Today's most popular variety of creeping bentgrass is found on golf courses around the world. Penncross can take the heat in warm climates and stays green longer in the fall up north. Penncross is more genetically uniform, resists disease better and establishes quicker than conventional bents. What does this mean to Pat Fitzsimons? "Consistent greens are important to me and Penncross greens have the uniformity that gives me greater confidence in putting."

"The Grass Designed For Golfers"

Write for free pamphlet on planting and maintaining Penncross greens.
5 New Girl on the Block — WEEDS TREES & TURF gets a new editor.

12 Water: Colorado's Shrinking Commodity — A hot issue gets hotter as the population boom drains availability. Learn how one state is working to protect its precious water supply in this two-part story.

19 Protect Irreplaceable Trees From Lightning Destruction — Professional installation of lightning rods can save countless dollars.

24 Trees ... and More Trees — A thousand people come to St. Louis for the 52nd Annual Convention of the International Society of Arboriculture.

27 SPECIAL PULL-OUT SECTION — YOUR 1977 MANAGERS GUIDE TO EQUIPMENT AND SUPPLIES

74 With a Little Blt of Luck — Ohio's Fred Slagle transforms 200 acres of farmland into the state's toughest 72 par course with some surprising methods.

The Cover — It's just possible the well will run dry for turf in Colorado... see story on page 12.
Princep works around ornamentals.

Princep® herbicide stays where you put it. And since it has practically no foliar action, there's little danger to the plants you spray around.

Princep cleans up your right-of-way and won't hurt your ornamental plantings. It's as simple as that.

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For a full season.

No other herbicide can give you broad spectrum weed control. Without posing a problem for ornamentals.

This season, talk to your local Princep dealer. Go over the correct rates and the newly expanded list of labelled trees and shrubs, before you spray.

Or, if you'd like, drop us a line. We'll send you our fact sheet.

Agricultural Division, CIBA-GEIGY Corporation, P.O. Box 11422, Greensboro, NC 27409
New girl on the block

Meet Gail Hogan, your new editor for WEEDS TREES & TURF. A native of Marblehead, Massachusetts, Gail was graduated from the University of Massachusetts with a BA in journalism and has done graduate work at Cleveland State University.

She has held numerous positions in advertising and public relations and has worked as a reporter for three Cleveland area newspapers. Most recently she was editor for Chessie System, Inc., Cleveland.

New to the green industries, Gail believes her biggest asset will be you, the readers. “I want to know what interests our readers, what they want covered and what they need to know to keep abreast of their exciting and innovative industries. With their help, WEEDS TREES & TURF will continue to be a viable and necessary information source.”

Gail also plans more features about people. “People are the industry,” she says. “They are what it’s all about.” She hopes to meet many readers as she travels throughout the country gathering material for WEEDS TREES & TURF.

Gail lives in North Ridgeville, Ohio, with her husband, Mike, and two children, Sean, 18 months, and Jennifer, nine.

INVENTIVE IDEA speeds application

Special spraying jobs call for special equipment, and that in a nutshell is the reason Ted Weidenfeller designed a new spray boom that’s simple, yet effective. It’s one of those, “Gee, I wish I’d thought of that” ideas.

Weidenfeller, who’s sales manager of Agricultural Services, Inc., in Minneapolis, points out that for spraying open areas such as parking lots, storage areas, sub-stations and the like, a different type of boom is needed. A hand or orchard-type sprayer is great for spot treatment. In areas filled with obstructions, OC or flood tips fill the bill.

However, Weidenfeller discovered that a boom for open areas, one that would treat large areas accurately and efficiently without leaving untreated strips and misses, and one man could handle with ease day after day, just wasn’t available.

So, he set about designing his own. He came up with what he calls the “T type boom”, a rig that applies a 6-foot wide spray strip at a rate of about 50 gallons per acre.

His T type boom is equipped with a quick-coupler, a good shut-off (a 31 gun jet), and is fabricated from ¼-inch aluminum piping.

Overall length is 42 inches, including the coupler and gun jet. The horizontal boom, made of ¼-inch aluminum pipe, is 60 inches long. A pressure gauge is mounted at the junction of the vertical and horizontal boom pipes, and is easily read by the operator.

Completely equipped, including four nozzles, the boom weighs only 5 pounds.

There are other advantages besides being lightweight.

By using four nozzles equipped with 50 mesh ball check strainers and 8005 tips, and spraying at 40 psi, a person walking at a normal gait applies a spray strip 6 feet wide at a rate of almost 50 gallons per acre.

“Thus, a 200-300 gallon spray will treat 4 to 6 acres of bare ground chemical in one filling, and this is about all a two-man crew can treat in a day when the sites are scattered,” inventor Weidenfeller says.

If you have an Inventive Idea, send it to the Editor, WEEDS TREES & TURF, 9800 Detroit Ave., Cleveland, Ohio 44102. We will pay $25 for each idea printed.
IBDU works 'til 

Most slow release fertilizers depend on temperature. The hotter it gets, the faster they release. And when it gets cold, they stop. In fact they start slowing down as bacterial activity slacks—when the temperature falls below 80°F. Winter starts for them long before the leaves fall.

IBDU is activated by water. As long as there is unfrozen moisture in the soil, IBDU is releasing nitrogen. At 40°F, the

PAR EX DISTRIBUTORS

Capitol Nursery Sup., Inc.
Phoenix, Ariz. 85005
(602-272-5500)

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Chemicals Corp.
Los Angeles, Cal. 90023
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Foster-Gardner, Inc.
Santa Ana, Cal. 92801
(714-761-2521)

Agri-Turf Supplies
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(805-963-3691)

Northern Cal. Fert. Co.
San Jose, Cal. 95133
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(303-208-4281)

Avon Cider Mill
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McMullen Feed Store
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Fla. 33060
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(404-432-5382)

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Conyers, Ga. 30095
(404-483-4743)

Swift Agricultural
Chemicals Corp.
Barrington, Ill. 60010
(312-381-9333)

Professional Turf Spec.
Bloomington, Ill. 61701
(309-829-5031)

Vaughan’s Seed Co.
Div. Vaughn-Jacklin Corp.
Downers Grove, Ill. 60515
(312-969-6300)

Indiana Seed Co., Inc.
Wood Dale, Ill. 60191
(312-773-5856)

Deisch-Benham, Inc.
D/B/A Desco Chemical
Nappanee, Ind. 46550
(219-773-7781)

Chemi-Turf Chemical
Indianapolis, Ind. 462
(317-634-7963)

Seedem, Inc.
Evansville, Ind. 47718
(812-642-2401)

Tri-State Toro Co.
Davenport, la. 52802
(319-326-4416)

Leisure-Aid
Div. Aldex Corp.
Bellingham, Wash. 98225
(360-734-4141)

Toro Service Center
Des Moines, Iowa 50311
(515-243-0498)

Big Bear Equ. Co.
Des Moines, Iowa 50320
(515-243-1271)

Swift Agricultural
Chemicals Corp.
East St. Louis, Ill. 62201
(618-271-5650)

Turf Products, Ltd.
West Chicago, Ill. 60185
(312-668-5537)

Turf Mgmt. Supply Co.
Rockton, Ill. 61062
(815-243-0498)

Big Bear Equ. Co.
Des Moines, Iowa 50320
(515-243-1271)
release rate for IBDU is only 20% slower than at 80°F. So your
turf gets a steady meal whether it's hot or cold.
When the winter freeze sets in, your turf will still be thick and
green. And the IBDU will be ready to start feeding at the first
thaw of spring. IBDU. Works longer to make your grass greener.

**PAR EX® Professional Products**
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  - Kalamazoo, Mich. 49005
    - (616-349-7755)
  - Turf Supply Co.
    - St. Paul, Minn. 55121
      - (612-454-3106)
  - Swift Agricultural
    - Chemicals Corp.
    - Jackson, Miss. 39205
      - (601-982-2010)
  - Champion Turf Equ., Inc.
    - Kansas City, Mo. 64114
      - (816-333-8000)
  - Vaughn's Seed Co.
    - Div. Vaughn
      - Jacklin Corp.
    - Bound Brook, N.J. 08805
      - (201-335-4200)
  - Wagner Seed Co., Inc.
    - Farmingdale, N.Y. 11735
      - (516-693-2929)
  - Eastern Turf Equ., Inc.
    - Fayetteville, N.C. 28301
      - (919-483-0179)
  - Swift Agricultural
    - Chemicals Corp.
    - Wilmington, N.C. 28401
      - (919-371-2217)
  - Sidney L. Dryfoos Co.
    - Cleveland, Ohio 44146
      - (216-439-4363)
  - Van Atta Seed & Imp. Co.
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      - (513-541-2651)
    - C. O. Lowe Sales
      - Columbus, Ohio 43229
      - (614-891-9668)
  - Lee Road Nursery, Inc.
    - Cleveland, Ohio 44101
      - (216-551-3766)
  - Binding Stevens Seed Co.
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      - (918-627-4480)
  - Lawn & Golf Sup. Co., Inc.
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      - (215-933-5901)
  - Allen's Seed Store, Inc.
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      - (401-294-2722)
  - Bell Oil Co.
    - No. Myrtle Beach
      - SC 29552
      - (803-249-2616)
  - Swift Agricultural
    - Chemicals Corp.
    - Columbia, SC 29220
      - (803-799-3467)

- Champion Turf Equ., Inc.
  - Wichita, Kan. 67209
      - (316-269-2282)
  - Rhodes Chemical Co.
    - Kansas City, Kan. 66103
      - (913-423-2424)
  - Swift Agricultural
    - Chemicals Corp.
    - Glen Burnie, Md. 21061
      - (301-760-5927)
  - Cornell Chem. & Eq. Inc.
    - Baltimore, Md. 21227
      - (301-247-1525)
  - Vaughn's Seed Co.
    - Div. Vaughn
      - Jacklin Corp.
    - Landover, Md. 20785
      - (301-322-8800)
  - R. F. Morse & Son Co.
    - Wareham, Mass. 02571
      - (508-295-1553)
  - L. E. Chemical, Inc.
    - Div. Lawn Eq. Corp.
    - Royal Oak, Mich. 48067
      - (313-298-3635)
  - Rhodes Chemical Co.
    - Lincoln, Neb. 68507
      - (402-466-8156)

- Clark County Wholes. Mere.
  - Las Vegas, Nev. 89101
    - (702-362-7700)
  - The Terrace Co.
    - Saddle Brook, N.J. 07662
      - (201-843-6655)
  - Vaughan's Seed Co.
    - Div. Vaughn
      - Jacklin Corp.
    - Bound Brook, N.J. 08805
      - (201-356-4200)
  - Wagner Seed Co., Inc.
    - Farmingdale, NY 11735
      - (516-293-2929)
  - Eastern Turf Equ., Inc.
    - Fayetteville, NC 28301
      - (919-483-0179)

- Van Atta Seed & Imp. Co.
  - Cincinnati, Ohio 45225
    - (513-541-2651)
  - C. O. Lowe Sales
    - Columbus, Ohio 43229
      - (614-891-9668)
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      - SC 29552
      - (803-249-2616)
  - Swift Agricultural
    - Chemicals Corp.
    - Columbia, SC 29220
      - (803-799-3467)

- Central So. Turf Dist., Inc.
  - Nashville, Tenn. 37211
    - (615-932-7729)
  - Swift Agricultural
    - Chemicals Corp.
    - Houston, Tex. 77002
      - (713-864-4498)
  - Swift Agricultural
    - Chemicals Corp.
    - Chesapeake, Va. 23324
      - (804-543-8441)
  - turf & Garden
    - Div. Todd Farm Equ., Inc.
    - Chesapeake, Va. 23320
      - (804-543-2071)
  - Swift Agricultural
    - Chemicals Corp.
    - Vancouver, Wash. 98660
      - (503-285-0493)
  - turf Mgmt. Supply Co.
    - Sun Prairie, Wis. 53590
      - (608-837-5598)
  - Reinders Brothers, Inc.
    - Elm Grove, Wis. 53122
      - (414-786-3300)
EPA Administrator Russell E. Train has notified 4,100 pesticide producers, formulators, distributors and registrants that EPA will soon be initiating an auditing program to examine selected toxicity test reports. He said it was the industry's responsibility to insure that all data submitted in support of registration are complete, accurate and valid.

The federal quarantine for imported fire ant has been amended to extend regulated areas in parts of Alabama, Arkansas, Georgia, Mississippi, North Carolina, South Carolina, and Texas. James O. Lee, deputy administrator of the USDA's Animal and Plant Health Inspection Service, APHIS, said this action was necessary because the imported fire ant has spread to new areas in the seven states. Pest-risk articles—such as soil and used soil-moving equipment—must be inspected, treated if necessary, and certified free of pests by APHIS or state agricultural inspectors. The amendment puts movement restrictions for the first time on all or part of the following counties: Colbert and Lauderdale, Ala.; Calhoun and Miller, Ark.; Barrow, Burke, Clarke, Forsyth, Greene, and McDuffie, Ga.; Lenoir, N. C.; McCormick and Newberry, S.C.; Bee, Bell, Blanco, Bowie, Camp, Falls, Freestone, Gillespie, Jim Wells, Milam and Refugio, Tex.

Scientists at the Georgia Institute of Technology will study solar heat collectors and storage systems under a cooperative agreement with the USDA. Under the agreement terms, the Georgia scientists will have one year and $39,199 to design, build and evaluate several solar collector and storage systems using a rock-bed system to store heat for use in heating greenhouses, farm buildings or rural residences. USDA's Agricultural Research Service will sponsor the study with funds from the Energy Research and Development Administration.

EPA has asked for ideas and comments from the public on ways to address the problem posed by contamination of drinking water supplies by organic chemicals. In an Advance Notice of Proposed Rulemaking, EPA says interested people should submit written data, views or arguments to the Agency's Office of Water Supply (WH-550), Criteria and Standards Division, 401 M. Street, SW., Washington, D. C. 20460.

Scientists at Washington State University's Irrigated Agriculture Research and Extension Center, Prosser, will seek controls for the black vine weevil, a serious grape pest, under a cooperative agreement with the U. S. Department of Agriculture. USDA's Agriculture Research Service (ARS) will provide $5,000 for the 18-month study. The scientists plan to evaluate the effectiveness of carbofuran on the weevils. Several treatments using various strengths of carbofuran will be tested. Samples of treated grapes, juice and pomace will be taken for later evaluation for residues and the effects of flavor. Dr. W. W. Cone, an entomologist at the university, is the principal investigator and Billy A. Butt, ARS entomologist, Yakima, Wash., will represent ARS.
The three advantages of advertising when almost everyone is hiding.

1. **Your company stands out.**
   A very comprehensive study,* covering 26 years of data from 1947 to 1973, shows that companies who don’t cut advertising during a recession year do better in sales and profits than those who pare their budgets.

   And when sales rebounded, the non-cutters rebounded a lot better than the cutters did.

   ![Table 1: Sales index of budget-cutters and non-cutters]

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<td>Maintained budgets in 1970 &amp; 1971</td>
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<tr>
<td>Cut budgets in both 1970 and 1971</td>
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<td>111</td>
<td>109</td>
<td>111</td>
<td>122</td>
<td>145</td>
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2. **Your brand stands out.**
   A McGraw-Hill survey of their business magazine readership indicates that a company’s advertising can affect a company’s reputation. Some of the reader comments:

   “If I didn’t see their ads, I would begin looking for a second source of supply because I’d consider them a dying organization.”

   “I feel that a strong ad indicates strong management.”

   “I buy from someone who advertises...it spells quality to me.”

3. **Your salesmen stand out.**
   An article published in the Harvard Business Review (“Industrial Advertising pays off,” Harvard Business Review—March-April, 1970) shows that sales costs are reduced when a strong advertising program supports a sales program. The total cost of selling to groups exposed to advertising often drops by 10% to 30%.

   On the other hand, the non-advertiser stands at a serious disadvantage in a well-advertised market. His cost of selling to groups exposed to his competitors’ advertising may actually increase 20% to 40%. This isn’t a happy thought in times when you’re selling less.

*For a copy of this study entitled “How Advertising in Recession Periods Affects Sales,” send $1.00 to American Business Press, 205 East 42 St., New York, 10017.