

At Colleges.

College is truly a "growing experience" for Pennfine, but while the students grow smart, Pennfine grows dense.

For Backyards.

If the grass is always greener in the other fella's yard, the other fella's probably using Pennfine, in a premium grass seed mixture.

For Athletic Fields.

You can run all over Pennfine —it has the speedy emergence and resiliency that make it a good sport.

At Resorts.

Pennfine mows so smooth and clean, that working on the grounds is almost as much fun as playing on them!

In Dry Soil.

With its deep-lying roots, Pennfine holds up under lowmoisture conditions and in sandy soil. It's the best thing to pop up through dry ground since the last oil well came in.

Around Hospitals.

Naturally Pennfine does well around hospitals. It's very disease-resistant!

ennfine

Along Highways.

TTAR

mint

D M

Yep, that's Pennfine along many major state thruways. Leave it to Pennfine to make the quickest route the scenic route.

At National Monuments.

During the Bicentennial, Pennfine's durability made history at Independence Hall. It likes crowds, and vice versa.

On Cemetery Grounds.

What more could anyone ask for? Pennfine germinates quickly and mows smooth and clean.

In The Shade. Willows never weep over

Pennfine. It does as well in shade as in direct sunlight.

On Golf Courses.

Pennfine's quick germination makes it ideal for overseeding at many of America's most prestigious golf courses. About the only place you won't see Pennfine growing is in the cup.

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 fineleafed 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.



The best thing growing.

NELSON SPRING SALE You spring for 9... We'll pop with 10!

Corrosion resistant brass and stainless steel sprinkler head.

Full 3" pop-up height for clearance of nozzle stream above grasses.

Heavy duty plastic cover and 2-piece case with reinforcing ribs.

Large non-clogging barrel vane provides greater distance of throw.

Large area for flushing trap-

Three-way wiper seal flushes, seals and cleans for trouble-free operation.

Strong 7 lbs. stainless steel * retract spring assures positive pop-down and vandal resistance.

Side inlet 34" FIP and bottom inlet 34" FIP and 1/2" FIP, plug provided. -Heavy duty plastic cover.

Corrosion resistant plastic and stainless steel sprinkler head.

Full 21/4" pop-up height for clearance of nozzle stream above grasses.

Large non-clogging barrel vane provides greater distance of throw.

2-piece case.

Large area for flushing trapped soil from housing.

Three-way wiper seal flushes, seals and cleans for trouble-free operation.

Strong stainless steel retract spring assures positive pop-down and vandal resistance.

1/2" FIP, bottom inlet.

Buy 9 of our popular 6720, 6730, 6740, or 6750 sprinklers and get the 10th FREE.

Install the leading design in top quality pop-up rotors from Nelson and make more profits this season.

From May 15th through June 15th, 1978 you can take advantage of a special sale that saves you 10% on these feature packed sprinklers. It's a spring sale that means business.



L. R. NELSON CORPORATION PEORIA, ILLINOIS 61614

SEE YOUR LOCAL PARTICIPATING NELSON DISTRIBUTOR OR CONTACT US FOR HIS NAME.

L. R. Nelson Corporation 7719 N. Pioneer Lane Peoria, Illinois 61614 309-692-2200 Gainesville Distribution Center L. R. Nelson Corporation P. O. Box 1324 Gainesville, Florida 32601 904-372-3394 Sparks Distribution Center L. R. Nelson Corporation 1485 Southern Way Sparks, Nevada 89431 702-331-1030



10 ONLY

Look for the special display at your local participating Nelson distributor.

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.

5	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
5	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
5	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
2	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	206 226	207	208	209	210	211 231	212	213 233	214	215 235	216	217 237	218 238	219	220
	241 710	242 711	243 712	244 713	245 714	246 715	247 716	248 717	249 718	250 719	700 720	701 721	702 722	703 723	704 724	705 725	706 726	707 727	708 728	709 729
5	NAME							TITLE									-			
2	COMPANY																			
	ADDRESS																			
t	CITY					STATE							ZIP							
1	Are	you i blete	ntere	sted	rece in re ormati	ceivi	ng o n this	r con	and	ng to	rece	eive I	_	YES DS T	-	3 NC	-	? If y	you a	re,
	Pleas	se ch	eck t	he or	ne iter	m wh	ich b	est de	escrit	oes y	our p	rimar	y typ	e of t	ousin	ess:				

Rights-of-Way Maintenance

April 1978. Good thru July 1978

- □ a. Highway □ b. Utility □ c. Railroad
- Chemical Applications (vegetation and structural)
 Accommercial/Industrial ground applicators
 b. Aerial Applicators
 Extension Services; Forestry; Federal and State Regu-
- atory Agencies □ Parks and Grounds Maintenance Federal, State, Municipal (does not include Forestry) 4
- Golf Courses
- 6.7.8.
- 9
- Cometeries
 Industrial Parks
 Industrial Parks
 Shopping Centers
 Hospitals, Nursing Homes, Schools, Colleges and
 Universities (Grounds meintenance personnel only)
 Atklatic Fields
- 10. Athletic Fields 11. Race Tracks

- 12. □ Airports
 13. □ Military Installations
 14. □ Grounds or Landscape personnel in businesses not specified above. 15. I Mine Field Reclamation 16. Chemical lawn care companies

- Landscape contractors Landscape architects
- 18.
- Sod Growers
 Seed Growers
 Tree Service Companies/Arborists
- Wholesale nurseries/Tree Farms
- Irrigation and Water Drilling Contractors/Consultants
 Chemical Dealers/Distributors
- 25. C Equipment Dealers/Distributors
- 26. C Other (Specify) -

If you are not personally receiving WEEDS TREES & TURF and want your own subscription, circle number 101. Subscription price is \$10.00 per year, U.S. and Canada

My question or comment 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. Mail this postpaid card today.

A

First Class Permit No. 665 Duluth, Minn.

BUSINESS REPLY MAIL

No Postage Stamp Necessary if Mailed in United States

Postage will be paid by

Weeds Trees & Turf

Box 6049 Duluth, Minnesota 55806

> First Class Permit No. 2675 Cleveland Ohio

BUSINESS REPLY MAIL

No Postage Stamp Necessary if Mailed in United States

Postage will be paid by

Weeds Trees & Turf

9800 Detroit Ave.

Cleveland, Ohio 44102 Attn: Editor



8

10

16

Bruce F. Shank Editor

Ron Morris Assistant Editor Ray Gibson

Graphics Director

Hugh Chronister Publisher Richard J.W. Foster General Manager David J. Slaybaugh Executive Editor Stephen Stone Advertising Director Dick Gore National Sales Manager Jack Schabel Circulation Manager

Clarence Arnold Research Services

Patricia J. Kelley Production Manager

Copyright[®] 1978 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. Subscriptions 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, American Society of Business Press Editors, National Golf Foundation.



Viewpoint

Letters

People

GREEN INDUSTRY NEWS

Seed Burning Limits Due This Month ... GCSAA Takes Over San Antonio ... Ice Storms to Add to Spring Tree Business ... Arborist Meeting in Florida Sets Records ... Velsicol Chlordane Agreement Reached

FEATURES

Mower Engine Trouble Shooting

Sprinkler Irrigation Equipment

SPECIAL LANDSCAPE CONTRACTOR SUPPLEMENT

Twelve Experts to Advise Magazine

Pruning Young Trees Increases Efficiency

Vegetation Management	80		
Proscape	1	83	
Events		90	
Products		94	
Classifieds		98	
Advertiser Information	102		

The new "Little-Big" tractors from John Deere.

Liquid-cooled 22 or 27 PTO hp diesels that are big enough to do all the jobs you need to do. Yet small enough so you can afford them.

If the jobs you have are too big for a lawn and garden tractor and too small for a farm or industrial tractor, John Deere has the tractor you need. In fact, two of them. The new John Deere 850 and 950 Tractors. Rugged. Reliable. And built to handle the jobs you'll give them.

Big-tractor features. Under each tractor's lift-up hood is a liquid-cooled, fuel-efficient diesel engine: 22 PTO hp for the 850, 27 PTO hp for the 950. Both tractors have smooth-running transmissions with 8 forward speeds, 2 reverse. Speeds are well-spaced from less than 1 mph for tilling to almost 12 mph for transporting.

Other big-tractor features are standard. There's a differential lock that engages on-the-go for added traction in slippery conditions and a fully shielded 540-rpm rear PTO. Individual rear wheel brakes lock together for highway transport and lock down for parking. A heavy-duty drawbar adjusts to four positions. Hand and foot throttles are both standard. Integral equipment easily attaches to a 3-point hitch (Category 1). The adjustable, fully cushioned seat tilts forward for weather protection. **Big-tractor versatility.** You can match the 850 and 950 to your jobs. Wheel tread width adjusts front and rear. Ground clearance is nearly 14 inches under the 850—more than 15 inches under the 950. Maneuverability is superb since both tractors will turn within a 10-foot radius. So whether you're mowing, loading, plowing, digging, planting, or cultivating—these tractors can handle the job. **Service you can count on.** Your John Deere Dealer is always ready to help.

Service training schools for the 850 and 950 have already been completed. And a complete inventory of service and replacement parts is ready.

So stop by and see your John Deere Dealer soon for the complete story behind the new "Little-Big" Tractors. Or for free literature write to: John Deere, Box 63, Moline, Illinois 61265.

Choose from a family of tractormatched implements for all the jobs you need to do:

- Center-Mounted Rotary Mower3150 Utility Box Scraper1031 Integral Disk20Johnson-Arps Model 30 Loader2-350 Mower3071 Flexi-Planter4011 Light-Duty Field Cultivator4545 Integral Plow25
- 31 Posthole Digger 100 Integral Disk 205 Rotary Chopper 2-Row Cultivator 30 Integral Plow 40 Rotary Tiller 45 Rear Blade 25A Flail Mower



Nothing Runs Like A Deere

"My Laval Separators save me over \$3,500 every year in labor costs."



Julian Serno, Golf Superintendent Albuquerque CC, Albuquerque, New Mexico

Sand's no longer a problem in this sprinkler system.

"I had one and sometimes two guys working nearly full-time every day, cleaning sand out of my sprinklers. My ATH control valves wouldn't work at all 'cause of the sand.

"We had settling tanks, but they didn't work worth a damn. So we got Laval Separators. Installed 'em ourselves. They really work good. What more can I say?"

Nothing else gets the sand and grit out like Laval Separators. Up to 98% of all particies as small as 74 microns (200 mesh). No moving parts to wear out. No screens or filter elements to clean or replace. And very little loss of line pressure. Call on us. We won't let sand grind you down.



Laval Separator Corporation 1911 N. Helm, Dept. V-1, P.O. Box 6119 Fresno, CA 93703, (209) 255-1601

Circle 125 on free information card

VIEWPOINT

Have you recently hired someone, changed jobs yourself, or won an award? If you have, we'd like to know.

The People page of this magazine is designed to let others know about you and your employees. It is too easy for us to print the releases provided to us by manufacturers with public relations departments. In this case, the easy way isn't really the best way.

We want to let all our readers know that your best worker was just promoted to route manager, that your designer won an award, that your son or daughter joined the business, that your association named your company or employee the safest, etc.

You don't need a public relations department to do this. You don't even need a typewriter. Use the reader comment card in this issue to write down the occasion, your name and phone number. We'll call you for more information and perhaps ask for a photograph of the honored individual.

If you do have a typewriter, just mail us a brief description, one page or less, and a photograph. The photo can be a black and white print, Polaroid print, or color print. Descriptions should include education and experience where applicable.

As all events aren't happy, there is also a need to let your friends in the industry know about deaths. We will treat obituaries with careful attention to the contribution made by the individual during his or her lifetime.

State and regional associations are invited to put WEEDS TREES & TURF on their mailing lists so that we may be alerted to newsworthy happenings in their area. One of our greatest goals at the moment is to strengthen the magazine's ties with regional associations. A newsletter contest for state and regional newsletters is in the works for later this year. We don't want to leave anyone out of the contest.

This month we are announcing the magazine's first industry advisory board. Each member has been asked to provide his comments about



his particular field. We are publishing their comments so that you can get an idea about what they stand for. We invite your remarks about their comments. This discussion between you and the Board members could very well bring some problems or misconceptions to light. We can all benefit by healthy and open discussion of the good and bad points of our industry.

Finally, what looks to be a very good year for the Green Industry has begun. Everyone is in the midst of the spring rush. We wish your business great success this year and hope you will use the product of our labor to your beneft.

Bruce F. Shark

By Bruce F. Shank, Editor



THREE INCH PENETRATION

with either 3/8" pointed tine or 3/4" regular tine, with a 1/2" regular tine also available. Dedoes TCA-551 with 240 tines on spacing close to

2" CENTERS

Improved TCA-551 has two drums welded in the middle and only one door to open to dump the cores.

Tines enter straight in turf and come out straight. Leaves your green in playable condition. Aerate a 5000 square foot green in less than 15 minutes. Cores are collected in the drum. No costly clean-up.



The hydraulic principle utilizes the weight of the vehicle for down-pressure giving you needed hole depth.

Designed and ruggedly built to cut maintenance costs.

Dedoes the Aerating Pro

QUICKLY MOUNTS to any all-purpose vehicle you may already have. BACKWARDS OR FORWARDS you have complete mobility. No special attachments necessary.

Before Deciding on an Aerator, See a Dedoes in Operation.

Our economy model TCA-450 costs 20% less than the regular models — has 120 tines on 2 drums. WE HAVE A DISTRIBUTOR IN YOUR AREA.

Fairway Models also available with the same advantages — and they can pick up the plugs.

Manufactured by

Industries, Inc. Edoes

1060 W. West Maple Road, Walled Lake, Michigan 48088 (313) 624-7710

Circle 157 on free information card

Considering wood & brush chippers



Are you getting everything you should ?

Ask the ones who use them !! Free! Write for the new

illustrated Whisper Chipper brochure.

ASPLUNDH

Asplundh Tree Expert Co. Manufacturing Division Chalfont, Pa. 18914 215-822-0542

Circle 130 on free information card

LETTERS

After 40 years experience in various phases of the Green Industry, I am convinced that there are more business failures attributable to a lack of applying sound business practices than to any other cause.

Since most people in our industry love their work, they seek to constantly expand their knowledge of the latest technological developments in our field. Until recently, there has been almost nothing available to the vegetation management industry about the business aspects that can make the difference between success and failure. Glad to see WEEDS TREES & TURF becoming more aware of this. "Direct Mail: Boost to Spring Business," in Feburary, is a step in the right direction.

Samual Virgilio, President Lawnkare Inc. Bryn Mawr, Pennsylvania

Thank you Mr. Virgilio. We intend to

Conwed® Hydro Mulch® 2000. It's in the bag.



Hydro Mulch® 2000 is a ready-mixed tackifier and mulch in one bag. That simplifies storage and helps eliminate loading errors. Application is fast and easy. Hydro Mulch 2000

fibers cut post job maintenance costs and provide protection against costly repairs and redo's. The special tackifier helps hold down the fiber mulch, seed and fertilizer while it protects against wind and water erosion. The fiber mulch holds water and stabilizes temperature variances for fast seed germination and strong plant starts. A temporary green dye permits monitoring of application and gives the job a finished look.

Write for informative brochure. Conwed Corporation, Environmental Products Division, 332 Minnesota St., P.O. Box 43237, St. Paul, Minnesota 55164. Phone: (612) 221-1144.





innovative products for better environments

bring you more such information in the near future. Bookkeeping, legal tips, and personnel management features are in the works.

The recent Proscape article (February) on sand trap construction was much enjoyed. However, a gravel base under six inches of sand causes an air-water interface which actually impedes movement of excess water from sand into pipe. If the sand in trap is medium coarse and 12 inches deep, gravitational pull will likely keep the top two to three inches of sand relatively playable.

The question and answer columns are a great improvement in your continuing excellent publication.

G. D. Chaster Victoria, B.C. Canada

One of the current activities of the SW-244 Irrigation Management Committee of the Soil and Water Division, American Society of Agricultural Engineers, is to compile a cross-referenced listing of manufacturers of irrigation controllers, the equipment they manufacture, and the performance features of the controllers now available. We will develop a survey questionnaire to the manufacturers for a response regarding each of the models that they wish to see listed.

In order that this listing be as complete as possible, we need to contact all manufacturers of irrigation control equipment. We are asking that any manufacturer desiring to participate in this survey contact us with the following information: company name, address, telephone number, and the name of a contact person to whom we should send the survey. This information should be sent to: Ken Solomon, 1755 Foothill Drive, Logan, Utah 84321.

Ken Solomon 1755 Foothill Drive Logan, Utah 84321

Circle 154 on free information card WEEDS TREES & TURF/APRIL 1978