This is

Warren's®

ADVENTURE

Turf-type Tall Fescue

Rated better than its top competitors.

<table>
<thead>
<tr>
<th>Variety</th>
<th>Turf Quality</th>
<th>Spring Color</th>
<th>Brown Patch Resistance</th>
<th>Pythium Resistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Warren's® ADVENTURE</td>
<td>6.8</td>
<td>6.5</td>
<td>7.8</td>
<td>8.0</td>
</tr>
<tr>
<td>Apache</td>
<td>6.7</td>
<td>*</td>
<td>6.5</td>
<td>5.0</td>
</tr>
<tr>
<td>Mustang</td>
<td>6.6</td>
<td>*</td>
<td>6.0</td>
<td>6.3</td>
</tr>
<tr>
<td>Olympic</td>
<td>6.5</td>
<td>5.8</td>
<td>5.8</td>
<td>5.3</td>
</tr>
<tr>
<td>Jaguar</td>
<td>6.1</td>
<td>*</td>
<td>7.3</td>
<td>6.0</td>
</tr>
<tr>
<td>Rebel</td>
<td>5.9</td>
<td>7.4</td>
<td>6.5</td>
<td>6.0</td>
</tr>
<tr>
<td>Hound Dog</td>
<td>5.9</td>
<td>*</td>
<td>6.2</td>
<td>6.2</td>
</tr>
<tr>
<td>Falcon</td>
<td>5.8</td>
<td>5.6</td>
<td>6.3</td>
<td>7.0</td>
</tr>
<tr>
<td>Kentucky 31</td>
<td>3.4</td>
<td>4.0</td>
<td>6.5</td>
<td>6.8</td>
</tr>
</tbody>
</table>

SPECIFICATIONS

| Mowing Height | 1¾ to 2½” on irrigated turf, 2” on non-irrigated turf, dependent upon rate and rainfall |
| Fertility Requirements | 2-3 pounds of N per year per 1000 square feet |
| Seeding Rate | 5-7 pounds per thousand square feet |
| pH Tolerance | Ranges of 6.7 to 8.5 |
| Shade Tolerance | Up to 80% shade at 2½” mowing height. The blade becomes narrower in the shade |
| Germination Time | 7 days is normal at 70°F. Responds better in high soil temperatures than bluegrass |
| Heat Tolerance | Excellent. Far superior to ryegrass or bluegrass |
| Cold Tolerance | Much better than perennial ryegrass |
| Fungus Susceptibility | Superior resistance to brown patch and red thread. No mildew seen in shade. Good crown rust resistance |
| Weed Resistance | denser than competitive brands. Very tolerant to herbicides, particularly compared to creeping red fescue |

No matter what demands you put on Warren’s® new ADVENTURE Turf-type Tall Fescue — turf quality, color, density, texture, toughness, heat and drought tolerance — you can count on performance that’s proven superior against leading competitors.

The finer blade of ADVENTURE provides a denser, more attractive turf than the older unimproved varieties. It requires less water and fertilizer than Kentucky Bluegrass or perennial ryegrass and is suited for heavy shade conditions as well as full sun.

In comparisons to “cool season grasses” ADVENTURE survives much better in the “transition zone” of the U.S. where it is often very hot and droughty. Wear tolerance for athletic fields, especially in the transition zone, is far superior to the old tall fescues.

The superior performance and quality of Warren’s® ADVENTURE has made it one of the leading brands of Turf-type Tall Fescue on the market. For more information, contact your Warren’s® Turf Professional, Warren’s® Seed Supplier, or call 1-800-828-TURF (8873). In California call 1-707-422-5100.

Wherever you put down roots, go with the PRO’s.

Warren’s®

Turf Professionals

7502 South Main Street, Crystal Lake, Illinois 60014

Warren’s offers only professional turf products.
**The hot Japanese import.**

When Japan's largest fertilizer supplier, Zen-Noh, needed phosphate rock to make fertilizer, they came to ESTECH. Through our joint venture at the Watson Mine in Ft. Meade, Florida, we helped Zen-Noh import over 600,000 tons of phosphate rock into Japan last year. Which in turn grew a lot of grain. Which in turn fed a lot of people. You'd think we would have shared this claim to fame before now. But that's the secret of our success...

**At ESTECH, we don't talk. We just do.**
1984 PGA putts on PENNCROSS

Shoal Creek, Alabama

At the rugged Shoal Creek course, host of the 1984 PGA Championship August 16-19, 1984, the touring professionals will again be putting on Penncross creeping bentgrass. Penncross and Penneagle, the Penn Pals, are no strangers to the pros. Most of the recent major championships have been played on one or the other. The Western open at Butler was played on Penneagle fairways and greens. The 1983 US Open at Oakmont was played on Penneagle tees, fairways and greens. Maybe you saw the sixty-foot putt on Penneagle.

So, when the Shoal Creek course was designed, it's no wonder Penncross was specified for the putting surface. It was a 'natural' to choose Penncross bentgrass, with its glorious history, for a course with a sparkling future!

The PENN PALS

Penneagle's Oregon certified blue tags qualify for cash awards to qualifying turf organizations for turf research. Call our toll-free number for details.

Marketed by TEE-2-GREEN Corp., PO Box 250 Hubbard, OR 97032 1-800-547-0255 TWX 510-590-0957

Circle No. 132 on Reader Inquiry Card
Bayleton is preventative

**Problem:** I recently heard that Bayleton would prevent Fusarium blight, but could not cure it. Is there more research on this subject? (Michigan)

**Solution:** Mobay's technical representative indicated that Bayleton will work best as a preventative when applied about 30 days before the incidence of disease and followed up with a second application after 30 days. So far, it has not shown any curative action and no additional research is being planned.

Yellow oxalis is stubborn

**Problem:** I manage a four-acre property and have tried to get rid of yellow oxalis growing within mesembryanthemum for some time with only spotty success. We have sprayed magnesium sulfate, Roundup and others and have only killed the flowers and stems, but not the bulbs. Can you recommend a herbicide and/or application procedure that may help stop this perennial from reoccurring. We believe our pest is Oxalis pes-caprae (Bermuda buttercup). (California)

**Solution:** Oxalis sp. is considered to be one of the more difficult to control broadleaf weeds. Reports suggest that application of herbicides, such as Trimec Turf Ester, Weedone DPC or Professional Turf Herbicide 123, can provide satisfactory control of yellow woodsorrel (Oxalis stricta). Since you are not very sure about the Oxalis species you are dealing with, I would suggest applying and determining the efficacy of the products on Oxalis sp. in a small area before using it in larger areas. The following information should help you to verify the species.

The Bermuda buttercup (Oxalis pes-caprae syn. O. cernua) is a winter-blooming weed. It is the only tender, yellow flowered, stemless Oxalis in cultivation that has clusters of flowers; others have solitary flowers. It has scaly bulbs, a deep, thick tap root, and very long-stalked leaves with three obcordate leaflets fringed with hairs. Flowers are about 1-1 1/2 inches wide and bright yellow.

Herbicide application should be made during early spring or late fall when the weeds are actively growing. Repeat application may be necessary for satisfactory results. These herbicides contain ester formulation of 2,4-D which can volatilize and may cause injury on non-target, desirable plants. Therefore, be careful while applying these around ornamental plants. Read and follow label specifications for further details.

From asphalt to turfgrass

**Problem:** At my place of employment we are planning an expansion of turf and/or landscaping in areas formerly covered by asphalt. Are there any precautions that should be taken, such as soil replacement, to avoid possible contamination of the root zone by oils or residues having leached into the subsoil? If so, how deep should the soil be replaced from these areas for trees (probably oak) and turf? (Indiana)

**Solution:** In an area which was formerly covered by asphalt, I would suggest that you take the following precautions before establishing any turf or landscape plants.

First, try to find out whether any total control (nonselective) herbicides were used in the area before the asphalt was laid. If so, depending upon the product and rate of application, the materials may still persist. If the materials are known, have the soil tested for residual concentrations which would affect the growth of plants.

If information concerning herbicide use cannot be determined or as a further precaution, I would suggest that you perform a radish and ryegrass seeding bioassay either directly in the field or in the laboratory using the soil in question. Sample the soil at various locations and depths. Testing soil to a depth of 10 inches is usually sufficient unless herbicide residues are found.

If herbicide residues or oil are found, the removal of 6-10 inches of soil is usually sufficient to replace the affected soil. Add new topsoil and till into the underlying soil.

If necessary, add topsoil in layered increments, tilling between layers. Planting the trees in a mound of soil above grade will provide further protection from traces of herbicide in the soil. If the bioassay tests indicate that the soil is free from contamination, then pursue the soil improvement, planting, etc., based on soil test results and recommendations which can improve the soil.

Problems & Solutions continues on page 65

Questions should be mailed to Problem Solver, Weeds Trees & Turf, 7500 Old Oak Boulevard, Cleveland, Ohio 44130. Please allow 2-3 months for an answer to appear in the magazine.

Balakrishna Rao is plant pathologist and Thomas Mog is pest management specialist for Davey Tree Expert Co., Kent, OH.
The Professional Lawn Care Association of America
1984 Conference & Trade Show
November 12-15, Tampa, Florida

PLCAA '84 Tampa
NOVEMBER 12-15

MORE IN 84! Mark your calendar. It's not too early to start planning for the lawn care industry's biggest week of the year — the Professional Lawn Care Association of America's 1984 Show and Conference.

And what a week it will be! PLCAA '84 is shaping up to be the biggest, best gathering of powerhouse speakers and exhibitors in our five-year history. The seminar program has been expanded to offer over 16 hours of educational programming hosted by a new lineup of outstanding speakers, problem solvers all.

In addition, last year's popular "Workshop" series will offer even more hours of "how to" advice on business basics like purchasing, business expansion, and promotional techniques. Subjects aimed at boosting the bottom line of your operation.

IT'S SHOWTIME, FOLKS! Virtually every major vendor and supplier to the lawn care industry will be among the over 100 exhibitors at PLCAA '84. Longer show hours and more floor space in the beautiful Curtis Hickson Convention Center will give showgoers an unparalleled opportunity to see, touch, and compare all that's new in lawn care.

BRING THE FAMILY! Take advantage of Tampa, heart of Florida's funland. PLCAA '84 offers features, options, and vacation opportunities designed with fun in mind. Features like a special Spouse Program full of fun and surprises. Options like a week-long post-conference Caribbean cruise on the luxurious New Amsterdam, newest ship in the Holland America Line. Opportunities like a chance to visit those Florida wonderlands you've been dreaming about — Disney World, Epcot Center, and Sea World. Indicate your interest on the coupon below and details will be sent to you.

'84 is the year. Tampa is the place. Go for it!

Delta Airlines have been appointed official carrier for PLCAA '84. Delta has regular scheduled flights from most major US cities to Tampa and will be offering discounted fares to all PLCAA '84 participants — up to 30% off regular prices.

YES! I'm interested in attending PLCAA's 5th Annual Conference and Trade Show. Send me more information on:

☐ REGISTRATION ☐ EXHIBITING ☐ MEMBERSHIP ☐ POST CONFERENCE CRUISE

NAME ____________________________

COMPANY ____________________________

ADDRESS ____________________________

CITY, STATE, ZIP ____________________________

Mail to Professional Lawn Care Association of America
1225 Johnson Ferry Road, NE • Suite B220 • Marietta, Georgia 30067
Scientific Guide To Pest Control Operations

by Dr. L.C. Truman
Dr. G.W. Bennett and
Dr. W.L. Butts

Domestic: $32.50* (hardcover)
Foreign $37.50* (hardcover)

The SCIENTIFIC GUIDE TO PEST CONTROL OPERATIONS is designed to provide a sound basis for studying the scientific aspects of pest control and promote technical competence. It places emphasis on urban and industrial pest problems. This volume also covers the laws and regulations concerning the pest control industry.

The SCIENTIFIC GUIDE TO PEST CONTROL OPERATIONS is written for owners, supervisors, servicemen, salesmen, students, persons preparing for state certification under the EPA/state programs for commercial pesticide applicators, and people interested in structural pest control.

The SCIENTIFIC GUIDE TO PEST CONTROL OPERATIONS - a must for anyone involved in the field of pest control!

Return this coupon to: Book Sales
Harcourt Brace Jovanovich Publications
One East First Street, Duluth, MN 55802

Domestic: $32.50* (hardcover)
Foreign $37.50* (hardcover)

YES! Please send me__
copy(ies) of the SCIENTIFIC GUIDE TO PEST CONTROL OPERATIONS.
A check or money order for$WTT 84 is enclosed.

Please charge to my Visa, Master Card, or American Express (circle one)
Account Number Expiration Date

*Please add $3.00 per order plus $1.00 per additional copy for postage and handling.

Please allow 6-3 weeks for delivery.

TURF MANAGERS’ HANDBOOK

By Dr. William Daniel and
Dr. Ray Freeborg

$23.95* hardcover $18.95* paperback

This essential reference book covers:
• scope and organization of turf
• pests and controls
• grasses and grooming
• rootzones and water
• nutrition
• AND MORE

The TURF MANAGERS’ HANDBOOK is an easy on-the-job reference to planning, purchasing, hiring, construction, and plant selection. These 424 pages contain 150 illustrations, 96 color photographs plus 240 tables and forms.

Ordering Information

Please send ____ copies of the hardback ($23.95* ea.)
____ copies of the paperback ($18.95* ea.)

Quantity rates available upon request.

*Please add $3.00 per order plus $1.00 per additional copy for postage and handling.

Send to: Book Sales
Harcourt Brace Jovanovich Publications
One East First Street
Duluth, MN 55802

Signature
Name (print)
Address
City State Zip Phone

President's Cup Final, Oct. 1.

To insure that your event is included, please forward it, 90 days in advance, to: WEEDS TREES & TURF Events, 7500 Old Oak Boulevard, Cleveland, OH 44130.
They do. It's their job to know things first and then pass that information on to you fast. Things like new turf management techniques, effective methods of insect and weed control, what really works... and what won't.

LOOK FAMILIAR?
They should. You've seen them often at turf shows, seminars, conventions, wherever industry news is in the making. They're the editorial and sales management team of WEEDS TREES & TURF. Please meet (seated l. to r.) Ron Kempner, Bruce Shank, Dick Gore, and Maureen Hrehocik; (back row l. to r.) Bob Mierow, Kevin Cooney, Joe Kosempa, and Bob Earley.

THERE'S NO GRASS GROWING UNDER THEIR FEET.
They apologize for not always being in when you call, but great stories are found in the field, not in the office. These pros know the only way to really cover the green industry is to get out and be a part of it. From turf test plots in Oregon to the corridors of our Nation's Capital, they're following leads, surveying markets and interviewing the landscape professionals who make our industry hum. Then, they use their years of experience to pull it all together, analyze it and present it to you in a crisp, easy-to-read and easy-to-use style. That way, you have the information you need to do your job better, faster and more effectively.

The next time you want to know something in the green industry, give them a call. If you can't reach them at the office, don't worry. They'll reach you in the pages of WEEDS TREES & TURF.
Sunburst designed to clean up lakes
The Sunburst floating aerator cleans up algae, aquatic weeds, and unpleasant odors by adding dissolved oxygen and circulation to water. A product of Barebo, Inc., makers of Otterbine Spray Sculpture Floating Fountains and Aerators, the Sunburst is pre-assembled at the factory and shipped ready for installation. It is said to be easily installed by two men in one hour. Each unit is a self-contained compact unit requiring no foundation, external pump, or plumbing fixtures. The Sunburst-ST is especially designed for tough conditions such as saltwater, alkaline waters, and high temperatures.

Orthene approved for turfgrass use
Orthene Tree & Ornamental Spray has received EPA approval for use in the control of turfgrass insects. It is registered to control many species of armyworms as well as sod webworm, leafhopper, and greenbug. Orthene is compatible with most commonly used fungicides and is not phytotoxic to the turf. Chevron Chemical Co. said the spray can be applied without protective equipment or clothing, and workers can re-enter the turfgrass area as soon as the spray deposit has dried.

Herbicide gains greater versatility
New label registrations for Devrinol preemergence herbicide allow the herbicide to be used on a greater variety of ornamentals including birch trees, dogwood, forsythia, ivy, camellia, sedum, and xylosema. The herbicide can also be applied to flowers such as dahlias, petunias, daisies, and gladiolus. Devrinol controls over 35 weeds including crabgrass, goosegrass, sandbur, foxtail, common chickweed, common purslane, and lambquarters. The new registrations include the 50 WP and the 5-G formulations of Devrinol.

Blow debris away with attachment
Olathe introduces its Model 67 Leaf and Debris Blower to blow leaves, grass clippings, sand and debris off paths, fairways, and parking lots quickly and efficiently. The Model 67 attaches to the Toro Groundmaster 72 to create a hurricane force wind which can be channeled either direction with a directional chute controlled from the operator's seat. The heart of the Model 67 is a 24-inch diameter fan driven by the Groundmaster's P.T.O.

Turf Blazer mows acres per hour
The Turf Blazer 727-104 can cut up to 5.3 acres of grass per hour with its 104-inch cutting capacity. Its design, with a 60-inch mower out front and two hydraulically-operated wings, provides the floatation of a 60-inch machine. The mower is powered by a 747 Tractor with a field-tested, 3-cylinder, water-cooled, 27-HP diesel engine in conjunction with hydrostatic transmission.
The authors concluded that there is no substitute for good soil.
**CLASSIFIEDS**

**Rates:** 95 cents per word (minimum charge, $20). Bold face or words in all capitals charged at $1.20 per word. Boxed or display ads charged at 1x—$80.00, 2x—$78.00, 3x—$75.00, 4x—$70.00 (one inch minimum). Agency commissions will be given only when camera-ready art is provided by agency. For ads using blind box number, add $5 to total cost of ad. Send ad copy with payment to Dawn Anderson, WEEDS TREES & TURF, 1 East Kirt Street, Duluth, MN 55802.

**Box Number Replies:** Mail box number replies to: WEEDS TREES & TURF, Classified Ad Department, 120 W. 2nd St, Duluth, MN 55802. Please include box number in address.

---

**Business Opportunities**

**WANT TO BUY OR SELL** a golf course? Exclusively golf course transactions and appraisals. Ask for our catalog. McKay Golf and Country Club Properties, 15535 N. East Street, Lansing, Michigan 48906. Phone (517) 484-7726. TF

Landscape Contractor. All phases Nursery Stock, Inventory, Equipment, Shop Tools. Accounts, Dealership. 20 years in business. Retirement and health. $200,000.00. DAL CORP. W220 S7625 CROWBAR ROAD. MUSKOGO. WI. 53150. 8/84

**HELP WANTED**

**SALES POSITION**—Landscape firm seeks sales personnel with 1-3 years minimum experience in Landscape installation sales in the Dallas-Fort Worth metroplex. Position involves no design or job supervision. Interested individuals should send letter and resume c/o 2559 Southwell, Dallas, TX 75229. Interviews will be arranged upon receipt of resume. 8/84

**CREWCHEF**—Park District has a new leader position for trimming, planting, and removal of trees. Must be experienced with rope and saddle. Year-round position with full benefits. Send resume and salary experience to: Glenview Park District, 2320 Glenview Road, Glenview, IL 60025. 8/84

**Used Equipment**


1975 Woodchuck Chipper 16" 300 Ford VB, good condition. $4,500.00 or best offer. (914)462-4042. 8/84


**Hydro-Mulchers and Straw blowers**

New and used. JAMES LINCOLN CORPORATION, 3220 S. Jupiter Rd., Garland, TX 75041, (214)840-2440 (TX). 800/527-2304 (except TX). TF


**FOR SALE**

**FOR SALE—SALE—SALE**—Hannay 12 volt base mount reel motors, $100.00 (new). Regular $160.00. FMC (John Bean) parts and pumps at discounted prices. Hydro pumps. parts and accessories at 25% discount. Call Strong Ent., Inc., Collect (305) 264-5525. 8/84

**Lawn Seed**—Wholesale. Full line of top quality grasses. Improved bluegrass varieties, fine fescues and fine bladed ryegrasses. We specialize in custom mixing. Gliger Seed Company, 2705 WIngate Avenue, Akron, OH 44314. Call collect (216) 753-2259. TF

**Tree Fertilization Gun**—tested on over a million square feet of trees and shrubs all over the U.S. Good to 500 psi. repairable, non-corrosive. Buy direct from manufacturer. $92.50. Arbor-Nomics, Inc., 5634-A Buford Highway, Atlanta, Georgia 30071. (404) 447-6037. TF

**WANTED**

Wanted to buy HYDRO SEEDER. Please send photo. Johnson Hydro Seeding Corp., I3751 Trav- ilians Road, Rockville, MD 20850, 301/340-0805. TF

**Landscaping Spray Service**—complete landscape pest control including; turf and tree insects and diseases, gopher control, weed control, and abatement. Licensed PCO, PCA. 714-953-8344, 213-439-3079. 8/84

**Use Our Classified Blind Box Service For Confidential Results!**