

When there's a lot on the line, professionals choose TORO!



That's why TORO was a key performer at Munich, Montreal and Los Angeles

Stadiums that hosted three of the last four Olympic Games chose Toro 640 sprinkler heads for the vital task of irrigation when the eyes of the world were focused on their turf. No wonder! Toro 640s are *safe*, with a very small 2 $\frac{1}{4}$ -inch exposed surface. And they install $\frac{1}{2}$ -inch *below* grade. They *pop up* 2 $\frac{3}{8}$ " for efficient watering, then *fully retract* with heavy duty stainless steel springs. To top it all, these superior sprinklers are backed by Toro's 7-year warranty. Oh, about the *fourth* Olympic site, Moscow? Well, we really don't know, but we'd be willing to bet that the Russians wish *they* had invented the Toro 640! Toro, the leader in sports field and large turf irrigation products.



TORO

Excellence in Irrigation™

The Toro Company, Irrigation Division
Dept. LI-884, P.O. Box 489, Riverside, CA 92502

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THE DENISON DIMENSION

IN BLACK . . . AND WHITE . . .

In June '85 scientists from Michigan State University and The Ohio State University undertook a critical field and laboratory study which compared Denison's interim transplanted ornamental evergreen trees with conventionally grown specimens. Below are excerpts from their results:

PARAMETER	MEAN SAMPLE VALUE	
	CONVENTIONAL	DENISON
Size of specimens (ft.)	7	7
Basal area of branches (mm ²)	39.6	102.1
Branch length (cm)	34.1	57.2
Branch weight (kg)	6.85	17.00
Trunk size		
a. Caliper (cm)	3.5	5.4
b. Basal area (cm ²)	29.4	72.6
Trunk weight (kg)	1.27	3.05
Branch & Trunk weight (kg)	8.12	20.05
Root System Surface		
Area within the ball (cm ²)	7,958.21	30,129.71

"The observations reported here indicate the Denison interim transplant stock surpasses conventional nursery trees in every characteristic measured."

"Analysis of the roots contained in the root balls sent back to Michigan State University indicates that there is exactly 4 fold increase in fine roots in the Denison tree root ball, over a tree of similar size, grown by conventional methods, harvested with the same size root ball."

"The Denison interim transplant trunks had more pronounced taper than typicals, a feature conferring greater structural strength and tolerance for high winds."

"Morphological superiority of the magnitude demonstrated by the Denison specimens reflects a vigor and soundness implying greater resistance to insects, diseases and physiological stresses which may exist at the eventual planting site."

"The information presented in this report indicates that conventionally grown nursery stock is marketed in a distinctively juvenile stage of development, whereas Denison interim transplanted trees at marketing time have developed morphologic characteristics of mature trees."



Conventional



Denison

Data Sources: DOE Plant Research Laboratory,
Michigan State University
Dr. Alden Kelley, Cypress, CA

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If you wish a preliminary copy of this landmark study, please write or call.

DENISON EVERGREEN TREES



Austrian Pine



Colorado Spruce

THE DIFFERENCE IS IN OUR ROOTS GO FOR THE GOLD LABEL

VARIETIES INCLUDE (All trees are shipped B&B)

EVERGREEN

- Colorado Spruce (6 ft. - 13 ft.)
- Austrian Pine (6 ft. - 14 ft.)
- Scotch Pine (6 ft. - 14 ft.)
- Shore Pine (6 ft. - 14 ft.)
- Japanese Black Pine (8 ft. - 13 ft.)
- Cedar Deodar (6 ft. - 13 ft.)
- Blue Atlas Cedar (8 ft. - 13 ft.)
- Mugho Pine (18 in. - 42 in.)

DECIDUOUS

- Thundercloud Flowering Plum (2 in. - 4 in.)
- Newport Flowering Plum (2 in. - 4 in.)
- London Planetree (2 in. - 4 in.)
- Silver Maple (2 in. - 4 in.)
- Red Maple (2 in. - 4 in.)
- Norway Maple (2 in. - 4 in.)
- Crimson King Maple (2 in. - 4 in.)
- Columnar Norway Maple (2 in. - 4 in.)
- Schwedler Maple (2 in. - 4 in.)
- Scarlet Oak (2 in. - 4 in.)
- Green Ash (2 in. - 4 in.)
- Kimberly Blue Ash (2 in. - 4 in.)
- Thornless Honeylocust (2 in. - 4 in.)
- Autumn Olive (2 in. - 3 in.)
- Japanese Weeping Cherry (2 in. - 4 in.)



Call Toll Free 1-800-448-8733

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For more information phone toll free: 800-448-8733 or
mail coupon to: Bob Gillette, Marketing Director
Denison Gold Label Nurseries
P.O. Box 435, Wilsonville, OR 97070

Name _____

Company _____

Address _____

City _____ State _____ Zip _____

Phone () _____

ROOKIES

PRODUCT UPDATE

FIELD COVERS



A patented "zipper" eliminates overlap and provides a water-tight seal for athletic field covers by Putterman. The high-strength polyester fabric with PVC coating provides resistance to tears, abrasions, and punctures. The fabric coupled with the MPC Interlok (zipper) makes the field cover practical for section by section use rather than as a bulky single piece.

The covers, due to their size, can be quickly moved onto or off the field without bulky equipment. They are zipped together or unzipped easily. When zipped together, the covers provide a watertight surface to protect natural or artificial surfaces underneath.

PUTTERMAN & COMPANY

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PREEMERGENT HERBICIDE



A new clay carrier for Elanco's Balan improves spreadability, reduces dust during application, and increases calibration accuracy. The manufacturer says clay spreads more uniformly than corncob or limestone carriers.

The preemergent herbicide controls crabgrass in turf for eight to ten weeks with a single application and goosegrass in two applications. The herbicide, applied before weed seeds germinate, also controls annual bluegrass, barnyardgrass, foxtail, and other annual grasses. It

is safe for application on all established common varieties of cool and warm season turfgrasses. Reseeding of turf areas can be done as soon as six weeks after application.

A spreader setting guide, containing settings for all common spreaders, is available.

ELANCO PRODUCTS CO.

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LARGE CAPACITY MOWER



Jacobsen's new HR-15 can cut nearly a 16-foot swath through semi-formal and rough turf with three hydraulically powered 72-inch rotary decks. The decks float in front and on both sides of the tractor providing great maneuverability; they are raised and lowered hydraulically.

The mower is eight feet wide with both side decks in the up position enabling the mower to be transported over the road. Rear-wheel hydrostatic power steering reduces the uncut circle to five feet when turning.

Mowing thick turf is possible since the unit has high torque from a 236 CID diesel engine that generates 74 hp at 2250 rpm. All controls are easily operated from the driver's seat.

JACOBSEN TEXTRON

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SWIVEL JOINT UNION

Swing joints are easier to install and sprinkler heads are easier to line-up with Rain Bird's swivel joint union.

When struck by overhead equipment or foot traffic, the swivel absorbs the movement of the head and reduces the likelihood of damage to pipe laterals. Sprinkler head angles are easily adjusted on slopes. With the improved connection at the union, side inlet mounted heads can be installed without excessive digging and removed without cutting the lateral connection.



O-ring seals against the ball make the swivel virtually leakproof. The unit is constructed of durable ABS plastic.

RAIN BIRD SALES, INC.

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GROWTH REGULATOR

Reduce maintenance of utility turf areas so you can concentrate on sports turf with Stauffer's new Short-Stop. The growth regulator greatly reduces and, in some cases, eliminates the need to mow tall fescue by preventing formation of unsightly seedhead stalks. Treated areas become lush and green, not chlorotic, and grow to a shorter, more uniform height.

Short-Stop is particularly beneficial on steep slopes, along busy highways, and other hard-to-mow areas. It can be used on tall fescue in utility rights-of-way, cemeteries, airports, industrial parks, and golf course roughs. The potential for tall grass fires is also reduced since the growth regulator maintains green turf without dry seed stalks.

The product can be applied at the rate of 60 to 80 lbs. per acre within four to six weeks after the first break of dormancy. It can be used, without injury, around evergreens, deciduous trees, shrubs and ground covers. Rainfall before or during application does not reduce the product's effectiveness. Application of the granules can be accomplished with drop or centrifugal spreaders.

States that have cleared Short-Stop for use include Alabama, Delaware, Florida, Georgia, Illinois, Indiana, Kentucky, Maryland, Mississippi, New Jersey, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, Virginia, and West Virginia.

STAUFFER CHEMICAL CO.

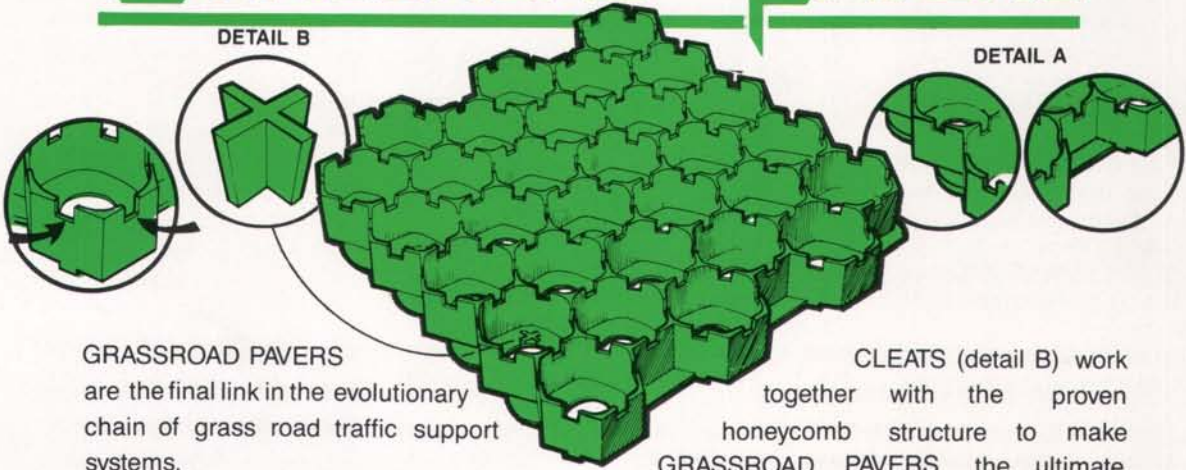
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THE "FINAL" LINK IN GRASS ROAD SUPPORT SYSTEMS



DETAIL B

DETAIL A



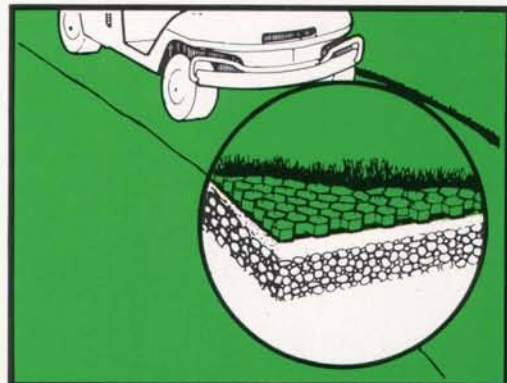
GRASSROAD PAVERS are the final link in the evolutionary chain of grass road traffic support systems.

The FLEX-LOCK nesting system (detail A) combined with the GROUND-LOCK

CLEATS (detail B) work together with the proven honeycomb structure to make GRASSROAD PAVERS the ultimate, natural grass traffic support system ever designed.



"SUPPORT YOUR LOCAL FIRE TRUCK"



"UTILITY, PICK UP AND GOLF CARTS TOO"

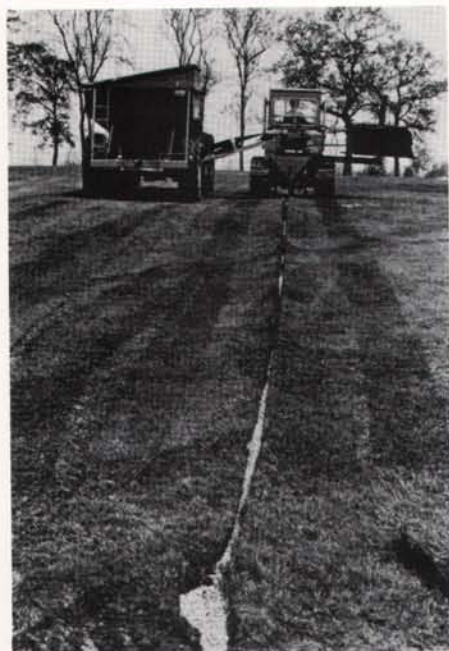
BARTRON CORPORATION

10 Hughes St., Suite A106, Irvine, California 92714, (714) 859-2705

ROOKIES

PRODUCT UPDATE

SPORTS DRAINER



When drainage is insufficient and the season is about to begin, you need a way to open up drainage without severe disruption to the playing surface. A British-made sports drainer is now available to do just that.

Mounted on an 80 hp agricultural tractor, the drainer cuts a trench, removes the soil, feeds a pipe into the trench, backfills with gravel, and finishes the surface with a soil. The trench is only one-and-a-half inches wide. The depth of the trench is controlled by a laser guidance system which ensures a proper grade for the pipe despite an undulating surface.

The drainer will lay pipe up to 4-1/3 inches in diameter and 20 inches deep. To prevent siltation, a filter can be installed.

D.W. CLARK

Circle 314 on Postage Free Card

FIELD COLORANT

Assure uniform application of fertilizers and pesticides by coloring dormant or injured turf with Blazon from Milliken Chemical. Blazon makes stable mixes with all water-base herbicides, fungicides and insecticides. It comes as a ready-to-use liquid that requires only mild agitation for dispersal.

Blazon shows the applicator exactly where he has sprayed so wasteful overlap

and overapplication are avoided. The color and shade of the product are adjustable by rate with the darkest green derived from an application of 16 ounces per acre for low-cut turf and 35 ounces per acre for two-inch tall turf.

Colorants have also been proven useful for helping turf absorb the sun's rays to speed up germination of seed and to bring turf out of dormancy faster.

MILLIKEN CHEMICAL

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LARGE AREA THATCHER



Four thatcher models for large areas are available from Lely. Models range in width from seven to 20 feet while operating, yet measure only seven feet during transport. The number of tines can be tripled to reduce the number of passes and save time. Thatching severity can be adjusted by five tine positions.

Lely's thatcher lifts thatch from turf, stands grass up for better mowing, knocks down mounds of dirt, improves water and fertilizer penetration, and prepares old turf for overseeding. Three of the four models can be operated with 15 hp tractors, the fourth requires a 20 hp tractor. All models are attached by a three-point hitch. Moving parts are virtually eliminated, the unit depending instead on the spring action of the tines.

LELY

Circle 309 on Postage Free Card

MASTER IRRIGATION SYSTEM

Get control of a complex irrigation system with the Computer Oriented Programming System (COPS) from Buckner. Now available after five years of development, COPS is a fully integrated



system using software designed for an IBM compatible personal computer. The program can be adjusted for various seasons or activities.

The personal computer can be taken off-line temporarily after the program is stored in field controllers or on floppy disks. Perhaps best of all, the user does not have to be a computer programmer to understand and use the system since all commands are listed in a menu and are easy to enter.

COPS can generate a record of operation for each station of each field controller as part of a diagnostic routine to check the system. It can manage an integrated system of rotors, spray heads, and drip irrigation.

BUCKNER

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CLUB CAR CARRYALL



Designed to carry people, the Carryall II from Club Car, Inc., is versatile and practical. The body, truck bed, power and drive train, and accessories have been designed to enhance performance, reliability, and durability. The bed is constructed of light-weight, yet durable aluminum double walls. A ramp for fast loading and unloading is easily handled by one person.

Features include a 1,000 lb. load capacity, 341 cc, four-cycle gas engine, a standard trailer hitch with a towing capacity of 1,000 lbs. A "true balance" suspension levels loads and provides sure traction.

CLUB CAR, INC.

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CONGRATULATIONS!!

MICHAEL BRENNAN

Landscape and G.C. Superintendent

BRIARGATE, Colorado Springs, CO

BUD VERDEN

G.C. Superintendent

SAN MARCOS GOLF CLUB, Chandler, AZ

MARCIE LOMELI

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ROXBURY PARK, GREYSTONE MANSION

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Chuck Clark and Tommy Anderson at **THE BROADMOOR RESORT** in Colorado Springs (54 Holes)

•Jim Ward and Ken Novac at the **ENCINO G.C.**, Los Angeles •David Hughes at **MOUNT PROSPECT G.C.**, IL

•Peter Voykin at **TWIN ORCHARD G.C.**, Chicago (36 Holes) •Richard Gineven at **WILSON G.C.**, City of Los Angeles •Harry Kennedy at the **HARDING G.C.**, City of Los Angeles •Richard Scholes at **RANCHO MURIETA G.C.**, CA

•Michael Bavier at **INVERNESS G.C.**, Palatine, IL •Brad Johnson at the **RAVINIA GREEN G.C.**, Chicago •Howard Hamada at **PEARL G.C.**, Honolulu, HI •Ray Twombly at **RANCHO EL MIRAGE G.C.**, Sun City, AZ

•Scott Johnson at **TROPHY CLUB**, Roanoke, TX •Harry Kennedy, **GRIFFITH PARK**, City of Los Angeles •John Anders, at **ALLERGAN**, Irvine, CA •Bill Cobb at **TRILAND DEVELOPMENT**, Dallas, TX

•Mike Prevost at **FEDERAL EXPRESS**, Nashville, TN •**MARY KAY COSMETICS**, Dallas, TX

•TRW, San Diego, CA

Sorry, Joe, we just can't enter them all



MOTOROLA

WE SET THE STANDARDS

"There's a lot of talk about computerized irrigation and its place in golf/turf irrigation, but who really has the products and systems we need now?"

While Others Just Promise—MOTOROLA Delivers

MAGIC CARPET FLOATS AT UNIVERSITY OF NEVADA



Gaming figure Sam Boyd cuts the ribbon to the new Magic Carpet field at UNLV as UNLV President Robert Maxson (right) and Stadium Director Dennis Finrock assist.

Growing turf in the desert for six home games a year didn't make sense to Dennis Finrock, executive director of the football stadium at the University of Nevada, Las Vegas. The artificial turf installed previously was quickly destroyed by the sun's intense ultraviolet rays. So, putting down another carpet didn't make sense either.

More than 30,000 fans expected the University of Nevada-LV to play and win each fall. Finrock also wanted to use the stadium for mud bogs, tractor pulls, and moto-cross races he knew were popular and profitable. To cover the field for each event cost an estimated \$25,000 to \$40,000. Finrock listened with interest when Monsanto salesmen came up with a unique solution—a removable field surface called the Magic Carpet. The unique field system was being used at the Pontiac Silverdome, home of the Detroit Lions. All he needed was \$1.2 million and his problems would be solved.

High rollers are common in Las Vegas and, fortunately for Finrock, gaming figure Sam Boyd wanted to help sports at UNLV. So, for the needed amount UNLV got its removable field and Sam Boyd now has a stadium named after him, the Sam Boyd Silver Bowl.

"We're really excited about being the first outdoor stadium to install this system," Finrock said when the field was rolled out for the first time in August.

The entire field of AstroTurf-8 is rolled up on a steel core when not in use and stored at the side of the field. Dozens of air jets float the carpet so crews and winches can move the surface into position on the field and back onto the steel core when finished.

The Magic Carpet system will allow UNLV to generate revenues for further capital improvements, says Finrock, including a paved parking lot, improved sound system, a new scoreboard, locker room renovation, and new parking entrances and exits.

Football coaches and players have told Finrock the new surface is a great improvement over the previous one and has more bounce and give.

SCOREBOARD

CLASSIFIEDS

CLASSIFIED RATES: \$35.00 per inch payable in advance. One inch minimum. There are about 50 words per inch. Classified advertising is not commissionable. Ads using special borders will be billed at display rates. Blind box numbers are available. Replies to all box numbers should be addressed to **sportsTURF**, P.O. Box 156, Encino, CA. 91426-0156.

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CAMBRIDGE SOIL SERVICES
(205) 492-7847**

BUYERS WANTED If you have something to sell to other sports turf managers, the classified section of **sportsTURF** is the place to do it. It's a smart way to advertise consultant services, equipment for sale, help wanted, or even personals.

JOB SEEKERS WANTED Get the best job you can by running a blind box in the SCOREBOARD section of **sportsTURF** magazine. You have skills, market them for the highest bidder.

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RANSOMES DISTRIBUTORS TREATED TO ENGLAND



U.S. Ransomes officials visit the headquarters in Ipswich, England. Pictured (left to right) are New Jersey distributor Steve Willand, U.S. President Helmut Adam, Washington distributor Bob Erickson, and U.S. Executive Vice President Dick Lehman.

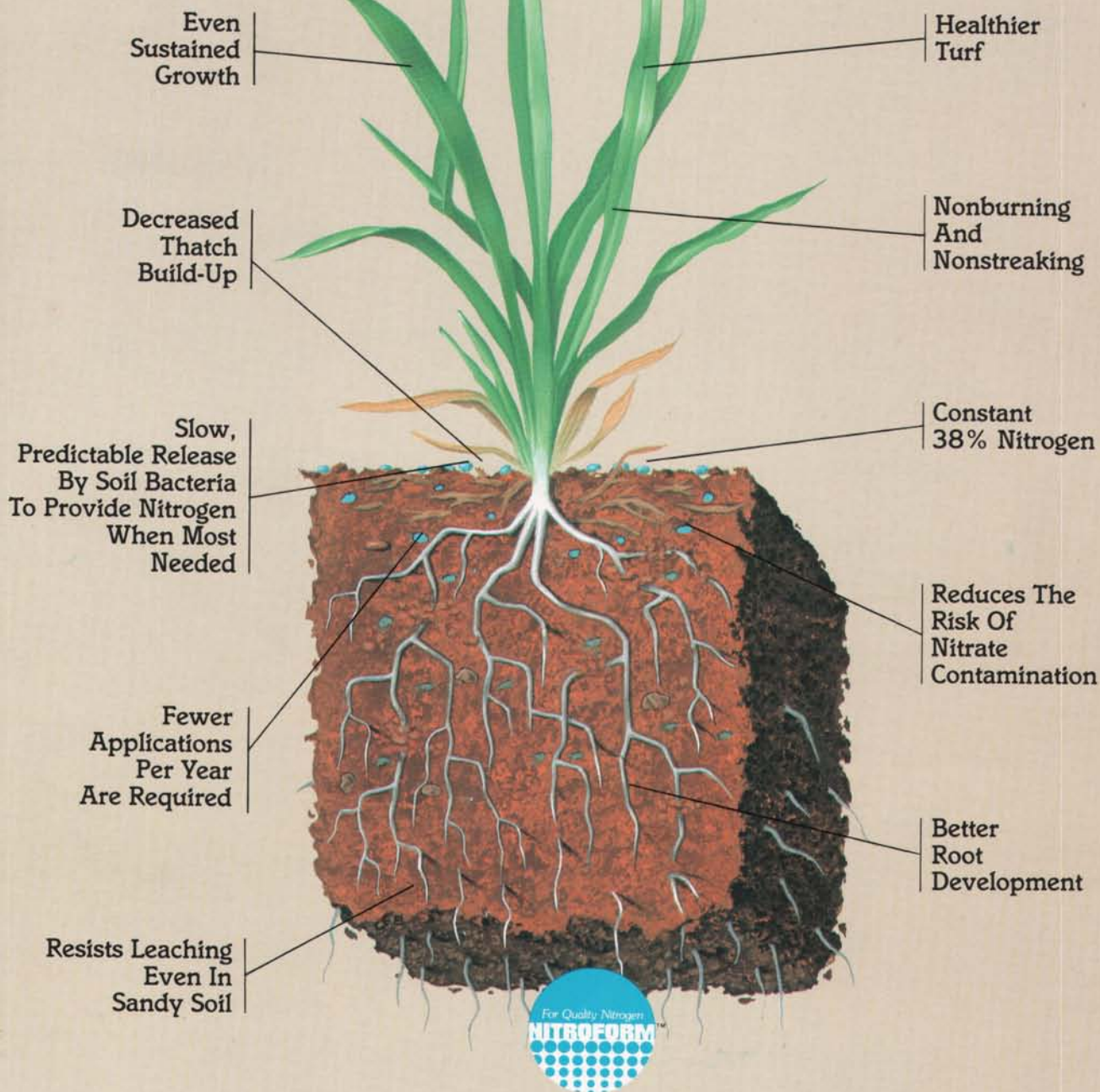
The roots of the Ransomes companies are planted solidly in Ipswich, England, at the Ransomes Sims & Jefferies production facilities. So it was only natural for North American Ransomes Inc. to take 20 of its top distributors and their wives on a journey there this fall, especially after a record sales year.

Led by Vice President Dick Lehman, the group toured the 150-year-old Ransomes facility, attended the Institute of

Groundsmanship International Exhibition at the Royal Windsor Racecourse, visited Brighton to see the imaginative work of the prestigious seaside town's parks department, and enjoyed an afternoon sightseeing in historic Cambridge.

The North American visitors were given an opportunity to meet and exchange ideas with several of their English counterparts and to discuss emerging technologies in the turfgrass industry.

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