mechanical drive, and has

a built-in stacking conveyor.

Contact Pioneer Peat, Inc., P.O. Box 5438, Grand Forks, N.D. 58206; 701-746-4300.

CIRCLE NO. 300

Rain Bird improves hydraulic control systems

Glendora, Ca. — Rain Bird has introduced the 77 D-Series, Part Circle Rotor, featuring the latest in pressure-regulated, hydraulic and stopomatic valve in head control.

It has also unveiled the MMP-SL, Multi-Manual Panel, which allows

the superintendent to syringe any station or combination of stations simultaneously, while providing simple and flexible multi-station operation from the field.

The Part Circle Rotor is compatible with the pressure regulated (DR) and low pressure regulated (DL) models, providing individual head control, while the built in automatic pressure regulating module, constantly compensates for mainline pressure fluctuations. The hydraulic (DH) model features a normally open diaphragm valve for individual control on hydraulic control systems without the 24-volt requirements.

The 77 rotor, has a full 1-1/2-inch

inlet to accommodate larger swing joints and minimize unwanted pressure loss through fittings. With an adjustable arc ranging from 20 to 340 degrees, it uses a low-angle trajectory of 23 degrees, minimizing wind drift and the resulting water waste.

The MMP-SL's settings range from automatic to programmed operation.

The Multi-Manual Panel is compatible with the SBM-1230 (MAXI field satellite) and LM-1230 (LinksMaster Field Satellite). This unit may be also be adapted for use with other Rain Bird RC-Series electromechanical controllers, both hydraulic and electric versions. The



77 D-series part circle rotor

product is easily installed in either the deep drawn or stainless steel pedestal.

CIRCLE NO. 301

PUMPING WITH CONFIDENCE



It's the pumping confidence that comes from providing quality pumping stations to satisfied customers for over 30 years. The evaluation of a proven design philosophy provides you with the most cost effective pumping station. The Childers design includes a pressure relief valve that protects the pumps from excess heat and low flow conditions. The longevity of our pumps are enhanced even further by assembling them with 416 stainless steel shafts and straightening them to stricter tolerances than the original manufacturer. We are dedicated to providing you with pumping confidence.

For more information call: 1-800-231-4012

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CIRCLE #171/GCSAA BOOTH #1236

Columbia's new utility vehicle

Columbia ParCar has introduced the Utilitruck and all-weather Cab. The Columbia Utilitruck is built with a strict mission to improve productivity, stand up to industrial use and reduce operating costs.

The Utilitruck has an extended wheel base centered under the payload platform for optimum safety and stability. With the narrowest body in its class and its 18-foot turning circle, the Utilitruck works in smaller areas, yet features a cargo capacity of 12.5 cubic feet.

The 2-cycle gasoline engines have been redesigned for higher compression ratios and improved fuel/air combustion, which generates 15 percent more horsepower with greater fuel economy. The new combustion chamber, in conjunction with new CleanAir Plus engine lubricant eliminates smoke, spark plug fouling and dramatically extends engine life.

Driver visibility, ventilation and weather protection top the list of



Utilitruck and all-weather cab

features for the new all-weather cab. It is color-impregnated and made of impact-resistant materials that will not dent, rust or crack. A light colored UV stabilized cab roof incorporates the RainDrain suntop. Narrow steel pillars and large windows provide driver protection and visibility.

An exclusive feature of the Utilitruck cab is its pop-open windshield and rear vents that combine for true flow-through ventilation. Cab options include front windshield wipers, interior dome light, automotive rearview mirror and easily removable, lightweight doors with sliding or stationary windows.

Utilitrucks are available with steel or wood sides and tailgate, standard or extended flatbed, and manual or hydraulic dump bed.

CIRCLE NO. 302

Sprinkler offers better irrigation

FRESNO, Calif. — Weather Tec Corp. has unveiled the new ATR-30, "all-terrain roller" base for sprinklers.

This all-metal base is the first in the industry to be manufactured so that the two independent 14-inch rollers articulate at their connecting points on the frame. This unique design allows the base to conform to slopes, peaks and valleys and maintain the sprinkler in a more level position.

Sprinklers operating in the level position provide a better and more efficient irrigation pattern. Additionally, the 30-inch overall width ends the problems of crawling or tipping when used with large sprinklers.

The Weather-Tec ATR-30 uses aluminum rollers, powder-coated metal frame and stainless steel nuts and bolts to resist rust and corrosion. Both the hose inlet and the sprinkler connection are 1 inch to accommodate the big jobs. The ATR-30 is a heavy-duty base that is made for use on golf courses, parks, schools and other large turf projects.

Contact Weather Tec, 5645 East Clinton Ave., Fresno, Calif. 93727; 209-291-5555.

CIRCLE NO. 303

Powered hydro flexes its muscle

LOUISVILLE, Ky. — The Bunton Co. is introducing a new 61-inch Hydrostatic mower with an 18-horsepower Briggs & Stratton overhead Twin Vanguard engine that provides more power to tackle increased acreage.

Also new on the larger, higher-powered hydro is an increased wheel size for added stability, traction and floatation.

One of the most outstanding features of Bunton's Hydrostat is the fast, efficient way it can adapt to the work at hand. The unit is loaded with premium hydraulics, has a zero turning radius, instant forward and reverse, as well as an infinite variable speed adjustment. This allows for maximum maneuverability on hillsides, and for trimming and cutting.

The finger-tipped levers at the handle grips provide easy and convenient transitions to forward, reverse and power turning. Also included are adjustable speed controls that allow the operator to set the speed and know it will remain steady.

With a maximum speed of 6.5 miles per hour in forward and 1.5 mph in reverse, this mower delivers a fast, clean cut in the shortest amount of time. It also has ergonomically designed controls, reducing operator fatigue.

The Bunton Hydrostatic mower is also available in 36-inch, 48-inch or 52-inch widths and offers a 1-inch to 4-inch cutting height.

Contact a local dealer or call Bunton at 800-333-2971. In Kentucky call 800-292-2971.

CIRCLE NO. 304

Tough dwarf turf has tolerance

HUBBARD, Ore. — Tomahawk Dwarf Turf-Type Tall Fescue has been introduced by Turf-Seed, Inc.

Tomahawk was developed at the Pure Seed Testing Inc. Research Facility by Dr. Bill Meyer and Crystal Rose Fricker. Tested under the experimental code 5DX, Tomahawk forms a dwarf, dark green dense turf with the advantages of improved brown patch, leaf spot and crown and stem rust resistance.

"Tomahawk is widely adapted, with improved heat and drought tolerance," says Tom Stanley, sales and marketing director for Turf-

Seed, Inc. "Tomahawk has a dwarf growth habit, yet is aggressive enough to compete with weeds and other grasses for establishment. Tomahawk forms a dark, dense turf that will stand alone in home lawns, parks, athletic fields and golf course roughs, or blend with other dwarf tall fescues".

Tomahawk performs well in high traffic and shade areas, and is included in the new maintenance-saving Mow-Less Dwarf Tall Fescue Blend.

Tomahawk will be available from Turf-Seed dealers this fall. Contact Tom Stanley or Jim Enyart at 1-800-247-6910 for a technical bulletin.

CIRCLE NO. 305

Aerifying turfgrass without disturbing play

Two models of the Turf-Tec Verti-Slicer are now available for aerifying golf courses without materially disturbing play.

The three-foot-wide model is an attachment for the Verti-Groove machine. The new model is six feet wide and is tractor mounted using a three-point lift.

Specially designed to open turf by slicing five inches deep, no soil is removed, but deep cuts in the turf allow air and water to penetrate down into the root zone.

The Verti-Slicer is the perfect machine to open up the turf on mounds, bunkers and steep banks to make these hard to wet areas more receptive to water. Fairways can be deeply sliced at any time of year, even when play is heavy.

With no moving parts, slicing blades spaced four inches apart can be adjusted to any depth of from one to five inches.

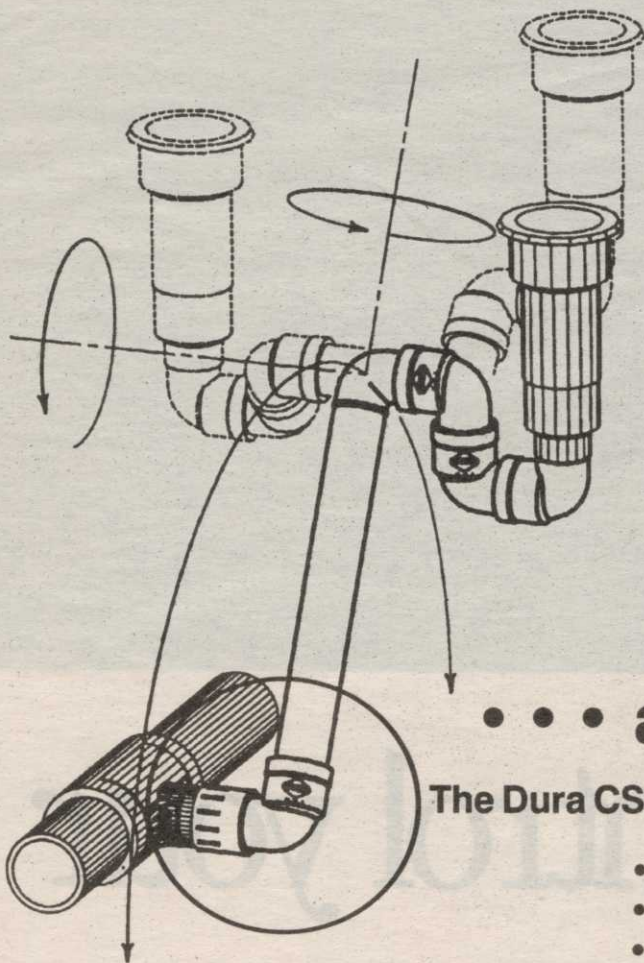
Contour aerifying with the Verti-Slicer can capture millions of gallons of runoff water on turfgrass areas.

Contact Turf Tech International, 4740 N.E. 12th Ave., Oakland Park, Fla. 33334; 305-938-7477.

CIRCLE NO. 306

#1 Swing Joint gets a New Twist • • •

The "Ultra" Unibody Swing Joint still offers all the proven features which makes it the #1 choice of the worlds leading Golf Course Builders.



- Double O-ring seals
- Schedule 80 construction
- One piece Unibody construction
- Rated to 350 psi at 73°F per ASTM D3139 Std.
- Full 360° swing
- Vertical adjustment thru 8 1/4"
- Four year limited warranty

• • • and here's the Twist

The Dura CS90 "Continuous 360° Swivel 90° Elbow"

- No disassembly to install
- Double O-Ring sealed
- Easier adjustment to grade

Quality, Durability and Performance

Stop by and see us at the GCSAA, booth 810-814

DURA PLASTIC PRODUCTS INC. BEAUMONT, CA. USA. 92223
(714)845-3161 FAX: (714)845-7644



Hazard liner is user-friendly

HOUSTON — Gundle Lining Systems has announced its new golf pond lining services.

Gundle says its golf pond lining services will help create leak-free, aesthetically appealing ponds, which are golfer, superintendent and management friendly.

Gundle's system also allows for a simple ball-retrieval system to increase recovery of valuable golf balls at less cost and less potential damage to the liner and less liability for unauthorized retrieval.

Gundline HD high-density polyethylene liners offer durability, weatherability and strength. Gundline HD is also fully UV stabilized allowing for soil-free or reduced soil linings saving money, time, cleaning, maintenance, and potential damage caused during soil placement.

For more information, contact Gundle lining systems, 19103 Gundle Road, Houston, Texas 77073; 1-800-435-2008.

CIRCLE NO. 307

Fiber provides erosion protection

North American Green introduces a new, improved method for applying seed, mulch and high-performance erosion protection in one easy step.

North American Green Cell-O-Seed is a recycled cellulose fiber growth medium incorporated with standard or customer-specified seed mixes. The newly engineered incorporation process insures ideal seed distribution and germination throughout the erosion blanket.

Cell-O-Seed is available on most North American Green erosion control blanket types for professional seed application and unsurpassed erosion protection.

Contact North American Green, 14649 Highway 41 North, Evansville, Ind. 47711; 812-867-6632.

CIRCLE NO. 308

New trailer takes on large loads

Tiger Line is marketing a new addition to its line of specialized and general purpose trailers. The Dump Trailer enable expansion of workload at low cost. It can help with all loading, moving and dumping needs without the expense of a dump truck.

The trailer incorporates an all-welded construction and is built for years of service, from the heavy-duty dumping mechanism to the reinforced tailgate.

The tailgate can be locked in almost any position to facilitate full dumping or even spreading in almost any situation. To compliment the dumping action, the dumping mechanism incorporates a special pivot design providing for complete dumping without trouble.

Contact Tiger Line Equipment, Inc., P.O. Box 121, 115 North Ohio St., Minster, Ohio 45865-0121; 419-628-3388.

CIRCLE NO. 309

Jet stake assembly saves time

San Diego — Olson Irrigation Systems has introduced a jet stake assembly that offers several new features.

Riser tubing quickly snaps into the stake's two-way riser clip, and is held in proper alignment when it is pressed into its alignment clamp.

The riser is fitted with an adapter which self-punches into hose with the aid of a "handle-like" tool, eliminating one installation step and minimizing chances of dirt getting into the system during jet installation.

The jet stake assembly was designed for the Olson Ultra-Jet, which offers an additional time-saving feature with the jet's quick-lock connection. The Ultra-Jet snaps into the riser with a quick quarter turn, saving the time involved in threading a standard jet into the riser tubing.

The Olson riser support stake will hold a variety of riser tubing sizes. The self-punching adapters are available in 3/16-inch barb X barb or 10-32 thread x 3/16-inch barb sizes. A quick-lock adapter is available to convert 10-32 risers to quick-lock size.

Contact Olson Irrigation Systems, 10910 Wheatlands Avenue, Santee, Calif. 92071; 619-562-3100.

CIRCLE NO. 310

Test kit for nitrate-nitrogen available

OAKLAND PARK, Fla. — A reliable, easy-to-use field tissue test kit for nitrate-nitrogen in turfgrasses is now available from Turf-Tec International.

The Tissue Test Kit includes strips of treated paper and a special tool to extract the sap from leaf and stem tissue into the absorbent test strip. Color will appear in one to five minutes, indicating the approximate amount of nitrate-nitrogen in the tissue. Full color will develop in

about 30 minutes. Color intensity ranges from low (200 ppm) to medium (400 ppm) and high (800 ppm).

Ideal range on intensively used turfgrass areas such as golf greens will range from medium to high on the color chart. Nitrogen levels can be monitored at the convenience of the Golf Course Superintendent. In order to prevent loss of turf from too low or too high the amount of Nitrate nitrogen, periodic monitoring will insure even growth.

Kits are available through distributors or directly from Turf-Tec International, 4740 N.E. 12th Ave., Oakland Park, Fla. 33334; 305-938-7477.

CIRCLE NO. 311

Control your weeds.

SCOTTS® pendimethalin preemergents provide tough, effective control of a broad spectrum of grassy and broadleaf weeds.

You can't find a better — or more cost-effective — control.

And there's a pendimethalin control for virtually every turfgrass application.

30-3-10 Fertilizer Plus Turf Weedgrass Control, with up to 8 times more particles per square inch than typical competitive physical blends, provides the ultimate preemergent weed control plus a controlled-release, methylene urea-based nitrogen feeding.

22-0-6 Turf Fertilizer Plus Preemergent Weed Control combines urea, sulfur-coated urea, and a potassium feeding with unsurpassed control of 6 grassy weeds and 9 broadleaf weeds before they sprout. Fine particles increase weed control efficiency over typical competitive physical blends.

14-0-14 Nitrogen/Potassium Fertilizer Plus Turf Weedgrass Control combines nutrient sources with pendimethalin for effective preemergent control of 6 annual grassy weeds and 7 broadleaf weeds.

Bench top monitoring

WOONSOCKET, R.I. — A programmable, PC-compatible benchtop microprocessor pH/mV/°C meter with audible alarms has been introduced by Hanna Instruments, Inc.

The HI 9017 features six internal programs to enter buffers and to set audible alarms to alert users when selected pH, millivolt and temperature values have been reached. All data collected can be input into a personal computer through the meter's RS232 interface.

The HI 9017 is designed for use

in checking the pH of samples and experiments in the lab.

The HI 9017 is designed for use in monitoring pH levels when high accuracy is needed and can help companies comply with EPA guidelines when used to monitor treated wastewater prior to its discharge. Applications include water treatment and conditioning, sewage, industrial and hazardous waste, and environmental control.

The programmable HI 9017 allows operators to:

- enter two nonstandard pH buffers for use with special applications. The HI 9017 has standard buffer values pre-programmed into its memory;



Benchtop microprocessor pH meter

- set audible alarms on upper and lower pH, millivolt, and temperature values; the alarm will sound if the limits are exceeded;
- set an audible alarm on an endpoint pH value (an additional alarm can be set to warn the operator when the endpoint is being approached and
- set a command code when the PC interface is being used.

The HI 9017 can meet the requirements of any pH, ISE, or ORP electrode. The temperature monitoring features of the HI 9017 allow it to double as an accurate laboratory thermometer.

The HI 9017 features laboratory accuracy of +0.01 pH; +0.2 mV (ISE); +1 mV (ORP); and +0.5°C. The unit has a measurement range of 0.00 to 14.00 pH, +399.9 mV (ISE); +1999 mV (ORP); and 0.0°C, with a display readout of 0.01 pH; 0.1 mV (ISE); 1 mV (OR); and 0.1°C.

Contact Hanna Instruments, Inc., 584 Park East Drive, Woonsocket, R.I. 02895; 401765-7500.

CIRCLE 312

User-friendly mowers show high performance

Jacobsen will feature several new products during the International Golf Course Conference and Show in New Orleans. Among them, the company will highlight its new HR-5111 rotary mower and ST-5111 reel mower.

Designed for use on golf courses, parks and other large turf areas, the HR-5111 has a cut of over 11 feet. Each rotary cutting blade is driven by a hydraulic motor, which means no more belts, blade pulleys, idlers and deck lids to worry about. The motors require no maintenance or lubrication.

The new ST-5111 hydraulic reel mower has a cut of more than 11 feet. Its front-mounted reels are easy to adjust and maintain without scraped knuckles, and allow tight trimming around obstacles.

Both have a fuel efficient 51-hp diesel engine. To reduce noise, the engine is surrounded by a full fiberglass body that won't rust. Four-wheel drive is standard.

Power rear wheel steering, tilt steering wheel, cruise control, a roll-over protection structure, seat belt and full instrumentation make the HR-5111 and ST-5111 as operator friendly as they are productive.

Contact Jacobsen, 1721 Packard Ave., Racine, Wis. 53403; 414-635-1251.

CIRCLE NO. 313

Pre-assembled valve manifold assembly introduced

HAWTHORNE, Calif. — Salco Products Inc. is adding a new pre-assembled valve manifold assembly to its line of drip irrigation products.

"The unit is designed to minimize field installation problems and to assure that the supply control assembly has been properly connected and is compatible with the overall system design and operating parameters," said Sam Tobey, Salco president.

The valve manifold assembly includes a 1-inch wye strainer, a 3/4-inch pressure regulator, electric remote control valve, stainless steel screen, screen flushing ball valve and a downstream pressure gauge. The pressure regulator is pre-set at a non-adjustable 40 psi. This assures adequate pressure to the system and prevents field pressure adjustments that could destroy the system or cause malfunction.

A choice of several electric remote control valves is available that operate at low flow and are compatible with Salco Products drip irrigation components. The recommended maximum flow limit for the valve manifold assembly is 20 GPM. This assembly is also available with a 3/4-inch wye strainer.

Contact Tobey at Salco Products Inc., 4463 Hawthorne Ave., Hawthorne, Calif. 90250; 213-973-2400.

CIRCLE NO. 314

Cut your costs.

Southern Weedgrass Control provides optimum utilization of pendimethalin necessary for season-long control on southern turfgrasses.

Turf Weedgrass Control provides unsurpassed pre-emergent weed control in both cool and warm season grass applications.

Weedgrass Control 60 WP offers liquid-applied pre-emergent control in both cool and warm season grass applications. It comes in convenient, easy-to-handle, water-soluble packets.

SCOTTS pendimethalin controls have been proven effective

and turf-safe for more than 6 years. Why risk your turf to anything less when you can count on these proven performers?

Your Scott Tech Rep is ready to help you select the formulation that's best for your course as part of a total turfgrass program. For more information, contact him today. Or call 1-800-543-0006.

There's no better way to control weeds, or your budget.



Aerator provides high oxygen and mixing efficiency

CHASKA, Minn. — Aeration Industries International, Inc. is making available a European mechanical surface aerator called the AIRE-0₂ Turbo.

The AIRE-0₂ Turbo aerator is the newest concept in high-speed surface splasher aerator technology. It is a floating, axial flow, surface impingement aerator/mixer/evaporative cooler. Water is pumped to the surface by an Archimedes, double helix, screw-type impeller.

The water is discharged at a right angle to the axis of the machine by centrifugal force. A circular dispersion pattern is created where the discharge impinges on the water surface. Oxygen from the atmosphere is absorbed by the water and biomass in this impingement diameter.

A vertical or axial flow pattern for mixing and oxygen dispersion is created by the pumping action and the suction intake well below the surface of the water. High efficiency is achieved by applying the principles of the Archimedes screw and centrifugal force to utilize a greater percentage of the

horsepower consumed for oxygen transfer and mixing rather than lifting water.

The AIRE-0₂ Turbo aerator incorporates a Screweller technology based on the Archimedes screw principle. The company claims this design provides the benefits of evaporative cooling and extremely high oxygen transfer with 18- to 20-percent greater oxygen and mixing efficiency over conventional surface aerators. Because wastewater is dispersed by centrifugal force in a powerful horizontal pattern, the lowest possible trajectory (or liquid throw) is achieved, dramatically increasing surface

turbulence for better oxygen transfer and mixing.

The AIRE-0₂ Turbo aerator's low dispersion trajectory also minimizes odors, misting and icing problems associated with conventional mechanical surface aerators.

AIRE-0₂ Turbo aerators are available in sizes from 2 horsepower through 150 horsepower.

The technology was developed by Aqua Systems International of Brussels, Belgium.

Contact Aeration Industries International, P.O. Box 59144, Minneapolis, Minn. 55459; 612-448-6789.

CIRCLE NO. 315

Upgrade responds to industry needs

TRIMS Grounds Management Software Version 2.3 has been released by LABB Systems/Software. This latest version of TRIMS incorporates many new features and modifications created in response to requests from superintendents.

Some of the TRIMS 2.3 features include chemical and fertilizer application logs, MSDS filing system and weather data base.

Extensive modifications have been made to increase the record-keeping capacity and allow unlimited editing of labor records, purchase orders, work orders and maintenance records.

Contact LABB Systems/Software, 6018 E. Osborn Rd. Scottsdale, Ariz. 85251; 800-733-9710.

CIRCLE NO. 316

Pumping stations offer savings

NORCROSS, Ga. — SyncroFlo introduces Eagle VFD (variable frequency drive) series of pumping stations designed specifically for irrigation systems.

Variable frequency drive stations offer energy savings and utility discounts in some states. Pump station operation is automatically optimized for peak load requirements with a built-in PC logic controller, which saves energy and operator training.

The new SyncroFlo Eagle models also feature soft start operation and require no routine maintenance. Tanks are ASME Code - NB Stamped. Panels are UL labeled. A data access panel gives a continuous status update on system pressures, flow rates and set points. Performance is backed by three guarantees: two-year total system, five-year PC, and 48-hour system service.

SyncroFlo packaged pumping stations are designed to save time, labor and change orders on site. Completely self-contained units precisely fit specified areas, and require only system piping connections and a single point electrical hook-up.

Contact SyncroFlo, 6700 Best Friend Road, Norcross, Ga. 30071; 404-447-4443.

CIRCLE NO. 317

Top creeping bentgrass available

Jacklin Seed Co. has announced plant variety protection approval for Putter creeping bentgrass.

Putter ranked as one of the top creeping bentgrass selections in many 1990 National Creeping Bentgrass Trial locations.

Putter creeping bentgrass is one of more than 50 improved turfgrass varieties commercially available from Jacklin Seed Co.

For National test results and additional information, contact Jacklin Seed Co., 5300 West Riverbend Ave., Post Falls, Idaho 83854-9499; 208-773-7581.

CIRCLE NO. 318

GOLF COURSE NEWS



GREEN HILL SEKI GOLF CLUB, NAGOYA, JAPAN
J. MICHAEL POELLOT GOLF DESIGN GROUP

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DI GIACOMO IS THE BEST AT WHAT WE DO – THE DESIGN AND CONSTRUCTION OF WATER FEATURES AND ROCK FORMATIONS...

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di Giacomo

Turf improved with less labor

TUNKHANNOCK, Pa. — Verti-Drain has introduced a new turf overseeder, called the Verti-Seed. The product incorporates Verti-Drain's patented technology redirected to turf seeding applications.

The Verti-Seed, which has been extensively tested in Europe the past several years, significantly reduces the formerly labor-intensive process of overseeding damaged turf areas. It is designed to produce quality turf with a minimum interruption in activity, especially on golf courses. Although the Verti-Seed was originally developed for golf greens, and expanded to tees and fairways, it can be used for virtually all sportsfield and lawn seeding applications.

The Verti-Seed's unique overseeding process begins with specially designed cutting discs that slice a sufficiently deep channel in the soil without damaging the turf. Immediately behind the cutter shaft are the seeding elements, consisting of a blade which further opens the channel, a special hopper which places concentrated seed into the channel, and a sliding pressure shoe to close the channel while maintaining a constant seed depth.

According to Otto, some machines previously used for overseeding were not really suited for the job, often resulting in damage to the soil structure and an unsatisfactory seed sowing pattern.

Both the Verti-Seed and the Verti-Drain were developed and are manufactured in Holland by Redexim. The two products are represented in North America by Emrex, Inc., with a national network of more than 30 distributors.

CIRCLE NO. 319

Repellent reduces use of chemicals

Bound Brook, N.J. — Turf professionals can reduce insecticide applications with three new turf varieties that contain natural insect repellents. Jamestown II Chewings Fescue and Repell II and Yorktown III Perennial Ryegrasses are all available from Lofts Seed Inc.

All three varieties resist insect damage because each contains endophytes — fungi living inside the turf plant. Without harming the turf, the endophytes repel surface-feeding insects which would otherwise damage the plant's lower stem and crown.

Jamestown II, Repell II and Yorktown III are all offspring of well-known turfgrasses. The new varieties were developed to answer the needs of the 1990s: each offers dark green color, excellent overall performance and requires less chemical applications.

Jamestown II is an improved fescue for use where a fine texture is needed. Repell II and Yorktown III have been developed to offer darker color than most commercial ryes and slower growth to produce fewer clippings.

Contact Lofts Seed Inc., Bound Brook, N.J., 08805-0146; 908-356-8700, 800-526-3890 or, in New Jersey, 800-624-1474.

CIRCLE NO. 320

GOLF COURSE NEWS

Vermeer unveils easy-to-maintain rock trencher

The new T-655 Trencher is Vermeer's latest high-powered rock trencher.

Powered by a 165hp CAT 3304DIT engine, it features full hydrostatic power-to-track-drive, conveyor and trencher functions.

Specially designed and built for low maintenance and ease of service, the T-655 is constructed with a Modular Power Pak (consisting of engine, pump drive, pumps, radiator, muffler, air cleaner) for easy

access when pulling maintenance. The entire Power Pak assembly mounts to a sub-frame and can be pulled out easily for service. A swing-out dashboard at the console also makes it easy to access the controls area. In addition, the T-655 is designed with side-by-side radiator and oil cooler, plus a larger capacity 85-gallon hydraulic reservoir to maximize cooling performance.

The 42,500-pound unit comes equipped with a planetary drive, hydraulic pump and motor on each independently operated track for greater torque, maneuverability and versatility. Automatic self-leveling



T-655 Trencher

tracks on the heavy-duty D4 undercarriage allow the operator to create a vertical trench in most conditions. The standard double grouser tracks measure 21 inches wide and can oscillate up to 12 degrees.

The trencher assembly is driven by two high-torque, low-speed, hy-

draulic motors directly coupled to the headshaft. This hydrostatic setup extends hydraulic component life and creates a lower operating pressure as the operator uses infinite speeds to match trenching conditions. The unit can be set up with either four- or six-foot booms for rock trenching (with digging widths of 14 and 18 inches). The boom's large 40-inch diameter end idler reduces snap on the cutters and provided greater support and stability for the ditcher assembly. For trenching in dirt, the unit can be outfitted with 4-foot and eight-foot booms.

CIRCLE NO. 321

THE GOLF CLASSICS

Keep your tees, fairways and greens in classic condition with the full NOR-AM line of products.

NITROFORM Slow-Release Nitrogen. Consistently releases nitrogen through bacterial action.

NUTRALENE Controlled-Release Nitrogen. For sustained release and quick green up through hydrolysis and microbial action.

TURCAM W.P. Insecticide. Controls white grub and a wide range of turf pests.

TURCAM 2½G Insecticide. All the benefits of TURCAM W.P. in a granular formulation.

BANOL Fungicide. Controls *Pythium* and *Phytophthora* in turf and ornamentals.

PROGRASS Herbicide. Controls *Poa annua* and broadleaf weeds in perennial ryegrass, Kentucky bluegrass, and creeping bentgrass turf.

PROXOL 80SP Insecticide. Rids fine turf of white grub, sod webworm, cutworm and armyworm.



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Always read and follow label directions.

CIRCLE #175/GCSAA BOOTH #2146

Utility vehicle features power and luxury

LINCOLN, Neb.—Cushman has introduced the GT America, a sporty-looking utility vehicle with wide-ranging job capabilities.

Golf managers will find the economical vehicle ideal for personal and supervisory run-about use on the course. At the same time, the 44- by 40-inch cargo box can be used to haul tools, equipment or supplies with the vehicle's 1,000 pounds of payload capacity.

The GT America features an

aerodynamic, steel and fiberglass body, supported by a wrap-around all-steel tubular frame. The suspension system — dual, three-leaf springs in front with dual coil springs in rear and front and rear shock absorbers—gives the vehicle unusually smooth riding qualities as well as smooth handling, even with heavy loads. Special Turfrac high-flotation tires are standard, for improved traction and minimum turf compaction.

A new feature — positive traction lock — delivers torque to both rear wheels for extra traction in mud or loose sand. The operator simply depresses a spring-loaded foot pedal to activate the positive traction lock.



GT America

The GT America features a custom-style steering wheel with integral horn button, rubber padded foot controls and a sculptured seat and backrest for operator comfort. Steel hip restraints are designed for easy access. Amenities include recessed cup holders for driver and passenger, cigarette lighter and heavy-

duty floor and cargo mats for appearance and added durability. The GT America also features an installed marine AM/FM cassette stereo radio.

Powered by an 8-horsepower, 4-cycle gasoline engine, the GT America has power, yet operates economically. An electric model is also available, powered by a heavy-duty 36-volt electric motor. Top speed for both models is 12 mph.

With standard 8-inch sides, the cargo box has a capacity of 8 cubic feet and comes with a gas spring-assisted manual dump for easy unloading.

Contact Cushman, P.O. Box 82409, Lincoln, Neb. E 68501; 800-228-4444.

CIRCLE NO. 322

EPA recommends new wastewater treatment method

DALLAS—Clearwater Environmental Systems, Inc. offers a new wastewater treatment method recommended by the EPA for recycling waste-water. Clearwater's Model 1100 Wastewater Treatment units may be configured to treat water prior to discharge off site, or into on-course ponds or tanks ready for watering or re-use in equipment wash bays.

The recycling units save water, stop pollution, and require little maintenance. They operate by gravity flow and use a two-phase filtering system. A proprietary sand and gravel filter sifts particulates, oil and grease. A discharge chamber, fitted with filter media, treats pesticides, herbicides and other contaminants.

The treatment units are substantial steel rebar and concrete construction, measuring 5- by 9- by 6-feet, with 6-inch walls, top and bottom, weighting 11,000 pounds without filter material.

Clearwater systems meet RCRA and CWA regulations, never need structural maintenance, allow for easy filter-media exchange, are warranted and installed with Clearwater engineering supervision. Units may be ordered "set in ground," ready for plumbing, or "turnkey."

Contact Clearwater Environmental Systems, Inc. 14901 Quorum Drive, Suite 480, Dallas, Texas 75240; 800-0444-7193.

CIRCLE NO. 323

Blanket protects grass from winter

ARLINGTON, Texas—American Excelsior Co. has announced Curlex GreenSavers, a machine-laid wood excelsior blanket for golf course protection in the winter months.

American Excelsior's Curlex GreenSavers are made from aspen wood excelsior enclosed in a plastic netting, forming a blanket. It is not harmful to the grass or soil, and do not contain pitch, tar or resin.

Once in place, the machine-laid blanket helps prevent grass from drying out on high windswept greens due to wind and freezing cold, while allowing air to circulate to prevent dryness from heat build-up. Curlex GreenSavers' insulating properties also help reduce frost penetration.

Curlex GreenSavers maintain a more constant temperature, minimizing the freeze/thaw cycle and establishing quality greens early in the spring.

Curlex GreenSavers come in 400-square-foot rolls, measuring 48 inches by 100 feet. Each roll weighs 72 pounds. Curlex GreenSavers are available through American Excelsior's 28 sales branches in the United States.

Contact Ken Starrett at American Excelsior Co., 850 Avenue H East, P.O. Box 5067, Arlington, Texas 76011; 817-640-1555.

CIRCLE NO. 324

You aren't born smart. That's why there's such a thing as experience.



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"With equipment, like a lot of things in the lawn-care business, you learn the hard way.

I put the equivalent of five years of 'homeowner' use on a trimmer in five days.

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—John Frick
Owner, Grassroots, Cincinnati, OH



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