



The seed that's changing the face of America.

Pennfine Perennial Ryegrass

The biggest breakthrough in the greening of America began in 1970. That's when turfgrass specialists at Pennsylvania State University completed development of a remarkable fine-leaved perennial ryegrass with all the advantages of ryegrass. And none of the drawbacks. They called it Pennfine.

Now, just six years later, the success of their undertaking is evident. On golf courses and athletic fields. In parks and cemeteries. And on public grounds across the country.

Proven in tests. Among the nine perennial ryegrasses tested over a five-year period at University Park, Pennsylvania, Pennfine ranked finest in texture. Most resistant to disease. First in density and decumbency (low growth).

The University Park test results were only the beginning. Over 5,000 test kits with seed samples were distributed over the entire country in answer to requests from turf professionals wanting to test Pennfine. The results confirmed the University Park findings.

Most importantly, Pennfine established a new standard of mowability. Some other perennial ryegrasses, cut with the same mower, left ragged, fibrous tops that quickly turned brown. Pennfine's softer fibers cut smooth and clean.

Proven from coast to coast, from North to South. Pennfine's durable beauty has been demonstrated at prestigious sites all over America. From the lawns at an historic national landmark to the greens at a nationally-renowned golf course.

Besides possessing the ability to stand up under heavy traffic, Pennfine germinates rapidly. That makes it ideal for winter overseeding in the South. And, its non-competitiveness allows a smooth spring transition to bermudagrass.

Proven quality control under the Plant Variety Protection Act. You can be sure that all Pennfine Perennial Ryegrass meets the same high standards, because Pennfine is covered by the Plant Variety Protection Act.

That means every pound of Pennfine is certified. You are assured, by law, that it's produced exactly as intended by the original variety breeder.

Prove it to yourself. To learn more about how Pennfine is changing the face of America—and how it can work for you—write: Pennfine, P.O. Box 923, Minneapolis, MN 55440.



JOHN DEERE TURF TRACTORS— any way you cut it

Gang mowers, rotaries, John Deere sicklebar or flail types—we have the tractors to match your equipment, turf, terrain and work schedules. Three horsepower classes, (43, 50 and 62 SAE net) and a wide choice of tread widths and tire options bring landscaping and turf maintenance jobs down to size fast.

Standard equipment includes an 8-speed transmission, inboard planetary final drives sharing the filtered transmission oil bath, and sealed, self-compensating, self-adjusting wet-disk brakes.

A rear PTO is standard on 62-hp machines, optional on all others. Power steering, on-the-go differential lock and ROPS are other choices high on the list.

For landscaping and site finishing, the John Deere 3-point hitch offers many exclusive advantages that help ensure the best performance with rear blade, scarifier, box scraper or rake, for example. A folding lever adjusts and locks the

center link easily, and anchors it out of the way when not in use. Hydraulic Load-and-Depth Control automatically compensates to help maintain working depth and engine rpm. Lift links can provide a vertical float action to follow ground contours; sway blocks are included to snub side-to-side tool movement. A Quik-Coupler is available to speed the change from one rear tool to another.

See your John Deere utility equipment dealer—he has both the ideas and the product support programs to match his turf and landscape equipment. John Deere, Moline, Illinois.



JOHN DEERE on the move



CONTENTS

FEBRUARY 1979/VOL. 18, NO. 2

Bruce F. Shank

Editor

Ron Morris

Technical Editor

Robert Earley

Contributing Editor

Scott Scredon

Assistant Editor

Dan Moreland

Assistant Editor

Ray Gibson

Graphics Director

Hugh Chronister

Publisher

Richard J.W. Foster

General Manager

David J. Slaybaugh

Executive Editor

Dick Gore

National Sales Manager

Clarence Arnold

Research Services

Patricia J. Kelley

Production Manager

Viewpoint

9

GREEN INDUSTRY NEWS

Greenhouse Heat Economics Studied ... Agriculture Secretary Bergland Says Organic Wastes Make Incomplete Fertilizers ... Florida Turfgrass Association and New York Nurseryman Announce New Officers 11

FEATURES

Cultivar Performance in Blends and Mixtures

The Lawn Institute's Director Dr. Robert Schery covers in-depth the performance of the primary turfgrass cultivars when part of blends and mixtures. Good overview of U.S. and European research of the past 40 years. 16

Baseball Field Preparation — East and West

Cal Poly's Dr. Kent Kurtz and Rutgers' Dr. Henry Indyke review procedures for preparation of skinned areas, infields, and outfields for spring play. 26

Herbicides for Brush and Bare Ground Use

A list of today's nonselective and brush herbicides as well as general guidelines for safety and use. 36

Asplundh Role in Rights-of-Way Clearance

One of the oldest and biggest rights-of-way contractors, Asplundh Tree Expert Co., offers advice on weed control around utility poles and substations. 54

Suburb Uses Growth Regulator to Increase Mowing Efficiency

A Boston suburb has trimmed mowing costs by using growth regulator on roadsides, cemeteries, and parks. 60

Trickle Irrigation Benefits a Michigan Nursery

A Michigan nurseryman tells how his use of trickle irrigation has controlled root and tree growth. 63

Proscape 72

Vegetation Management 79

Products 81

Classifieds 90

Events 96

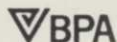
Advertiser Information 98



Copyright© 1979 by the Harvest Publishing Co., a subsidiary of Harcourt Brace Jovanovich, Inc. All rights reserved. No part of this publication may be transmitted or reproduced

in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the publisher. Address: 9800 Detroit Ave., Cleveland, Ohio 44102. Single copy price \$1.25 for current and back issues. Foreign \$1.50. Subscription in the U.S. and Canada are \$12.00 per year. \$15.00 in other countries. Foreign air mail optional at an additional \$24 per year. Controlled circulation postage paid at Cleveland, Ohio 44101. Postmaster: send form 3569.

Member, American Business Press, Business Publications Audit, National Golf Foundation, American Sod Producers Association, National Landscape Association.



Wherever annual weed

"Out here, crabgrass is our biggest complaint, and Balan in the spring works like a charm."



"Around these parts, we're faced with goosegrass/crowfoot in the summer, then when our Bermuda-grass goes dormant, Poa annua's the problem. So we use Balan twice."



"Sometimes we use Balan in the early spring for crabgrass, but if goosegrass is a problem we apply Balan later to get it as it germinates."



"If you've a goosegrass/crowfoot problem, a shot of Balan early in the summer takes care of that problem; but nothing makes our courses look worse than green patches of Poa after the Bermuda's gone dormant, so we apply Balan in the fall, too."

...the solution is Balan

The annual grass problems may differ from one part of the nation to another, but the solution is the same . . . Elanco's Balan. All across the country, Balan users have proven for themselves that a regular Balan program is their most effective means of controlling the hard-to-control annual weed grasses. Balan's granular form makes it as quick and easy to apply as fertilizer.

grasses are the problem...

"Around here, our main problem is crabgrass in the fairways, so we use Balan in the spring. It's so economical we treat fairways and the roughs."



"Almost every course in the South has two main weed grass problems: Poa annua and goosegrass/crowfoot. Two applications of Balan gets rid of them both."



"Plain old crabgrass is the biggest problem around here. Balan is so economical we put it on all our fairways in the spring before germination."



Balan is the dependable, economical pre-emergent that kills weed grass seeds as they germinate, allowing the desirable grasses to fill in. Name your weed grass problems . . . crabgrass, goosegrass, Poa annua or foxtail. Balan's the practical solution. Order Balan from your Elanco Distributor today.

ELANCO

Balan®

Elanco Products Company
A Division of Eli Lilly and Company
Dept. E-455
Indianapolis, Indiana 46206, U.S.A.



Embark® Plant Growth Regulator Puts You In Command—



*Read label instructions carefully
before application.

"Embark" is a registered trademark of
the 3M Company.

Slows Turf Growth When and Where You Need It.

This spring and summer, you decide when to send your mowers into action!

"Embark" Plant Growth Regulator reduces turf growth without injuring grass or inhibiting root development. That means less mowing and more time for other jobs.

A spray application of "Embark" Plant Growth Regulator on actively growing turf lasts up to eight weeks.

For hard-to-mow areas—roughs, along fences, highway embankments—"Embark" Plant Growth Regulator keeps most commonly-grown species* of grass on hold. Saves equipment and labor. Plus takes the pressure off a busy season.

This year make "Embark" Plant Growth Regulator part of your turf management. It's the common sense way to cut mowing and trimming costs.

Distribution of "Embark" Plant Growth Regulator for commercial turf is planned for many areas of the country this season. For a listing of "Embark" Plant Growth Regulator distributors in your area, write:

Agrichemicals/3M
223-6SE, 3M Center
St. Paul, MN 55101

3M

Weeds Trees & Turf FREE INFORMATION

Want free information on products and services advertised and featured in this issue? Use this card. Circle the numbers on which you want information and mail today.

101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160
161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200
201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220
221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240
241	242	243	244	245	246	247	248	249	250	700	701	702	703	704	705	706	707	708	709
710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729

NAME	TITLE
COMPANY	TELEPHONE
ADDRESS	
CITY	STATE ZIP

Do you want to receive Weeds Trees & Turf? ☐ YES ☐ NO

Are you interested in receiving or continuing to receive WEEDS TREES & TURF? If you are, complete all the information on this card and mail today.

DATE _____ SIGNATURE _____

1. What is your primary business/industry? (Check one only)

- | | |
|---|---|
| <input type="checkbox"/> Rights-of-Way Maintenance (highway, utility, railroad) | <input type="checkbox"/> Airport Grounds Management |
| <input type="checkbox"/> Commercial/Industrial contract chemical applicator | <input type="checkbox"/> Military Installation Management |
| <input type="checkbox"/> Aerial applicator | <input type="checkbox"/> Land Reclamation/Erosion Control Specialists |
| <input type="checkbox"/> Extension Services/Federal or State Regulatory Agency | <input type="checkbox"/> Lawn Care Company |
| <input type="checkbox"/> Parks or Grounds Management (Federal, State, Municipal) Forestry | <input type="checkbox"/> Lawn Maintenance Company |
| <input type="checkbox"/> Golf Course Management | <input type="checkbox"/> Landscape Contractor |
| <input type="checkbox"/> Cemetery Grounds Maintenance | <input type="checkbox"/> Landscape Architect |
| <input type="checkbox"/> Industrial Park Grounds Maintenance | <input type="checkbox"/> Sod Grower |
| <input type="checkbox"/> Shopping Centers Grounds Maintenance | <input type="checkbox"/> Seed Grower |
| <input type="checkbox"/> Hospital, Nursing Home (grounds maintenance) | <input type="checkbox"/> Tree Service Company/Arborist |
| <input type="checkbox"/> School, College and University (grounds maintenance) | <input type="checkbox"/> Wholesale nursery |
| <input type="checkbox"/> Athletic Fields Management | <input type="checkbox"/> Tree Farm |
| | <input type="checkbox"/> Dealer/Distributor |
| | <input type="checkbox"/> Other (Specify) _____ |

If you are not personally receiving WEEDS TREES & TURF and want your own subscription, circle number 101. Subscription price is \$12.00 per year, U.S. and Canada.



NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL

FIRST CLASS

PERMIT NO. 2675

CLEVELAND, OHIO

POSTAGE WILL BE PAID BY ADDRESSEE

ATTENTION: THE EDITORS

Weeds Trees & Turf

9800 Detroit Ave.

Cleveland, Ohio 44102





NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL

FIRST CLASS

PERMIT NO. 665

DULUTH, MINN

POSTAGE WILL BE PAID BY ADDRESSEE

Weeds Trees & Turf

Box 6049

Duluth, Minnesota 55806



My question or comment to the editor is . . .

Weeds Trees and Turf is glad to answer your questions or publish your comments on any green industry topic. Questions will be answered by industry experts in the Vegetation Management or Proscape columns. Comments will appear in the Letters or Viewpoint columns.

READER FEEDBACK CARD

NAME _____ TITLE _____

COMPANY _____

ADDRESS _____

CITY _____ STATE _____

- ☐ you may publish this letter with my name.
☐ do not publish this letter.
☐ you may publish this letter with my initials, and city.

VIEWPOINT

Bruce Shank, Editor

A recent editorial on landscape industry trade journals by Morton Herrman, president of the California Landscape and Irrigation Council, in its publication the Professional Landscape Contractor brought up a number of controversial points.

As editor of a landscape industry trade journal, I'd like to answer some of Herrman's charges. First, you can read what he had to say, and then I'll tell you what I think.

Industry neglected

"I feel that our segment of the industry has been sadly neglected by the California-based trade publications. For one reason or another their editorial staffs seem chain-bound to their desks, and are reluctant to pick up their telephones or leave their offices to find out what's happening in the industry. They seem more dedicated to soliciting advertising than in serving the needs of their readers in the landscape design and contracting professions. When was the last time you saw a story about an imaginative landscape construction project, or any kind of relevant, in-depth story on a landscape contractor or architect in one of our commercial trade publications?" Herrman.

Mr. Herrman's remarks should not be limited to California-based publications. He is right, to a great extent we are chained to our desks by the size of the task on hand and the staff available to do it. Trade magazines in the Green Industry rarely have more than two full-time editors. But, there is no excuse for not using the phone. We estimate that road time costs \$750 per week, a significant sum for any organization. We have to use it where it makes the most impact, such as for major trade shows. In 1979, however, we plan to attend more regional shows to improve our ties with regional interests.

Trade magazines can very easily forget the reader and become solely a tool for advertisers. This is why a trade magazine should have completely separate sales and editorial departments. The editor must defend his professional goal to serve his readers at all times. But, you should remember that without advertisers there are no trade magazines. Subscriptions, although very important for magazine stability, usually represent less than ten percent of gross revenue. You can't disregard 90 percent of your business, can you?

I agree that the landscape contractor has not received worthy coverage at times in the past few years. We have made a concerted effort to cover problems affecting landscaping contracting this past year and profiled at least four firms. Please read the articles on the landscape contractor/architect/nurseryman relationship in 1978. The architect has a fine publication through the American Society of Landscape Architects. The Associated Landscape Contractors of America has made great strides in serving the specialized needs of contractors through new affiliation with state and regional associations. Perhaps California

should strengthen its ties with the national groups and stop depending on state publications and groups entirely.

Culture not our concern

"I get so bored with the endless parade of tedious articles on turfgrass culture and rare ornamental diseases. How much more can you say about a blade of grass that hasn't been said before? We let the growers worry about plant culture and all those dreaded, little-known diseases. If a problem shows up on one of our landscape jobs, we call the grower who sold us the stuff, or some other professional who is far more qualified to diagnose and solve the problem than we are." Herrman.

A contractor who installs only and leaves the problem solving to someone else is making a terrible personal and professional mistake. Asking for help when needed is one thing, but leaving all "culture" to others goes against the principle that a person should strive to know all there is to know about his field. You are not a plumber or electrician who can install and forget. You are dealing with living organisms which are complex and susceptible to disease and insect attack, not inert wires and pipe.

Many people feel offended by seemingly over sophisticated articles written by our major extension agronomists and arborists. For this reason we try to rephrase such research in staff written material. Researchers are learning to write more on an understandable level, but they can't change overnight. They want to help and get their findings to as many readers as possible. However, it would be wrong to restrict this material to research journals only. Many readers need it.

You may pass the buck to the grower, but the general contractor is looking to you for answers. You must at least be able to make a general diagnosis to know which expert to call.

I greatly disapprove of layering knowledge in landscape contracting or any turf and tree field. There is a great deal to know about a blade of grass, especially when improved turfgrass varieties are considered. The contractor has to ask the grower for improved turfgrass in sod, not the other way around. When a certain tree species fails to survive in your area more than 20 percent of the time, you are the one to alert the growers and to signal a need for research on the problem.

The future of landscape contracting is in broadening knowledge, not dividing it. The design/build firm, the nurseryman contractor, and the arborist contractor are doing well today because they offer the most from a single source for customers. To grow in this way requires a vast amount and breadth of information. This information is what we, as trade editors, are trying to provide. Reject it if you like. But many readers want it, need it, and ask for more.

WTT

There are 785 different tree species...



And they all thrive on **Ross Super Tree Stakes** and **Ross Super Fruit Tree Stakes!**

Dependable **Ross Super TREE STAKES** provide once-a-year feeding of trees, shrubs, and evergreens with a high food value analysis of 16-10-9 PLUS iron and zinc formulation.

New **Ross FRUIT TREE STAKES** contain 16-5-10 PLUS iron and zinc to provide precise, pre-measured feeding of all fruit trees: apple, pear, apricot, plum, peach, cherry, all citrus, berries and fruit bearing shrubs.

Each commercial case contains approximately 155 stakes . . . enough to feed more than 35 trees of 3" diameter. There are 20 solid nylon pounding caps to simplify driving into the toughest soil.

For best results, place stakes at drip line of tree, using three stakes for every 2" of trunk diameter. Water does the rest, carrying plant food to the feeder roots.



Two great once-a-year formulas . . .

- 16-10-9 For Beautiful Trees & Evergreens
- 16-5-10 For bigger, better Fruit

Contact your nearest Ross Daniels distributor for Ross Super Tree Stakes and Ross Super Fruit Tree Stakes. If unavailable in your area, order direct from: ROSS DANIELS, INC., P.O. Box 430, West Des Moines, Iowa 50265. Use this coupon to order.

ROSS Super Tree Stakes
Commercial Pack,
Stock no. 1791
Please ship _____ cases,
check enclosed.

ROSS Fruit Tree Stakes
Commercial Pack,
Stock no. 1812
Please ship _____ cases,
check enclosed.

Approximately 155 stakes per case, weight 44 lbs.

1-3 cases, \$35.00 per case
4-11 cases, \$30.00 per case
12 or more cases, \$25.00 per case

Each case includes
20 Nylon Pounding Caps

Your name _____

Organization _____

Address _____

City _____ State _____ Zip _____

Make check payable to Ross Daniels, Inc.