not seem as precise as a seed drill or spreader, hydraulic seeding is becoming one of the most reliable methods of establishing sports turf. Large areas can be seeded successfully in a single day. The mulch and fertilizer mixed in a slurry with the seed protects the germinating seed from moisture or nutrient stress.

Hydroseeding is usually performed by contractors who have invested in the large, sophisticated equipment necessary and have developed the skill and knowledge to evenly distribute thousands of gallons of slurry over acres at a time. Micke Santoro, president of Southern California Hydroseed & Hydromulch, has golf courses, race tracks, parks and stadiums as regular customers. Using a 3,000-gallon hydroseeder he can sow as little as one-half pound of bentgrass per 1,000 square feet with amazing uniformity.

"Because we are very careful about mixing the right amount of seed, mulch and fertilizer together and how we spray, we can use more expensive improved turfgrass varieties without wasting our customers' money,," says Santoro. "There is no reason why they can't have the best turf just because we use a hydroseeder."

Preparation and follow-up is just the same, says Santoro. "The area has to be prepared the same as you would for any other type of seeding method. And, after we finish seeding, we make sure the area is irrigated up



A hose extension is used to hydroseed a new green.

to five times a day. In some cases, we even topdress the area with sand after we hydroseed."

Santoro does not use paper mulch. "Fiber mulch gives the best results. We use from 1,000 to 1,500 pounds of mulch per acre for overseeding and up to 2,000 pounds per acre for new seedings. For greens, we may only be mixing 20 to 30 pounds of bentgrass per acre with the mulch. You have to know

what you're doing."

In addition to golf course work, Santoro is having luck convincing parks to overseed using his method. "Parks are often shorthanded," he states. "They don't have the people to take care of overseeding in the fall. But that doesn't have to stop them. We can do all the fields in a park in a couple of days and they don't have to hire a single extra person."

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PRODUCT UPDATE

MULTIPURPOSE VEHICLES



For the industry turf professional looking for a rugged, reliable vehicle, the Hijet multipurpose utility vehicle from Daihatsu can get the job done.

Powered by a whisper-quiet, three cylinder, water-cooled engine, the vehicle has over 100 applications in turf maintenance, agriculture and industry.

Available in four body types: Cut-A-Way, Full Cab, Hydraulic Tipper and Hydraulic Liftpick/Tipper, all vehicles have rack-and-pinion steering and a super-tight turning radius of only 12½ feet. Steel doors with roll-up windows, guard bars, heat-er/defroster, turf or regular tires, and a restraint cage are all available as either standard or optional equipment depending on the body type selected.

DAIHATSU AMERICA, INC.

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TURF THERMOMETER



Managers of large turf areas are always looking for ways to lower water costs while still maintaining top quality turf. Now they can achieve both with the ST27 Turf Mo-

nitor from Standard Oil Engineered Materials Company.

Using an infrared thermometer to measure turf temperature and environmental sensors to measure air temperature, humidity and solar radiation, the monitor allows superintendents to make watering decisions based on the turf's actual need for water. It also detects turf stress before it can be visually detected to help keep grasses lush. All the information is automatically calculated by a lightweight shoulder-pack computer.

The ST27 Turf Monitor has the capacity to maintain records for up to 135 areas of a golf course including tees, greens, fairways, rough or any other special areas. This is capacity sufficient for 27 complete holes. These records can help the superintendent to identify problem areas where application timing of herbicides, insecticides and fungicides can be improved.

Once compiled, the data can be transferred to personal a computer. The information can be printed for a permanent file allowing superintendents to trace year-to-year stress trends for better turf management. Irrigation models and custom programs can be developed from the data to improve the course or more easily maintain it in top competitive form. Monitors for municipal and industrial applications will soon be available.

STANDARD OIL ENGINEERED MATERIALS

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ORNAMENTAL INSECT CONTROL

PBI/Gordon Corporation has introduced Pestroy Broad Spectrum Insecticide, a new organophosphate insecticide-miticide developed to control various insect and mite pests that attack ornamental shrubs and trees. It containing the active ingredient fenitrothion, which is also marketed under the name Sumithion.

The insecticide works on a wide range of pests, including aphids, borers, budworms, caterpillars, cankerworms, leafbeetles, leafminers, mealybugs, palmerworms, lacebugs, sawfly, midges, pine tipmoths, mites, scales, spittlebugs, whiteflies, slugs, psyllids, weevils and southern pine beetles. Pests are affected by both contact and stomach mode of actions, including moderate residual effects resulting from local systemic activity. This is produced by the product's penetrating action into plant tissues.

Recommended rates for control of insects on ornamentals are 1/2 to one pint of Pes-

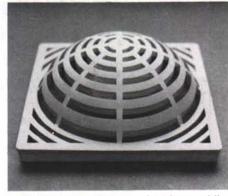


troy per 100 gallons of water, with the finished spray applied to the point of runoff. It may be used in greenhouses, as well as on young stock and mature trees and shrubs.

PBI-GORDON CORP

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ATRIUM GRATE



Designed to eliminate clogging and liability problems, National Diversified Sales, Inc. introduces its 12 inch by 12 inch Atrium Grate. Excellent for non-traffic areas and retrofit, the Atrium is compatible with all NDS 12 inch by 12 inch catch basins and adapter housings.

Made of high-impact space age plastic, it is available in the colors of black, green and gray.

NATIONAL DIVERSIFIED SALES, INC.

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PRODUCT UPDATE

WALK-BEHIND GREENSMOWER



Golf course superintendents who demand increasingly critical care of their greens can find dependability with the features on the Bunton 22 and 26 inch walk-behind greensmowers.

Powered by a 3.5 hp Robin engine, the mower features a powered rotary brush that stands the grass up before cutting, helping to control grain and eliminate runners. The dual-powered, solid aluminum drive rollers cut straighter and provide firmer greens without compaction. The non-floating head gives a straighter and truer cut.

Other Bunton features include optional grooved rollers for closer, more accurate cuts and verticut attachments for thatching.

BUNTON CO.

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THREE-WAY HERBICIDE

LESCO Three-Way Bentgrass Selective Herbicide recently received registration from the Environmental Protection Agency for use on bentgrass as well as most other turfgrass species.

Containing the active ingredients dicamba, MCPP and 2,4-D, the herbicide effectively controls black medic, buckhorn, chickweed, clover, spurge, purslane and other common turfgrass weeds.

For other grasses, including Kentucky bluegrass, fescue, Bermudagrass, ryegrass, bahia and zoysiagrass, turf managers may choose LESCO Three-Way Selective Herbicide with the same effective active ingredients for control of an even wider range of broadleaf weeds.

LESCO INC.

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Finn Finishes First...again

After 4 years of development and testing the Finn Corporation is proud to announce the new T90 HydroSeeder. This 800 gallon working capacity model is a joint effort of field input and Finn's 50 years of experience. By combining these efforts, Finn developed the highest quality and most efficient machine in the industry. Check it out.



For all the facts about the new Finn T90 and other Finn HydroSeeders and Mulch Spreaders call or write us today.



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PRODUCT UPDATE

BUCKET FORKS



If you have a bucket loader, you can turn it into a fork lift in less than five minutes with bucket forks. No drilling, welding or bolting is necessary to attach the forks to most popular brands of loader buckets.

Once attached, the forks can lift up to 3,000 pounds. The forks can be used to move pallets of sod or fertilizer, bleachers, backstops or tarps. They detach as quickly as they attach, freeing the loader for other jobs.

C.C. BUCKET FORKS

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UTILITY VEHICLE



The Smithco Bandit, a four-wheel, allhydraulic drive utility vehicle, is designed for turf care professionals who carry heavy loads and travel rough roads.

Equipped with a durable 20 hp Onan engine that provides plenty of torque, the Bandit is designed to go over almost any terrain. Available in a choice of three beds-a deep cargo dumpbox, a rugged personnel carrier, or a versatile flatbed with stake sides-the vehicle can haul up to 1,500 pounds.

SMITHCO

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KENTUCKY BLUEGRASS

Noted for its dark blue-green color, Midnight is compatible with other darker green, lower-growing bluegrasses, and in mixtures with the strong creeping red fescues and improved II series of turf-type perennial ryegrasses. Other advantages include its dwarf growth habits, very high tiller density-which provides a thick carpet to withstand abuses of athletic fields and high traffic-drought and heat tolerance, as well as cold tolerance, strong overall disease resistance.

TURF-SEED, INC.

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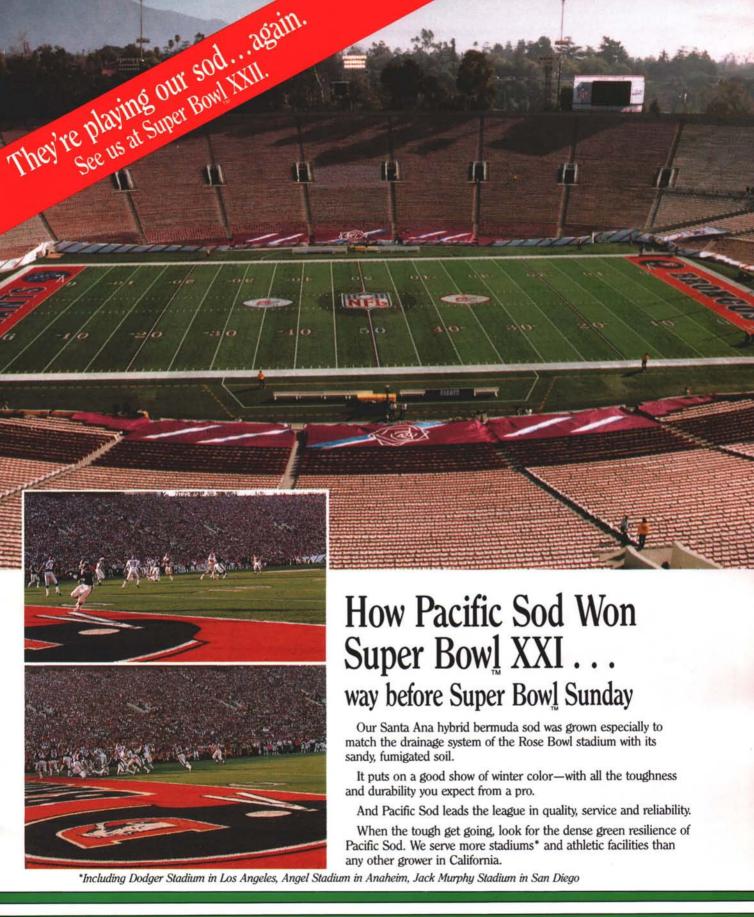
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PRODUCT UPDATE

AIR-COOLED TRACTOR



Featuring an air-cooled 24 hp twin cylinder Onan engine with cast iron cylinder liner, the Ransomes T-24 offers grounds superintendents the power needed for mowing large estates, municipal grounds, campuses, cemeteries, and golf courses.

Available with cutting decks ranging in lengths of 48, 61, and 74 inches, the tractor features bolt-on rear weights for extra steering ability. Optional wheel weights are available to increase drive wheel traction.

RANSOMES, INC.

Circle 146 on Postage Free Card

ROCK RAKE



Whether being used on large open fields, park and recreation projects, commercial or residential landscaping, the new double roller rock rakes from Glenmac, Inc. allows the moving of windrows several times while cleaning and leveling.

Available in either pull-behind or threepoint hitch attachment, in three different sizes, the double roller rock rakes can be used as an accessory to other existing rock picker models.

GLENMAC, INC.

PYTHIUM PREVENTER



Sports turf managers can now gain the upper hand in their battle against pythium blight with new Chipco Aliette, a systemic fungicide developed by Rhone-Poulenc.

Unlike conventional contact fungicides. Chipco Aliette works as a true systemic to activate a natural defense mechanism within the plant. This actually helps your turf protect itself against deadly pythium blight. One spray provides up to three full weeks of protection.

RHONE-POULENC

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GREENS CONDITIONER



Golf superintendents no longer have to rely on riding greens mowers to verticut lightly now that Jacobsen has introduced the Turf Groomer greens conditioner for its line of walk-behind greens mowers.

The Turf Groomer lifts up and cuts horizontally growing grasses and surface runners, which are then clipped by the closely following greens mower reel. The strong vertical grass resulting from regular use of the conditioner provides a smooth putting surface. Green speed is increased by as much as 25 percent without lowering cutting height or disrupting play. Green health is maintained since the cutting height does not have to be lowered in order to provide golfers with faster, smoother greens.

Circle 149 on Postage Free Card

PREFABRICATED DRAIN

Burcan Industries Ltd., Whitby, Ontario, Canada, has published an illustrated guide for installing Hitek prefabricated drainage systems. Using text combined with illustrations, the guide explains step-by-step how to properly install both fully wrapped and laminated drains.

The guide describes proper handling techniques and recommendations for better installation.

BURCAN INDUSTRIES LTD

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TURF PATCH REPAIR



Designed to start grass fast and promote strong growth in fusarium or other lawn disease patch areas, Ringer Corporation introduces Fusarium Patch, an all-in-one grass patch remedy for disease damaged lawns.

The kits contain a mixture of diseaseresistant Kentucky Bluegrass and perennial ryegrass seeds, plus an organic starting mulch with moisture retainers. The seed mixture of Rugby, Parade and Adelphi Bluegrass were chosen for their superior fusarium tolerance, and Delray and NK 200 Ryegrass for their vigorous root systems which will establish well even on compacted soils. Together, they will produce a highquality turf-grass with broad-based disease resistance and environmental tolerance.

Fusarium Patch is available in a 1.5 and 3 lb. size.

RINGER CORPORATION

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PRODUCT UPDATE

MULCH UNDERLINER

Professional landscapers have a new ally in their battle against tough, hard-to-control weeds. The Weed Arrest Mulch Underliner by Warren's Seed and Special Products Divison proved better than 90 percent effective in restricting the growth of large crabgrass, johnsongrass, yellow nutsedge, dandelion, sandbur, pigweed and six other tough, aggressive weeds, according to field tests done by Clemson University.

Made of 100 percent premium polyester

to resist sun, the soil environment and harsh chemicals, the underliner is needlepunch bonded, making it soft and flexible and easy to install. It conforms smoothly to landscape contours. The bonding also permits water, fertilizers and air to pass through so soil and plantings stay healthy. Its high co-efficient of surface friction keeps bark, wood chips and other mulches in place and helps prevent mulch erosion on tough grades.

WARREN'S SEED & SPECIAL PRODUCTS DIVISION

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