

PRODUCTS

Toro unveils unique new greens aeration equipment

ORLANDO, Fla. — The Toro Co. introduced a revolutionary aerator that uses high velocity water to aerate putting surfaces.

The HydroJect 3000 "has the potential to cause significant change in the way cultural aeration practices are performed by superintendents today," says Mike Hoffman, director of commercial marketing. The aerator delivers water at 5000 psi to penetrate deeper into the soil than conventional hollow tine aerators with less injury to the plant and root, without disturbing the playing surface.

"The key is that play does not have to be interrupted," adds Hoffman. "In the past, aeration was generally limited to spring and fall application...because the HydroJect 3000 does not disturb the surface, you no longer have the problem of mixing golfers with aeration. Now both can occur on the same day."

The HydroJect is capable of reaching depths of four to eight inches with a single shot of water and depths of beyond 20 inches if multiple shots are used. The aerator uses about 150 gallons of water to aerate a 7,000 sq. ft. green. It has an aeration width of 33 inches, with 11 nozzles spaced every three inches. It is powered by an Onan four-cycle, air-cooled, 24-hp engine capable of four hours of operation without refueling. □



The Toro Company's new HydroJect 3000 (seen here) "has the potential to cause significant change in the way cultural aeration practices are performed by superintendents today."

RESEARCH

Company buys bio product

SAN DIEGO, Calif. — Mycogen Corp. recently acquired the patent rights from Michigan State University for development of a biological control product for *Poa annua* (annual bluegrass).

The bacteria is called *Xanthomonas campestris*. Paul Zorner, director of bio-herbicide research, says, however, that the pathogen has not yet been identified.

"We have all of our permits submitted to the federal government and to each state where we want to release the organism," says Zorner. The company plans a 10-state/13-site

field testing program.

Current testing has been conducted in the company's San Diego and Ruston, La. laboratories and greenhouses.

Zorner says the xanthomonas is "very specific to annual bluegrass. Very few other species of plants are susceptible to this particular disease. That's the idea of bio weed control; it's very, very specific."

Zorner says that if all goes well, Mycogen would consider obtaining an experimental use permit next year, which would allow it to treat several acres of poa-infested turf.

In March, Mycogen reported receiving an experimental use permit for its MVP bio-insecticide, a product targeted for control of the diamondback moth and other caterpillar insects that attack cabbage, broccoli, lettuce and a range of other crops.

Based in San Diego, Mycogen also markets M-One insecticide, a *Bacillus thuringiensis* product for control of Colorado potato beetle larvae.

In January 1990 Mycogen purchased the Commercial and Agricultural Products Divisions of Safer, Inc. for \$2.25 million. □

RESEARCH

Bermuda first over bentgrass in South

ORLANDO, Fla. — The stresses faced by creeping bentgrass in the deep South are simply too overwhelming to make it the turf of choice there, according to Dr. James Beard of Texas A&M University.

"I think you can have some success initially," says Beard of southern creeping bentgrass greens, "but really the bottom line is what happens in that fourth, fifth, and sixth year. I think it's an awfully, awfully difficult thing to accomplish."

Beard says, "We must keep in mind that one is a warm-season species and one is a cool-season species, and that is a big difference in many, many different ways."

Florida is about as far away from the traditional adaptation zone for bentgrass as one can go, notes Beard. "And that's a big distance to overcome in terms of all the changes in environments and differences that exist in that distance." These include different metabolism, root systems, tolerances, cultural, irrigation and temperature requirements.

The farther you go away from the adaptation zone, says Beard, the more difficult it is to grow bentgrass. As a result, additional pressure exists for cultural practices to be successful.

"So, in a given situation, depending on environmental stresses or whatever stresses you have relative to temperature, this can affect the potential success you may have, because of the great disparity in stress tolerance between these two grasses."

Beard says the extension of bentgrass into the deep South so far is "really amazing, considering its normal range of application," but concluded, "I never want to say it can't be done or won't be done in the future...but

at this date and time and level of technology, I wonder whether it's really a wise way to go.

"I know there are great pressures out there to get away (from bermuda), but sometimes some people need to have some common sense talked into them."

Beard made his comments at the 61st annual Golf Course Superintendents Association of America meeting recently. □

RESEARCH

Support for bio-controls is meeting resistance in Europe

LONDON, England — Reuters News Service recently reported hostility toward biological research in the United Kingdom and West Germany. According to the report, genetic engineering firms are moving overseas to escape the red tape and hostility.

The regulatory environment in Europe is hindering bio research, and companies are going where they can proceed with minimal interference.

"Research will follow wherever the manufacturing and market is, and in-

creasingly the manufacturing and markets are overseas," says Nigel Poole, manager of bio-technology and regulatory affairs for Britain's Imperial Chemical Industries.

In West Germany, opposition is based on fear of the unknown, long-term implications of genetically altering a cell, fearing that organisms which have been tampered with in labs could run rampant when released into the environment.

Bayer AG and BASF AG, two large West German chemical companies, have

moved their bio-technology research operations to the U.S.

Hoechst AG is reported to be following close behind in the migration to friendly shores. A West German court recently blocked it from making genetically engineered human insulin.

The court decision means that no bio-engineered products can be produced in West Germany. But sources say moving operations to foreign soil will not automatically make it easier to sell biological products back home. □

CREEPING BENTGRASS BERMUDAGRASS

Heat tolerance	Fair	Superior
Summer rooting	Fair	Good
Wilt-stress tolerance	Poor	Superior
Drought Resistance	Fair	Superior
Wear tolerance	Fair	Excellent

TEMPERATURE DIFFERENCES:

Optimum temp.	60° to 70°	80° to 95°
Sub-optimal growth at	45° to 60°	65° to 70°
Root growth	50° to 60°	75° to 85°
Shoot growth	60° to 75°	80° to 95°
Shoot restriction	75° to 90°	95° to 100°
Root growth cessation	80°	105°
Death	105°	120°

RESEARCH

Pesticides pose no threat to groundwater



Dr. Harry Niemczyk: people need confidence in lawn care operators.

WOOSTER, Ohio — Scientists at The Ohio State University have found that there is little or no downward movement of pesticides applied to lawns and golf courses.

Dr. Harry Niemczyk and Adam A. Krause say the findings could help allay concern that lawn care chemicals are leaching into the soil and contaminating groundwater.

"Whether on 'Geraldo' or on '60 Minutes,' people have been saying that pesticides applied to

turfgrasses are getting into the groundwater," says Niemczyk. "Our data says that's just not true."

Niemczyk and Krause applied six herbicides and nine insecticides to turfgrasses in separate, one-year experiments. He says that almost all pesticide residues remained in thatch, and that there was little or no leaching of pesticides in their field studies. (Runoff or homeowner exposure to lawn care chemicals were *continued on page 12*)

GCSAA show attendance soars to a record 17,500

LAWRENCE, Kan. — Attendance at the GCSAA International Golf Course Conference and Show reached a record high of 17,500, a 20 percent increase over 1989 attendance.

GCSAA director of communications Pat Jones cited the increased popularity of golf and the show's Orlando, Fla., location as two keys to the high attendance figures.

"There's so much interest in the business because it's crucial to the Florida economy," says Jones. "There was also increased interest from golf course owners, operators and architects. That doesn't represent a huge number, but we're glad to see it."



The GCSAA estimates attendance from 25 European, Canadian and Pacific rim countries at 1500. Ideally, says Jones, foreign interest will increase each year. "We're certainly hoping," says Jones, "that with continued developments in Eastern and Western Europe through 1992 that golf is going to find a bigger place in Europe."

Jones reports that the

show's 552 exhibitors were thrilled with the higher traffic on the show floor, and superintendents expressed delight with the Orlando area and the way the show was set up.

"We were more specific in the educational programs," he notes. "In the past we've offered the op-

portunity to go from very general turfgrass maintenance classes to more specific classes. This year, with the addition of some of the environmental topics that we discussed and some of the very technical and specific regulatory issues they face, we were able to offer them some very detailed information that wasn't available in the past."

Jones says improvements and changes in next year's Las Vegas conference will be based on member surveys.

"We will continue to offer as many duplicate sessions as we can," Jones promises. □

GOLF

Very possible to 'max out' on green speeds, super says

PALM DESERT, Calif. — The extra maintenance required to maintain the fastest putting green speed possible has narrowed the margin between green survival and failure, says Bob Stuczynski, superintendent at Ironwood Country Club here.

As Stuczynski says—and as most supers would concur—closer mowing causes shorter roots and increased summer soil temperatures. The thinner turfgrass stand also encourages more weed problems, which lead to more herbicide use.

NIEMCZYK from page 11 not examined.)

"I hope that people will have confidence that what they're doing to lawns is not contributing to groundwater contamination," concludes Niemczyk. □

Stuczynski finds that some superintendents are inclined to omit the green's minimal nitrogen needs rather than anger golfers. "The major problems with low nitrogen," explains Stuczynski, "are more weeds and moss and more blemishes which heal slowly. Without new growth that can be mowed into a smooth surface, the demand for closer cut increases."

Stuczynski thinks the key is that players must realize what can and cannot be done.

"The golf course superintendent is willing to provide whatever the golfer likes," says Stuczynski, "if it is feasible without excessive failures. Extremely close mowing will increase problems. Needless to say, no one suffers more than the golf course superintendent when turf fails." □

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INSURANCE

Tank insurance required soon

ORLANDO, Fla. — Is underground storage tank insurance a big deal? It must be, since the Environmental Protection Agency has set an official deadline for financial responsibility for groundwater contamination caused by leaky containers: October 26, 1990.

Thankfully, the GCSAA has made the insurance for this latest government assault bearable with an affordable insurance program.

Financial Guardian of Kansas City is the underwriter for the insurance. Cost of coverage will range from \$431 per year up to \$1685. Premiums are reduced by seminar and self audit credits. The coverage provides \$1 million in aggregate coverage, and includes a \$1000 minimum deductible and third party liability coverage.

Bare steel tanks more



Richard Shanks: underground tank insurance deadline is October 26, 1990

than 20 years old will not be covered. According to Richard Shanks, a Financial Guardian spokesperson, no company but Financial Guardian will insure a bare steel tank that is more than 15 years old.

"Make no mistake," says Robert Ochs, GCSAA legal counsel, "the EPA will enforce the law, and it will be very costly once it's enforced." □

EQUIPMENT

Avoid 'sticker shock' by buying used trucks

MIAMI — Many landscapers today can be torn between their need to replace or add trucks and their accountants' warning to conserve cash.

The cost of purchasing new trucks has resulted in a business version of the "sticker shock" so familiar to Americans shopping for new cars. An alternative to this problem could be purchasing used trucks.

"Postponing or foregoing the purchase decision is a form of Russian roulette," notes Glenn Schneider, vice president of Ryder Truck Rental. "Aging vehicles break down more often and are more costly to maintain. Moreover, customers can be lost when service is delayed because of disabled vehicles or insufficient fleet size.

"A truck that has been serviced at regular inter-

vals can provide many years of useful, inexpensive service."

When considering the purchase of a used truck:

- make sure to see a dated maintenance log, showing when and what parts were replaced;

- match specifications with your intended use; and

- make sure the vehicle complies with local height, length, weight and emissions control regulations.

Savings for a well-maintained four- to five-year-old truck or tractor will typically range from 40 to 60 percent of its cost when new.

Ryder has a free brochure "How to Buy a Used Truck" available by calling (800) 446-5511 or writing: Used Vehicle Sales, P.O. Box 020816, Miami, FL 33102. □

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GOLF

'Get tough!' in negotiations for contracts, attorney says

ORLANDO, Fla. — An Atlanta attorney-at-law advises golf course superintendents to obtain as many advantages and benefits as possible during contract negotiations.

"You need to draft a contract," says Charles Palmer. "You'd be surprised how many things you can sneak into a contract...either by slanting a term in a particular way if you write the contract, or by including things that were never discussed during the negotiations but that look like they would be part-and-parcel of any normal contract."

Palmer further advises superintendents to be attentive to what, exactly, goes into their job descriptions.

"When you draft the contract," says Palmer, "make sure you include as many things as you can

think of that you're going to be responsible for, the things that are going to be your duties."

Additional contract provisions Palmer finds important are indemnification clauses and arbitration clauses.

With an indemnification clause, says Palmer, "someone else is assuming any liability you may have for a personal injury or property damage you may have caused a third party."

According to Palmer, an arbitration clause basically means that "if there's a dispute under the contract, you resolve it in arbitration rather than in the courts." It is a clause which Palmer says "takes a lot less time and a lot less money."

He made his points on the subject at the Orlando GCSAA convention held in February. □



Charles Palmer: Superintendents should draft employment contracts.

AWARDS

Free airfare to Expo on the line

CLEVELAND — Nominations are now open for LANDSCAPE MANAGEMENT'S fourth annual "Man of the Year" award. The contest is jointly sponsored by this magazine and the Professional Grounds Manage-

ment Society.

First prize is a "Landscape Manager of the Year" plaque and free roundtrip air fare to the Green Industry Expo Nov. 12-14 in Nashville, Tenn.

To obtain entry forms, send your name and address to: Landscape Manager of the Year, PGMS, 12 Galloway Ave., Suite 1E, Cockeysville, MD 21030 or mail in the form on page 22 of this issue. □

ORNAMENTALS

Demographics to boost business in flower markets

ST. CHARLES, Ill. — There will be more opportunities for using flowers in the landscape, thanks to emerging demographic shifts.

Herman de Boon, general manager of Cebeco Group told a GrowerExpo audience that—as more countries enter the world markets in the 90s—new

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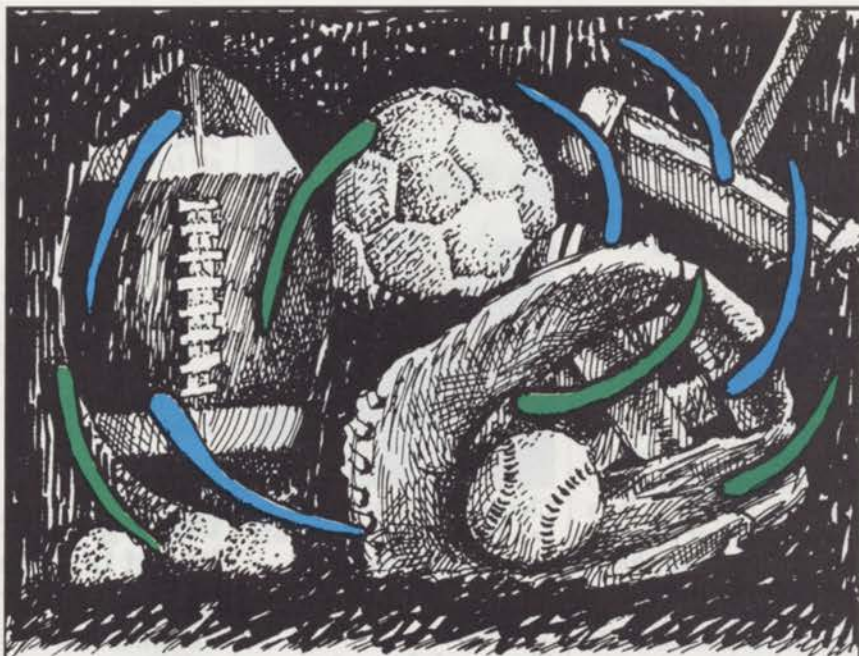
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opportunities, new threats and more competition will follow in a narrow timespan.

According to de Boon, world urbanization will increase from 40 percent in 1980 to 47 percent by the year 2000. "That's a positive development for flower consumption," predicts de Boon.

"Another important factor is age distribution. There will be a shift in the age distribution in Europe and in the United States. There's a trend to fewer younger people and to more elderly people, and this trend gives an increase in consumption." □

EQUIPMENT

Avoid pitfalls of bidding process

ORLANDO, Fla. — Bidding properly for golf course equipment requires much more than kicking a few tires and driving a mower out of the showroom.

The demand for quality equipment and better-looking golf courses is higher than ever before. Buyers are better educated and more concerned with getting the most for their equipment dollar.

"Conditions that used to be required by private clubs are now the norm for the public clubs," says Daniel Coffin, regional sales manager for Jacobsen Textron. "Therefore, the standards must be higher and the quality of tools must be higher."

Coffin believes that two pitfalls trip up buyers most often. "Not often enough are the correct people brought in during the decision process. Many times the superintendent or turf professional is not involved in the bidding process.

"Secondly," continues Coffin, "too much emphasis is placed on the initial cost; therefore the specifications are written with only minimal requirements. As a result, you get the minimal quality equipment trying to give you maximum quality results." □

Pa. Turnpike gets beautification plan

HARRISBURG, Pa. — The Pennsylvania Turnpike Commission has begun a landscape architecture beautification project along two major expressways.

Landscape architect Donald T. Gilligan says safety, low maintenance, community appearance, roadside aesthetics and environmental sensitivity are motivating factors for the two projects. Work will commence along the proposed Beaver Valley and Amos K. Hutchinson Expressways.

Two major tenants of the proposed plan are:

1. Paved road shoulders and seeded areas will provide a 30-foot clearance allowing for sunlight to help de-ice. The proposed clearance areas will also reduce the threat of falling limbs and trees, and provide an

adequate field of view for wildlife movement and safe sight distances.

2. Installation of plant material to provide a visual buffer near homes where construction will affect the overall appearance of the area. Efforts are being taken to advise and work cooperatively with the contractors so that maximum existing vegetation and trees at critical areas will not be removed.

"We hope to provide visual diversity, reducing monotony and enhancing views from the toll road," says Gilligan.

"We'll be using birdsfoot trefoil, switchgrass and wildflowers in roadside areas."

The projects are to be funded directly by turnpike monies, and not by tax dollars. □

EVENTS

APRIL

17-18/23-24: Rain Bird Contractor Business Development Seminars, Charlotte, N.C./Southern California. Contact your local Rain Bird distributor.

21-25: South Florida Landscape Trade Show, Radisson Centre, Miami. Contact: Charlye Roberts, (305) 235-2035

26-27: Golf Course Development, Stouffers Esmerelda Resort, Indian Wells, Calif. Contact: Conference Administrator, Inst. for International Research, 437 Madison Ave., 23rd Floor, New York, NY 10022-7001; (212) 826-1260.

27-28: California Landscape Contractors Association, Winter Tri-Board Meeting, Hyatt Regency, Long Beach. Contact:

Micheyl Barnett, (916) 448-2522.

25-29: San Francisco Landscape Garden Show, Piers 2 and 3, Fort Mason, San Francisco. Contact: Dick Turner, McLaren Lodge, Golden Gate Park, San Francisco, CA 94117; (415) 221-1310

MAY

10-12: California Council of American Society of Landscape Architects, Sacramento. Contact: Alison Dumas at (916) 621-2236.

16: North Carolina Turf and Landscape Field Day, North Carolina State University Turf Field Center and Arboretum, Raleigh. Contact: Bill Wilder, NCLCA, P.O. Box 400, Knightdale, NC 27545; (919) 266-1777.

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