

WEEDS TREES & TURF

The Professional Journal of Landscape Design, Construction and Care Since 1962

Poa annua Control in Overseeded Ryegrass

Native Shrubs Provide Low Maintenance Landscape

1981 Interior Landscape Winners

**Winter Means
It's Show Time**



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LARGEST GOLF
CIRCULATION**

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1980-81

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These scholarship winners reflect TUCO's commitment to the turf industry. Committed not only to product development and research, we also share the industry's professional goals. TUCO has awarded these scholarships since 1974. We're dedicated to meeting the industry's present and future needs.



Ohio State University
Michael J. Johnson

Purdue University
Dodd E. Drabing
Michael W. Oatis

California State Polytechnic Institute
Raymond S. Layland, Jr.

Virginia Polytechnic Institute
J. Kyle Miller

Cooperating Universities

*New for 80-81



The Ohio State University *



Past Winners

Michigan State University:

1974-75 John L. Kirtland
1975-76 Wayne Ertel
1976-77 William J. Kotenko
1977-78 Steven E. Ross
1978-79 Jerome Ducker
1979-80 Dale F. Conzelmann
1980-81 Stephen S. Brown
1981-82 Alan Nielsen
1982-83 Jeffrey A. Crean
1983-84 Dennis B. Myers

Virginia Polytechnic Institute:

1974-75 Myron J. Schowalter
1975-76 Brook Parker
1976-77 Dean Kent Mosdell
1977-78 Stephen C. Hyde
1978-79 James P. Mowery
1979-80 J. Kyle Miller

California State Polytechnic Institute:

1974-75 Steve Jessup
1975-76 Philip J. Wycoff
1976-77 Mark A. Hodnick
1977-78 Donald Johnson
1978-79 Guillermo Lozano
1979-80 Dennis Orsborn
1980-81 Brian W. Morris
1981-82 Roderic A. Graf
1982-83 Richard M. Ray
1983-84 Duncan Campbell Turner

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1974-75 Charles T. Ravis
1975-76 Robin W. Smith
1976-77 Michael J. Stanovcak
1977-78 David S. Zimmerman
1978-79 Bradley P. Balschmiter
1979-80 Michael J. Sauls

Purdue University:

1975-76 Regaland Cornett
1976-77 Mark Liddy
1977-78 Kenneth DeBusscher
1978-79 Matthew Lindner
1979-80 Donald A. Cross
1980-81 Mark H. Thielen
1981-82 James D. Mello
1982-83 Stephen P. Biggers
1983-84 David T. Shifley

University of Florida:

1978-79 James K. Lestrud
1979-80 Glenn R. Zalman

University of Massachusetts:

1974-75 Mark Spaulding
1975-76 David J. Sylvester
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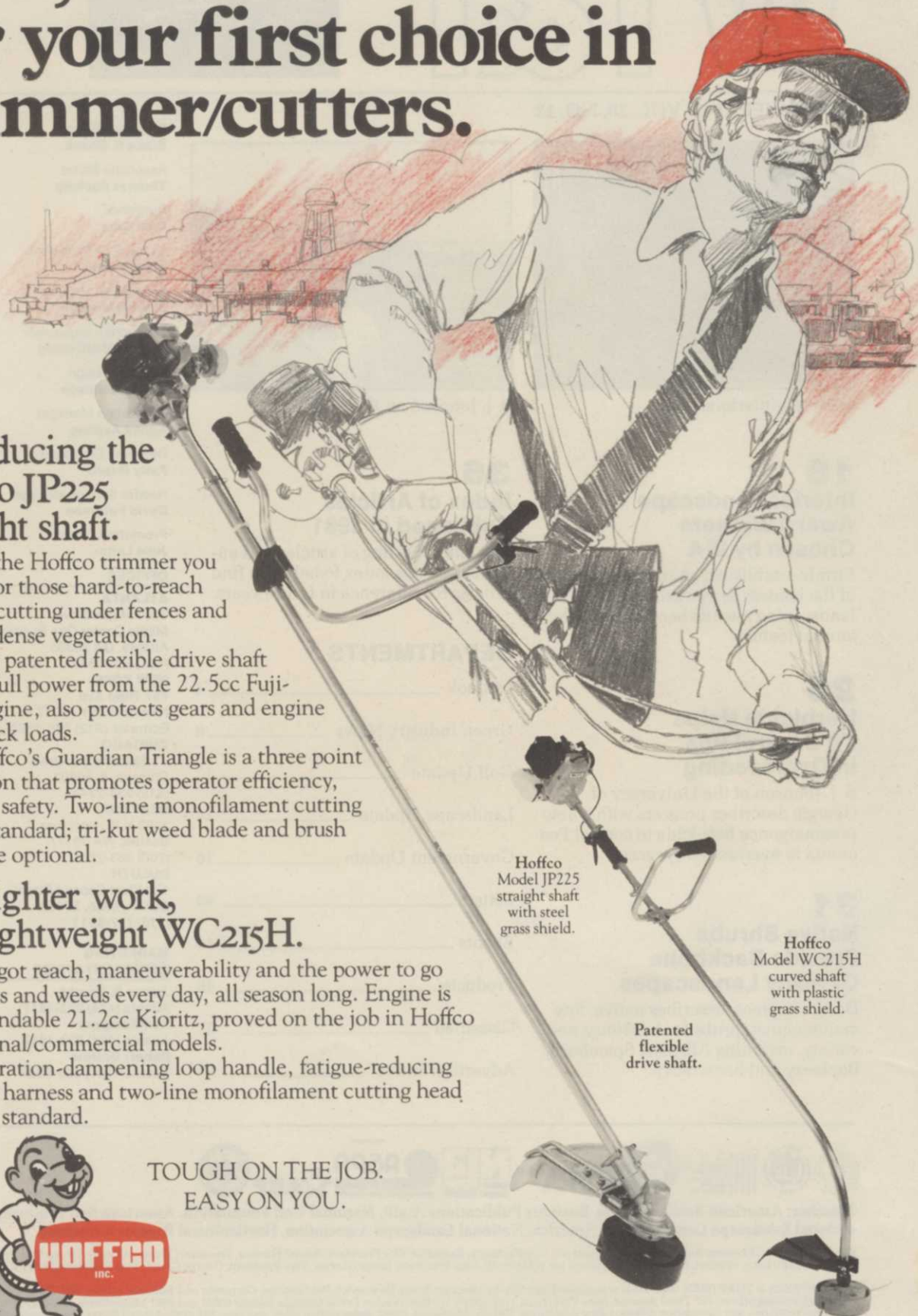
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DECEMBER 1981/VOL. 20, NO. 12



Isadora's interiorscape



B. J. Johnson on Progress

18 Interior Landscape Award Winners Chosen by IPA

Firmly established as an important part of the landscape market, interior landscaping awards become a regular annual feature.

26 Herbicide Helps To Control Poa In Overseeding

B. J. Johnson of the University of Georgia describes progress with a new preemergence herbicide to control Poa annua in overseeded ryegrass.

31 Native Shrubs Provide Backbone Of Many Landscapes

Doug Chapman describes native, low maintenance shrubs for hardiness and variety, including Allspice, Spicebush, Bayberry and Snowberry.

36 Index of Articles Published in 1981

The annual listing of articles and authors. Use this index to help you find articles for reference in future years.

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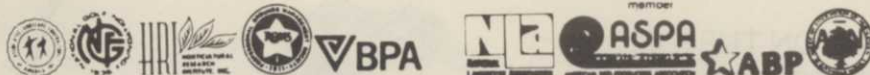
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OFFICES

ATLANTA
3091 Maple Drive
Maple Center One Building
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(404) 233-1817
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757 Third Ave.
New York, NY 10017
Editorial: (212) 888-2563 (or 2892)
CHICAGO
11 East Wacker Drive
Chicago, IL 60601
(312) 938-2344
SEATTLE
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Seattle, WA 98177
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OUTLOOK

By Bruce F. Shank, Executive Editor

Residential construction is a moving target

Many facets of the Green Industry depend upon the residential construction market. Tight money is causing an acceleration of changes in this business sector. The landscape industry must accelerate its changes to keep up.

Residential construction starts are down severely while apartment conversions are way up. Condo or coop living is gaining acceptance. The young, home-owning family is disappearing in the suburbs as is construction of small, single family homes. The big homes are being built at a conservative pace.

First time home buyers are getting older and are in higher income brackets. Nevertheless, due to high mortgage payments, they have no more disposable income than younger couples of five years ago.

Many families are asking if a single family residence is worth the money and effort to maintain. They have a better selection of condominiums to choose from, where they can avoid yard care worries.

Of course, the harder you work for something, the better you take care of it. Those that struggle and succeed in breaking the new home barrier are more careful and more interested in their property. They won't jeopardize the value of their home with a cheap landscape.

For this reason, the willingness of a homeowner to call a professional landscaper is greater. They want the job done properly. If they don't enjoy the landscape, it is at least insurance for property values.

Contractors should realize their residential customer is older, wiser, and probably more concerned about the landscape. They want to know more than the garden center can provide. They know good things are more expensive.

The landscape nurserymen, the original landscape contractor, no longer has the time to assist a customer design his landscape and select the proper plant material. The large garden center has let service slip to keep up with the volume demand of mass merchandising. Too often, there is only one knowledgeable person to answer the questions of tens of customers. That is insufficient to answer the questions of new homeowners who want to make sure they are not buying a mistake.

Garden centers must make a better effort to educate by wall displays, brochures, and knowledgeable sales people. If they do not, the homeowner will pay the landscape contractor to do the job correctly.

The landscape contractor must also allow time to answer customer questions. Work with homeowners who must phase landscaping. Stress that plant varieties commonly found in mass merchandising establishments have weaknesses not found in improved varieties. Excite them with your designs and earn their dependence with quality installation.

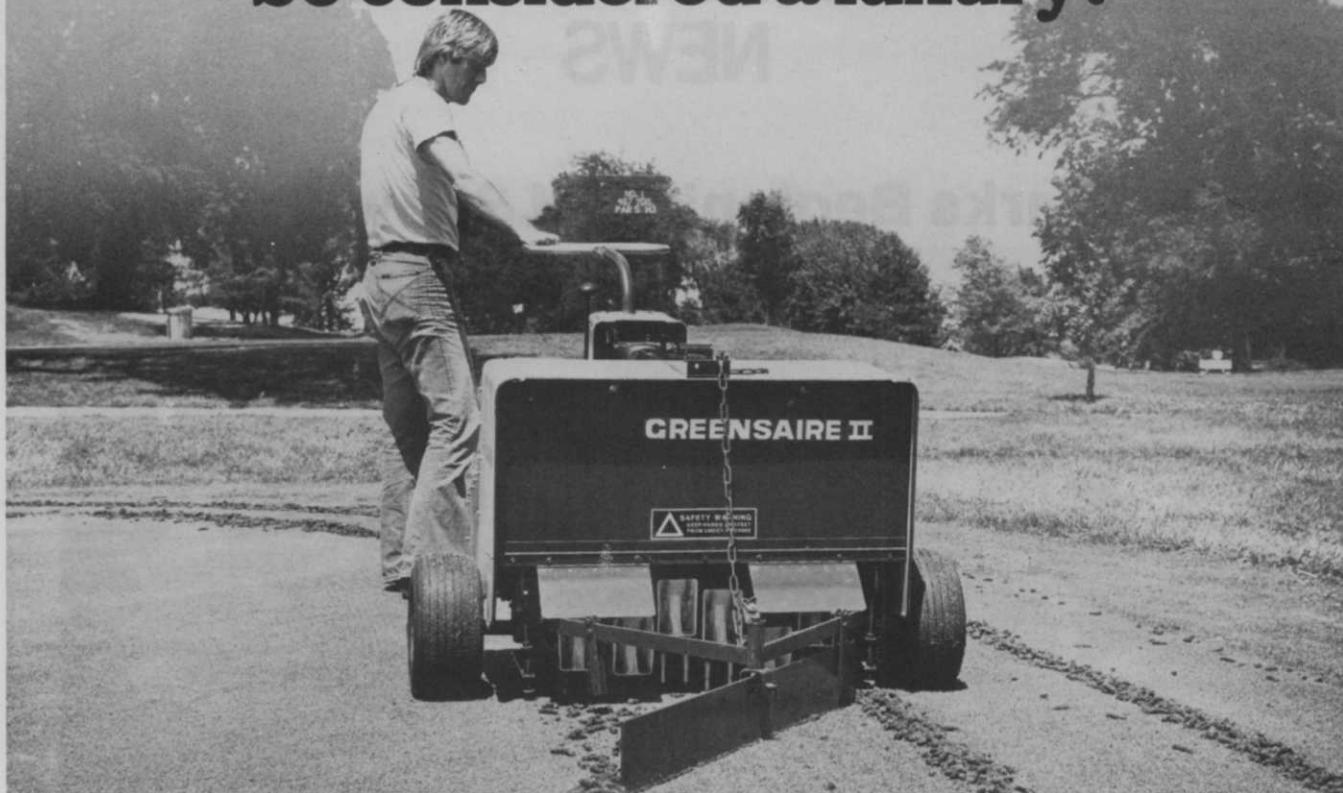
Part of the success of the lawn care market is the professionalism of its marketing material. Simple doorhangers don't work anymore. It takes colorful, educational, and impressive literature to get the attention of today's homeowner. They require more of your time to explain things. Price ironically is less a factor than quality. They need to see that the landscaper knows horticulture and design.

The residential property owner is changing. It's time to change our methods of reaching him or her.

This winter is a critical time to evaluate your promotional literature for residential sales. Get professional advice yourself from a small, local advertising agency. If you are near a college with an advertising program, approach instructors. Printers can help for small jobs and may have a graphic artist.

Experts are now setting mid-82 for recovery of housing and real estate. If this works out, demand will be extremely high next summer and fall. Some predict a boom in housing of unprecedented proportions. Don't sell construction equipment yet. You are going to need it before the end of 82. **WTT**

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WT&T

GREEN INDUSTRY NEWS

Winter Marks Beginning of Show Season



Rutgers Field Day had both good weather and attendance in October.

As the cool weather began to roll into the various parts of the United States, three well-attended turf shows in such diverse areas as New Jersey, California and Florida marked the beginning of show season.

More than 600 turf managers attended the **New Jersey Turfgrass Field Day** at Rutgers Stadium in October. **Dr. Henry Indyk** led demonstrations of athletic field care and renovation while distributors displayed their equipment on the nearby golf course.

Seed, chemical and equipment distributors were able to show their wares, describe them, and clear up confusion as to shortages for the coming year. Equipment distributors showed their new models for 1982. Show attendants were able to try out all models for themselves if they chose.

There was considerable discussion of shortages of Dacthal and possible substitutes, especially in fertilizer mixtures. Seed and chemical company technical representatives were there to

explain management techniques and product performance.

The field day precedes the New Jersey Turf Expo in Cherry Hill by two months, so those who were introduced to products at the field day can get final answers at the Expo on December 7-10. It is a system that New Jersey turf managers appear to like and support.

California

"Well planned, superbly conducted; informative and fulfilling" were some of the comments of the 185 industry personnel who attended the **University of California Turfgrass Field Day** at the South Coast Field Station, Santa Ana, CA.

Highlighting the latest research information were farm advisors John Van Dam and Mike Henry, turfgrass specialist Dr. Victor Gibeault, plant

Continues on page 12



John Van Dam (second from left) discusses cool season cultivars with industry leaders at the University of California Turfgrass Field, South Coast Field Station, Santa Ana, CA.

PENNEAGLE Creeping Bentgrass



The grass that re-greened Butler National

A devastating grass disease virtually destroyed the greens at Butler National Golf Club, Oak Brook, Illinois, home of the *Western Open*, shortly before the 1980 tournament. The Butler Board of Directors decided to replace the grass on all greens and after viewing several varieties of bentgrass in the Chicago area, they selected Penneagle Creeping Bentgrass for the restoration program.

Dr. Joseph M. Duich, professor of Turf Science, Penn State University, and

developer of Penneagle bent was called in as a consultant. Working closely with Oscar Miles, Course Superintendent, the re-seeding of Butler National was begun in mid-August 1980. Before the project was completed, the entire

course was seeded to Penneagle Bentgrass.

By November the course was pronounced in excellent condition and by the 1981 Western Open the course drew raves from players and spectators alike.

The TEE-2-GREEN CORP., marketers of Penneagle and Penncross bentgrass has published a booklet complete with photos of the Butler restoration program. The step by step program at Butler is available free of charge.

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For name of your nearest dealer, call:

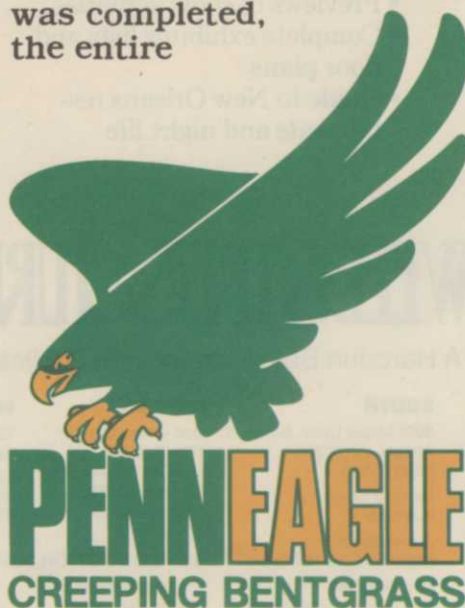
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Bruce Shank
Executive Editor

John Kerr
Editor

SOUTH

3091 Maple Drive, Suite 312
Atlanta, GA 30305
(404) 233-1817

Richard Gore
Publisher

James Brooks
National Sales Manager
Ron Kempner
Regional Sales Manager

MIDWEST

One Illinois Center
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Chicago, IL 60601
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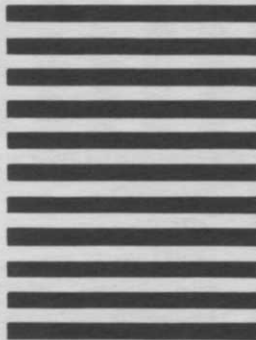
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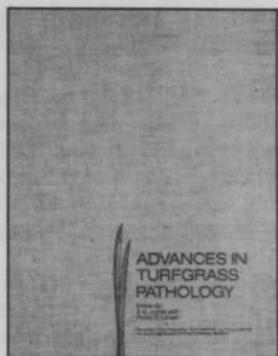
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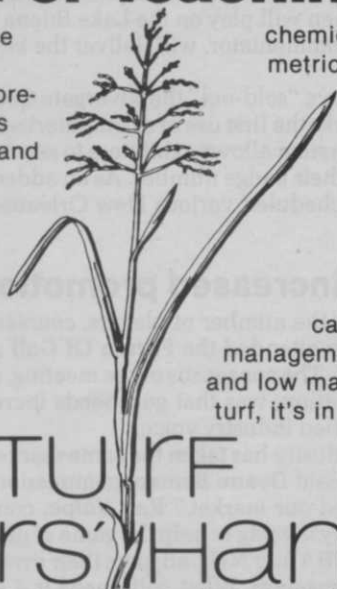
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WTT 12

GOLF UPDATE

Prusa is new GCSAA education director

Jim Prusa, superintendent of buildings and grounds and acting general manager of Pasatiempo Country Club in Santa Cruz, California, has been named to the position of Educational Director of the Golf Course Superintendents Association of America to replace Palmer Maples who left in June. Prusa's father is superintendent of Aquamarine Golf Course in Avon Lake, Ohio.

After a stint in the Navy, Jim attended Orange Coast Community College in Costa Mesa and California State Polytechnic Institute in Pomona. He was Kent Kurtz's turf technician at Cal Poly and was awarded the GCSAA student scholarship in 1973. He was also president of the Cal Poly Horticultural Alumni Association.

Prusa first served as superintendent to China Lake Golf Course and then moved to Pasatiempo. He is currently working on an MBA under a scholarship from the Club Management Association at the University of Santa Clara.

Attendance record for 1982 GCSAA Show

With nearly 8000 attendees already registered, the **Golf Course Superintendent Association of America's 53 International Turfgrass Conference and Show** in New Orleans (January 28-February 5) is set for a record turnout.

"Managing Change, with GCSAA at the helm," is the theme of the show. Along those lines, the educational program has been bolstered. Six preconference seminars are scheduled for Saturday and Sunday. Optional examinations with points towards certification renewal will be offered. A water symposium is scheduled for Monday and Tuesday afternoon, while the USGA Green Section's educational program will be held on Wednesday. GCSAA's educational program will wrap up with a full day of seminars on Thursday.

The 1982 GCSAA Golf Championships will be held January 28-29 at Walt Disney World in Orlando, FL. The men will compete on the Palm and Magnolia courses and the women will play on the Lake Buena Vista links. Jim McKay, ABC TV sports commentator, will deliver the keynote address to kick off the show.

Over 200 exhibiting companies have "sold-out" the Rivergate Convention Center. The 1982 show also marks the first use of a computerized registration and inquiry system. This system allows exhibitors to send additional information to attendees via their badge number. As an added service to its members, GCSAA has scheduled various New Orleans-style social events during show week.

Golf leaders agree to increased promotion

In an effort to stem the decrease in the number of players, courses, and rounds of golf, 142 industry leaders attended the **Forum Of Golf** at the Amfac Hotel and Resort, Dallas, TX. The consensus of the meeting, sponsored by the **National Golf Foundation**, was that golf needs increased marketing and promotion via a unified industry voice.

"Over the last 20 years the golf industry has taken the same market and cut it up—at each other expense," said **Deane Beman**, commissioner of the PGA Tour. "We need to expand our market." **Ray Volpe**, commissioner of the LPGA, said, "If anybody is going to help the game of golf, it is the people in this room. The NFL, NBA and NHL all have their own marketing departments to promote themselves. What golf needs is a single voice, a coordinating action point. I believe that the National Golf Foundation should be that voice."

The forum was attended by representatives from nearly every major golf organization and related manufacturing companies. NGF added the Club Managers Association, American Society of Golf Course Architects, Touring Professionals Association, Golf Course Superintendents Association of America, Professional Golfers Association and Ladies Professional Golfers Association to its board of governors.

News from page 6

breeder Victor Younger and field station technician Stanley Spaulding. Attendees came away from the event with many new concepts, sound practical information and progress of the Western Regional Cultivar Testing Program.

Faced with the possibility of reduced water availability within five years, the thrust of the University of California research effort has been on developing and evaluating turfgrasses with potential for greater water use efficiency than present day cultivars.

At the **Central California Turf Day** held in San Luis Obispo in Veterans Memorial Hall over 160 people took part in the educational program and equipment displays. The program was coordinated by **Dr. Tim Gaskin**, professor of turfgrass management at California Polytechnic State University, San Luis Obispo.

The featured speakers included Drs. George Schmitz and Kent Kurtz and turf student Raymond Layland, Cal Poly, Pomona; Wayne Morgan, Kellogg Supply Co., Los Angeles; Dr. Howard Ohr, University of California, Riverside; Dr. John Harris, Cal Poly, San Luis Obispo; and Robert Lilley, San Luis Obispo agricultural inspector. One of the highlights of the conference was the Mow Olympics. This consisted of a written test on principles of mowers and mowing equipment and an obstacle course set up on a large lawn area on the Cal Poly campus. The event was won by Michael Stallings, Grover City Recreation and Parks Department.

Florida

The **29th Florida Turf-Grass Association Conference and Show** held at the Sheraton Twin Towers in Orlando was a rousing success with over 900 people attending. The show also posted a record number of exhibitor booths with 130.

While no outdoor exhibits or demonstrations were held, attendees were enthusiastic about the revamped educational program. An extended session on water management was held the first day while the second day of the show gave way to nine 20-minute presentations in both the commercial turf and home lawn areas. The audience, largely consisting of golf course superintendents and students, was very attentive, eager to hear what kernels of information the speakers had to impart. Sessions on topdressing, irrigation, golf care maintenance and golf course design proved particularly enlightening.

The 1982 show is set for October 3-6 and will return to Tampa.

Continues on page 47

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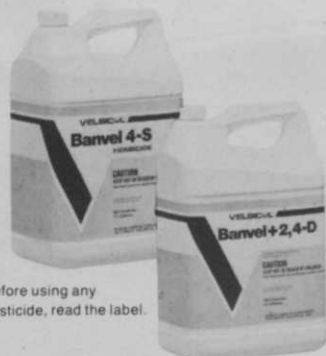


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Circle No. 138 on Reader Inquiry Card

LANDSCAPE UPDATE

PLCAA adds insurance to its services

The Board of Directors of the Professional Lawn Care Association of America approved the implementation of a casualty insurance program which can save members 10 to 30 percent compared to existing rates.

The insurance program will also help the lawn care industry develop a credible data base of premium and loss information to gain more favorable treatment from underwriters. Improved data could add 25 percent to the savings.

Marsh and McLennan, Inc., will administer the program for the PLCAA. Members may apply directly to M&M, 222 S. Riverside Plaza, Chicago, IL, 60606, or through their present insurance broker. Membership information can be obtained by contacting PLCAA, Suite 1717, 435 N. Michigan Ave., Chicago, IL, 60611.

PLCAA has already instituted safety engineering and loss control training for members. Douglas Baker is head of the Insurance Committee for PLCAA.

Interior landscape meetings draw near 1,000

Nearly 1,000 business persons registered for the ALCA Interior Landscape Conference in Atlanta in September and the Interior Plantscape Association Conference in St. Paul in October.

Both conferences covered business matters heavily to help the relatively young industry survive a recession. Technical subjects were also covered to update the interior landscapers on tissue culture, equipment, soils, and lighting.

The IPA conference was almost three times as large as the ALCA conference and some persons attended both meetings. The IPA meeting also offered the certification examinations for the first time. Chicago's Gerry Leider, one of the oldest and largest interior landscapers with his Tropical Plant Rentals, gave the keynote address at the IPA show. His topic was Success in the 80's. Many interior landscape contractors presented their view of the profession during the conference. Scientists from five universities updated horticultural techniques.

Rod Bailey, president of Evergreen Services in Seattle, WA, gave the keynote address at the ALCA conference. A unique suppliers night gave industry manufacturers and growers a chance to discuss new products with the group. Acclimatization, certification preparation, and the introduction of a new publication "Plants for Interior Landscaping" highlighted the three-day program.

Landscape clinic set for Galt House

The annual Landscape and Garden Center Clinic sponsored by the National Landscape Association and the Garden Centers of America is ready to go February 7-10 at the Galt House in Louisville, KY. L.C. Chadwick leads a distinguished group of speakers for the clinic. Interested persons should contact NLA, 230 Southern Bldg., Washington, D.C. 20005, (202) 737-4060.

LA magazine announces consumer edition

Jeff Gatewood, general manager of *Landscape Architecture* magazine, recently announced future publication of a consumer landscape architecture magazine. To be titled either *Garden Design* or *Domain*, the magazine will come out four times per year and have newsstand distribution.

Landscape Architecture magazine, published by the American Society of Landscape Architects, has sold certain issues at newsstands as an experiment. Success led Gatewood to suggest a separate publication for consumers. For more information contact *Landscape Architecture*, 1190 East Broadway, Louisville, KY 40204.

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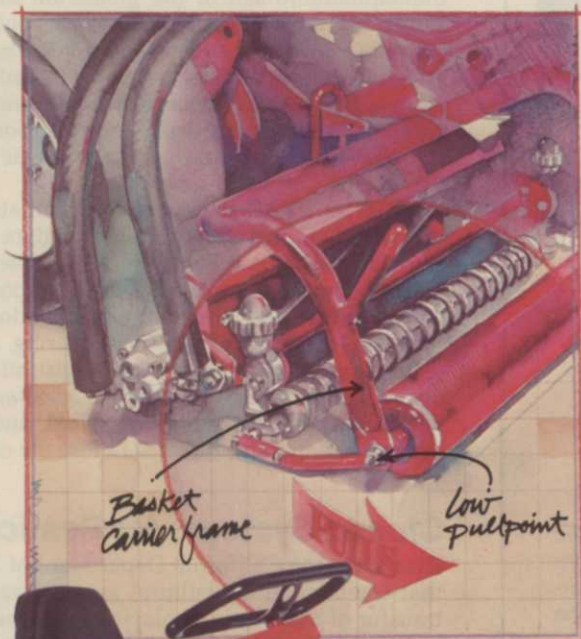
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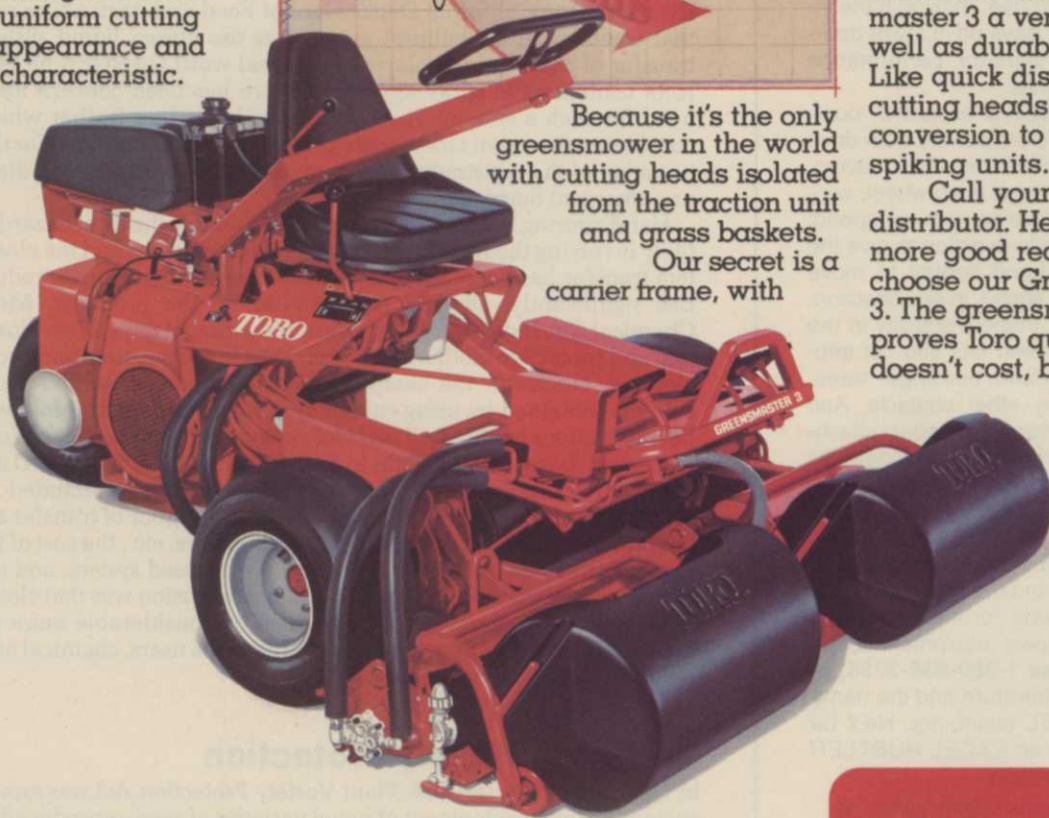
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GOVERNMENT UPDATE

MH Pesticides Suspended

In September the Environmental Protection Agency took action to suspend the registrations of pesticide products containing either the diethanolamine salt or the potassium salt of maleic hydrazide (MH). While MH is principally used to prevent tobacco suckering or harvest sprouting of onions and potatoes, it is also registered for use as a plant growth regulator on turfgrasses, ornamental hedges, and trees. It is especially useful in areas that are difficult to maintain such as along rights-of-ways, highways, industrial areas, airport properties and golf course roughs. We now have only those products which are now in the distribution chain.

When an RPAR review of MH, initiated in October 1977, indicated that additional chronic toxicological data was necessary to estimate the extent of risk caused by its use, EPA asked the registrants to supply such information. The Agency received no commitments for the studies required for the diethanolamine formulations and only one for the potassium salt for control of tobacco suckering. Accordingly, EPA has no other option than suspending the MH registrations. Under the suspension action, which became effective 30 days after the receipt of the EPA notice, registrants could only package, label, and release for shipment maleic hydrazide products produced before the effective date of the suspension.

Closed Systems for Pesticides Questioned

Ever since the California Department of Food and Agriculture required that commercial agricultural applicators use closed liquid systems for transfer of chemicals displaying the signal word DANGER on the label from containers to spray apparatus, there has been concern about the need for such a system. The controversy heated up further when EPA considered the use of closed system transfer as a requirement for the continuation of the registration of the emulsifiable concentrate of diallate, a pre-emergent herbicide.

Hand pouring has long been suspected as being the most hazardous activity involving the handling of highly toxic pesticides and the closed system transfer has been found by researchers in California to reduce this risk significantly. Diallate field studies by the producer, Monsanto Chemical Co., indicated an exposure reduction of 89% when closed system and protective clothing was compared to open system and protective clothing. However, the company also found that a similar reduction could be obtained by using rubber gloves and goggles and following label instructions explicitly. This information was presented at a Workshop on Closed System for Diallate in September, 1981 in Fargo, ND as were many of the disadvantages of the closed system. These included: lack of uniformity of containers and openings, large number of transfer systems but little standardization of pumps, pipes, motors, etc., the cost of the system, the time needed to activate a complex, closed system, and maintenance costs of the system. The Workshop conclusion was that closed systems have great promise but there must be considerable more experimentation before finding ones acceptable to the users, chemical and container manufacturers and the EPA.

Turfgrass Variety Protection

In December 1970, the U.S. Plant Variety Protection Act was enacted to encourage the development of novel varieties of seed-reproduced plants ranging from farm crops to flowers and to make them available to the public, providing protection of those who breed, develop, or discover them.

In the first nine months of 1981, certificates were issued to the Kentucky bluegrass varieties America, Apart and Eclipse; the hard fescue, Silvana; the tall fescue, Rebel; the perennial rye, Barvy; the red clover, Tristan; and the creeping foxtail, Retain.

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THE OTHER HALF: AWARD WINNING INTERIOR LANDSCAPES

by BRUCE F. SHANK, executive editor

Some landscape business opportunities show great promise only to flicker and die. The interior landscaping profession has survived the speculation stage as it enters its second decade with association representation and recognition.

A few of the 1981 interior landscape projects were recently honored by the Interior Plantscape Association. Since we publish the exterior landscape award winners, we thought the time was right to recognize the interior winners.

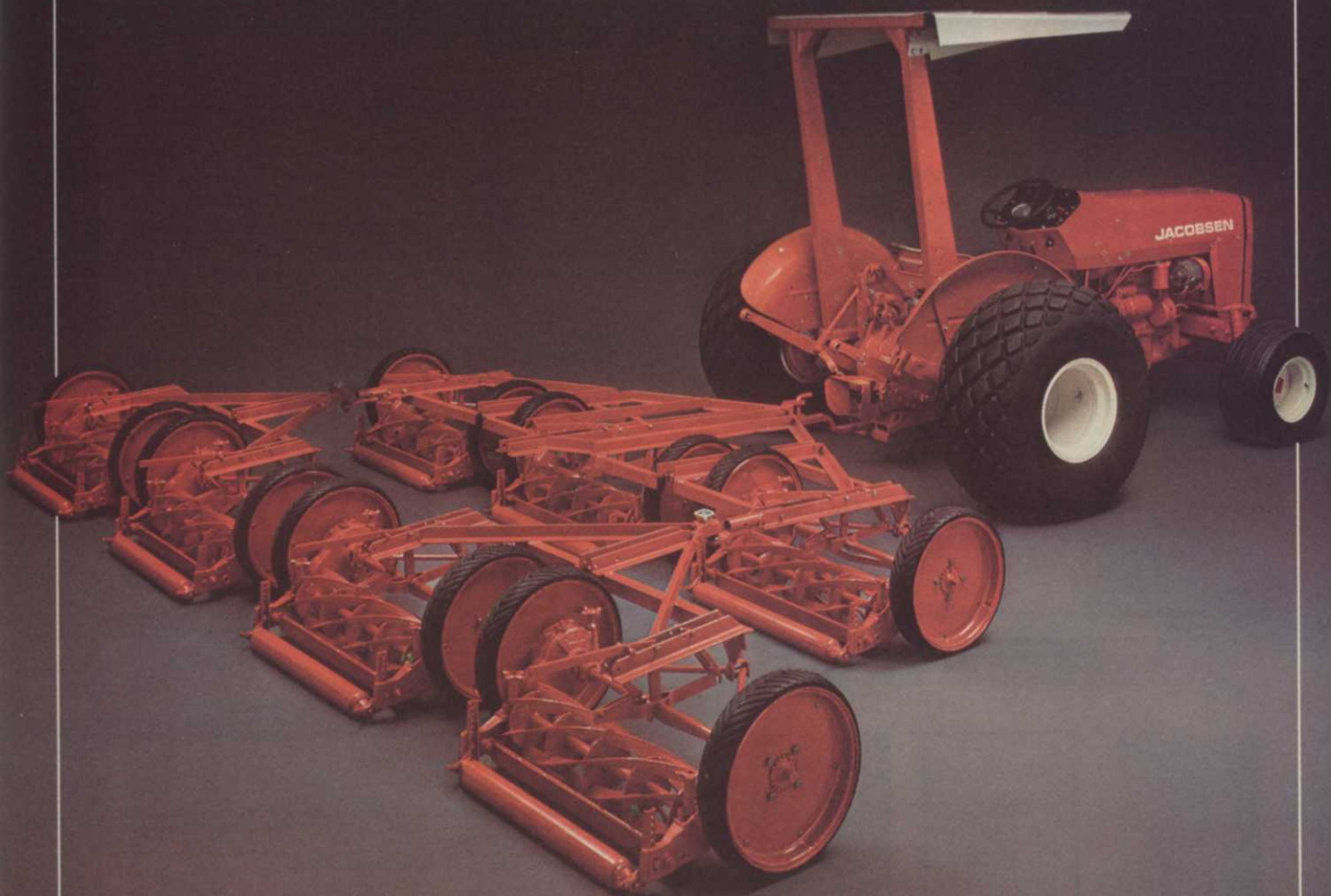
Organizations have helped the interior landscape industry develop a solid reputation with building planners and architects. The Society of American Florists cooperating with the foliage growers in Florida developed the first training programs for interior landscape design, installation and maintenance. The rapidly growing market, bolstered by foliage producers in the South, wanted more than SAF was willing to provide and sought assistance from the Associated Landscape Contractors of America and created the Interior Plantscape Association. All three groups continue to serve the market. ALCA and IPA cooperate on a

Continues on page 22



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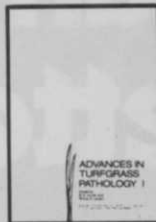
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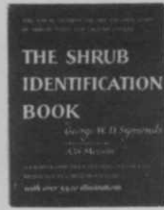


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Plants provide privacy and color at Armco offices in Middletown, OH.

national certification program for the field.

IPA selected 29 projects for the 1981 awards. The following winners were selected from the design/installation category. Awards were also presented for maintenance, creative horticulture and continuous watering. Awards were announced and presented at IPA's annual convention in St. Paul October 29.

Green Expectations

Dallas nightlife is natural at Isadora's Disco. For this project, Green Expectations specified large numbers of Kentia Palms, Bouganvillia, and large hanging baskets of Cissus and Airplane plants. The plants tie in well with wicker furniture to provide a cool, casual respite from the flashing

lights and activity of the dance floor. The project won the highest honor in the \$5,000 - \$10,000 category. Rhea Lilly was project manager. Green Expectations also received a merit award in the \$10,000 to \$25,000 category for the Centre Plaza Holiday Inn in Dallas, managed by Robert Abramson.

Decora

The highest honor in the \$10,000 to \$25,000 category was presented to Decora of Greenwich, CT, for its design and installation of Jardines Restaurant in Cos Cob, CT. Project manager Bruce Crowle adapted his design to benefit from a two-floor plan with many mirrored walls. Combinations of large Palms and Ficus trees, colorful potted plants, and trailing varieties

are magnified by the mirrored walls. Wicker baskets and rattan plant stands contribute to the casual atmosphere of this popular restaurant.

John Mini

The highest honor in the \$25,000 and above category was John Mini Indoor Landscapes for the Park Avenue Plaza in New York City. Few firms get this kind of job challenge. Park Avenue Plaza was constructed with a 30-foot high public galleria that includes a 100-foot waterfall to complement this 15-sided, green glass building. The budget for the galleria alone was \$20 million. Mini chose a mix of seasonal flowers in a setting of Ficus Benjamina, Dracaena "Warnecke" and Spathiphyllum "Mauna Loa." A crane and four

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Actual Size

men were required to install the large Ficus trees. The green glass sides of the building provide optimum conditions for plant lighting, but a complete lighting system on timers was included.

Trabuco Canyon Plantenders

The highest honor in the residential design and installation category was presented to Laurie Park of Trabuco Canyon Plantenders for the Arthur Eastman residence in Laguna Beach, CA. The house overlooks the Pacific Ocean from a bluff and features a large, two-story entryway. Park chose plants to adapt to Southern California weather conditions and include the unusual Reflexa as well as Philadendron, Dracaena, Spathiphyllum, Chamaedorea, and Grape Ivy. The overall effect of the residence is airy, spacious and light-filled.

Something Different

The highest honor in the less than \$5,000 category was awarded

to Barbara Helfman of Something Different Interior Landscaping for the Armco, Inc. offices in Middletown, OH. New open landscape offices depend greatly on interior plants and coordinated color schemes. In this case, Helfman sought to enhance the navy, gray and burgundy color scheme of the three-floor office building. Hand-thrown and glazed pottery were chosen to go with a large mural and the colors of the furnishings. Tropical foliage was used extensively in long planters atop files and panels to soften lines. The plants offer privacy, control traffic, and add a natural touch to open office spaces.

Summary

Tropical plants are not the only elements of interior landscaping. The IPA award winners show that a spectacular setting is not spectacular without coordinated planters, plants, and lighting. Perhaps the hardest type of interior landscaping is the open landscape of modern office buildings. The fixed ele-

ments of the landscape are wall to wall and look alike. Only plant features save the office environment from being stark. For this reason, the designer holds the upper hand in interior landscaping. However, maintenance is the bread and butter of many interior firms with its regular income.

Many interior designers work on a consultant basis for building and landscape architects. This relationship has prevented intrusion by unqualified interior landscaping firms in many cases. The creation of a self-regulating body to certify individuals further strengthens the market's image.

The florist industry has treated the interior landscapers as distant cousins whereas the landscape industry, both contracting and architecture, has made a concerted effort to welcome the new and important market to the overall landscape industry. There is a new and exciting dimension to the landscape market, and it appears that its future is secure.

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B.J. Johnson and herbicide test plots at the University of Georgia Agricultural Experiment Station. Johnson is professor of agronomy and research project leader of herbicides.

HERBICIDE MAY CONTROL POA IN OVERSEEDING

If applied at the right time, Prograss may control *Poa annua* without harming overseeded ryegrass or bermudagrass.

Preliminary research from the University of Georgia indicates a new herbicide may control annual bluegrass (*Poa annua*) in bermudagrass without damaging overseeded ryegrass. These early results tie in well with similar studies conducted at Auburn University over a 12-year period, according to B.J. Johnson, professor of agronomy at the University of Georgia Agricultural Experiment Station.

The new herbicide is Prograss, manufactured by BFC Chemicals, Inc. It will be available this fall to control annual bluegrass in greens where ryegrass is overseeded in bermudagrass.

Controlling annual bluegrass in overseeded greens is one of the major weed problems facing golf

courses in the sunbelt states.

At present only two options are available for annual bluegrass control.

1. A preemergence herbicide sprayed 60 to 90 days before overseeding with ryegrass. Hopefully, overseeding is delayed until the herbicide loses its residual action. If not, the ryegrass can be severely damaged.

2. Use pronamide either pre- or postemergence one to two weeks before overseeding. Then, treat a week later with an activated charcoal application to neutralize the herbicide.

"I'm not sure, but the activated charcoal may neutralize some pesticides that may be used later in the year," said Johnson.

What Johnson has been doing is

looking at the effects of Prograss in three areas: its control of annual bluegrass; its ryegrass tolerance; and its effect as a growth retardant on bermudagrass.

Over the past year, Johnson conducted three separate studies. To test for annual bluegrass control, he applied Prograss on fairways. These areas were not overseeded, but used to test strictly for herbicidal effectiveness. Next he applied the herbicide to bermudagrass greens that were overseeded with ryegrass, to test the selectivity of the ryegrass. Finally, because he was concerned about the winter survival rate of bermudagrass treated with Prograss, he applied it to four bermudagrass cultivars that were not overseeded.

His first series of treatments for all three programs began in October and November. The October treatment was primarily for preemergence control at the time of overseeding. The November treatment, applied at a low rate, was to extend the preemergence control period and for postemergence control of any escaped annual bluegrass.

He treated annual bluegrass in February and March, when the annual bluegrass is fully mature, to see if the herbicide would control it as a late postemergence treatment.

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His results indicated excellent early annual bluegrass control. "The best treatments were in October and November. When we delayed treatments until February we had poor results. In addition, the February treatments delayed green-up of the bermudagrass. These preliminary results of excellent annual bluegrass control are very similar to (Prof.) Ray Dickens' research at Auburn, where they've been looking at Prograss for several years."

Although Johnson cautions that his results are still preliminary, and need to be duplicated before he makes a recommendation, he found that the herbicide's effects on overseeded ryegrass were minimal. Bermudagrass growth in the following spring was normal when treated in October and November, but severely delayed when treated in February and March. Of the four bermudagrass cultivars tested, Tifway showed the least effect and Ormond was affected the most. Tifgreen and Tifdwarf were affected slightly.

Johnson noted that the herbicide does delay or retard bermudagrass growth once it has been applied. This would indicate that the best time for application would be several weeks after overseeding when ryegrass has become well established. Earlier applications could result in some thinning of the greens until the ryegrass becomes established.

Johnson presented his preliminary data to the Georgia Golf Course Association meeting at the Cherokee Town and Country Club in Dunwoody, Ga.

During the coming year, he plans to duplicate his earlier tests as well as expand testing in the area of Prograss' effect on other overseeded varieties.

Ken Chisholm, BFC Chemicals' project manager for the herbicide recommends that for preemergence or postemergence control of annual bluegrass and common chickweed in dormant bermudagrass overseeded with perennial ryegrass, apply in the fall at the time of or up to 30 days after overseeding. The rate should be two to four pints per acre in 20 to 60 gallons of water.

One or two supplemental applications may be necessary, Chisholm adds. These applications should be made at a rate of two pints per acre at 30 to 60-day intervals to maintain control through the winter months.

Chisholm says applications of Prograss after February 1st **are not recommended**. Late applications may temporarily delay transition into active growth of bermudagrass in the spring.

In established perennial ryegrass turf, he says applications are recommended from two to four weeks prior to the main period of annual bluegrass germination and up to 30 days after emergence. Recommended rates are two to four pints per acre in 20 to 60 gallons of water. Applications may be repeated one to two times if needed at 30 to 60-day intervals to maintain control.

Overseeding with perennial ryegrass may be accomplished at any time during the treatment period, he adds. Prograss is recommended for use in new seedings of perennial ryegrass at a rate of four pints per acre for broad-spectrum preemergence weed control.

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NATIVE SHRUBS ARE BACKBONE OF LANDSCAPES

Allspice, Spicebush, Bayberry, and Snowberry

BY DOUGLAS CHAPMAN, "Horticulturist, Dow Gardens, Midland, MI"

Native shrubs should provide the backbone for home and commercial landscapes. Four native shrubs which thrive when grown in full sun or light shade which provide a real diversity to the landscape include Carolina Allspice, Spicebush, Northern Bayberry, and Snowberry. These natives are relatively free of insect and disease problems, will grow in a wide range of soil conditions, and provide color and uniqueness at times when other shrubs are just background.

Carolina Allspice (*Calycanthus florida*) is native from Virginia to Florida but grows acceptably as far north as Boston and Central Michigan. It grows well in sun or shade but is usually slightly taller when grown in shady conditions. It is a dense round shrub, reaching 6 to 8 feet in height and 6 to 10 feet in width at maturity but in northern areas it seldom grows over 6 feet in height and width. *Calycanthus* can be transplanted easily during the

spring. It grows in a wide range of soil conditions, thriving in moist, well-drained loamy soils but adapts to well-drained, almost droughty conditions. It has darker green leaves during the summer months, becoming a pale yellow-green in the fall but does not develop effective fall color. The two-inch dark reddish-brown, star-like flowers appear sporadically from late May through June. This star shape is a unique aesthetic trait. Further, these flowers are very fragrant. The urn-shaped fruit (capsule-like at maturity) is not very effective. This shrub is outstanding in native plantings as specimens in the home landscape and mass plantings in large or commercial landscapes.

Spicebush (*Lindera benzoin*) is an outstanding shrub, 6 to 10 feet in height and width. It is native from Maine to Florida. *Lindera* is a native shrub which is effective in the home or commercial landscape, in naturalized plantings, specimen, or

used in small groupings. Spicebush thrives in full sun but is acceptable in partial sun. It is a good companion to pine or at the edge of a beech-maple-oak woods. It has been reported to be difficult to transplant because of the coarse roots but we have had 98% success when planting in moist, well-drained, sandy loam. During the spring the light green leaves are oblong, 3 to 5 inches in length. This lime-green foliage of summer is transformed into a rich yellow during fall. This fall color is spectacular. Spicebush flowers very early in the season (late April in Central Michigan). These thread-like flowers, borne in clusters near the terminal, are yellowish-green in color. The fruit which is scarlet and shaped somewhat like raspberries can be spectacular along with the fall foliar color. This native is underused and should be grown more in the trade. Lastly, the leaves and stems are fragrant, just one additional reason to consider culture of this outstanding plant.

Northern Bayberry (*Myrica pensylvanica*) is native from Nova Scotia to Pennsylvania mostly along the coast. It is very salt-tolerant (chloide). Bayberry has a long history or association with the development of our country. It was used from colonial times to present in the making of highly aromatic candles (Bayberry candles). This semi-evergreen is perfectly hardy when planted in sandy, well-drained soils. Dirr reports it will exist in the clay soils of Central Illinois. It should be transplanted

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Carolina Allspice has reddish-brown flowers.



Spicebush is a good companion to pine or as an edge of woods.

balled and burlapped during early spring. Bayberry is an outstanding shrub when used in mass plantings associated with pine or broad-leaved evergreens as it has similar requirements. Myrica spreads from root suckers and if planted in full or partial sun will thrive. It will rapidly die out in 50% or more shade. The leaves are a rich dark green. They are oblong, 1½ to 4 inches in length. Bayberry flowers are not particularly effective but the grey fruit which literally lines the one-year old growth can be exciting during the fall. This fruit is usually profuse on one-year old growth. The foliage or branches, when crushed, are extremely fragrant. Although Bayberry has been reported to reach 5 to 12 feet in height and width, we usually find it rarely over 4 to 6 feet in height. Because Myrica spreads by root suckers, it tends to form large clumps and is most effective when used in mass plantings, be it for individual home landscapes or commercial landscapes.

Common Snowberry (*Symphoricarpos albus*) has been reported to be of little landscape value, but when noted in the fall with fruit, it is unique yet exciting. This naturalized plant was brought to this country during the late 1800's and can presently be found growing in the Canadian Maritime Provinces to Virginia and west to Minnesota. This dense shrub at maturity has a somewhat upright habit, reaching 3 to 5 feet in height and 2 to 4 feet in width. The leaves are opposite, somewhat honeysuckle in appearance, being a deep blue-green during the summer with no effective fall color. The perfect pink flowers are borne in terminal clusters during June. The white berry-drupe fruit are borne in clusters. They are interesting and afford an opportunity for one to truly enjoy the landscape. Snowberry can be planted in a wide range of soil conditions from sand to clay but prefers well-drained situations. Further, it is a good companion plant when planted at the edges of woods as it

prefers full to medium sun. This shrub when found as understory or a border plant in large area landscapes, commercial landscapes, parks, or home landscapes is exciting. Further, Snowberry has few or no catastrophic insect or disease problems.

The four above-mentioned native shrubs are underused in today's landscapes. They are particularly effective when used in naturalized plantings as specimen shrubs or in mass borders. They are usually most effectively grown in full or partial sun. They have no catastrophic insect and disease problems, are relatively easy to transplant, and will generally decrease maintenance requirements for most landscapes. They are not only exciting for their flower color or fruit but also Spicebush, Carolina Allspice, and Bayberry are exciting when the leaves and stems are crushed, giving off a unique fragrance. These plants truly stimulate all our sense while adding little to maintenance costs. **WTT**

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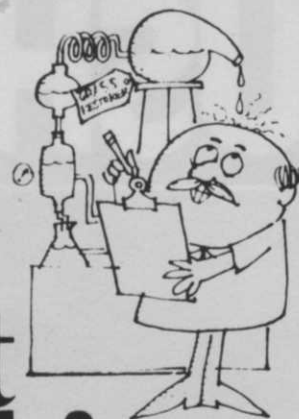
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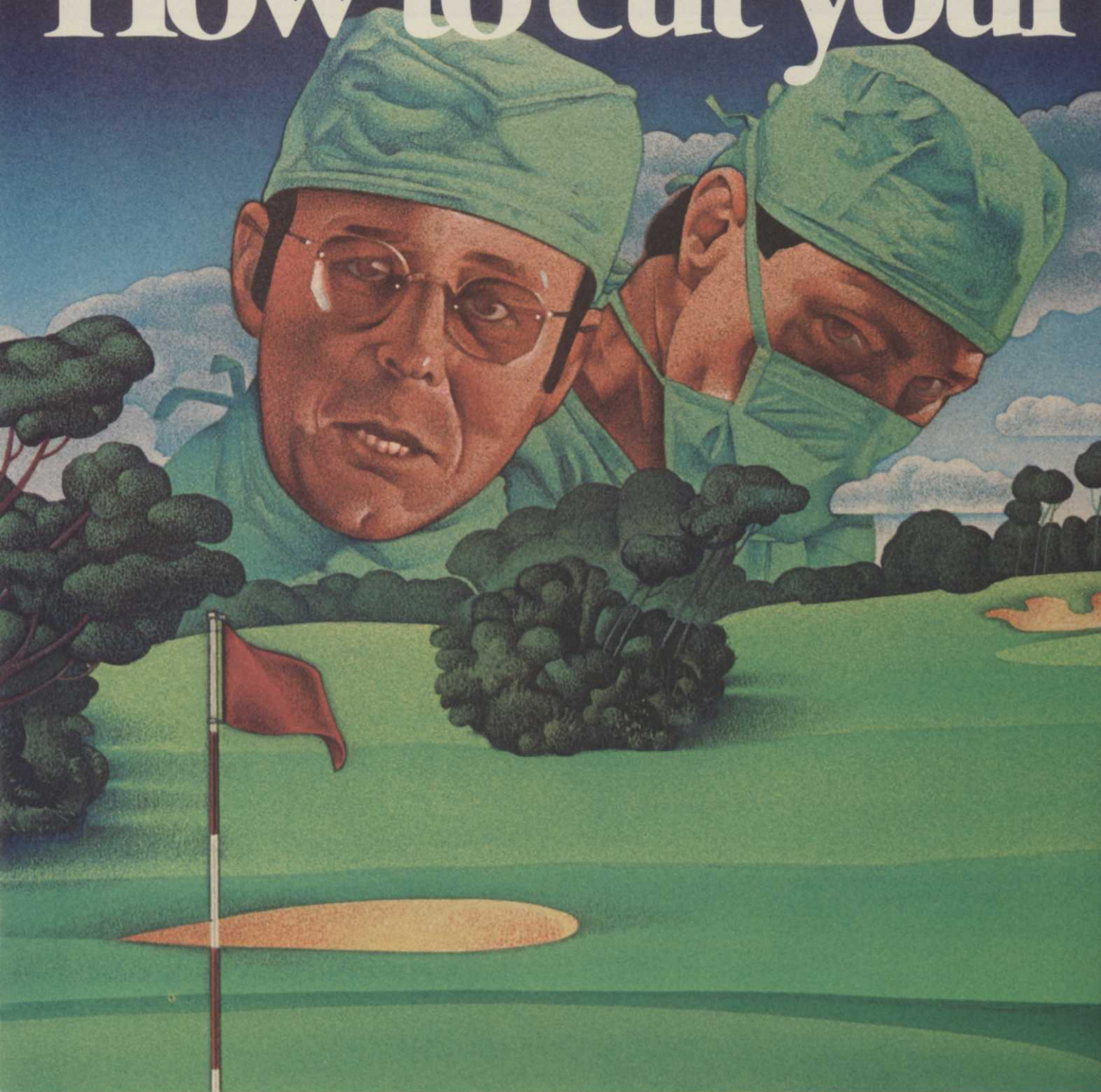
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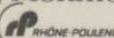


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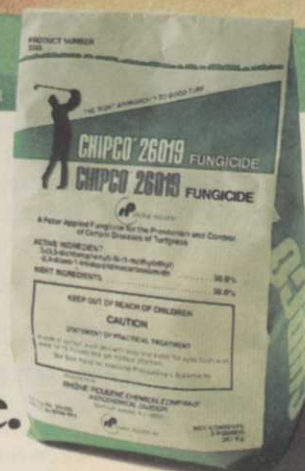
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LETTERS

Change of seasons

Mr. Chapman must be using some arcane calendar because he claims midsummer is anywhere from late May to early July. My calendar, and those of most other of your readers, shows June 21st and 22 as the end of spring and the beginning of summer. Thus your article should have been titled late spring and early summer, for midsummer does not even begin until after all these trees have finished blooming.

I would have included the Japanese Tree Lilac which is a shrub that can be pruned into a single or multiple trunked tree form as a better recommendation. It is reliably hardy in northern Illinois and southern Wisconsin, and to my mind is much more showy than those listed.

Tree Hydrangias come closest to midsummer August blooming and Hercules' Club (*Aralia spinosa*) too but neither gets to be truly far up over head so as to be tree-formed.

It seems an oddity that right when the weather is usually the very finest for

being out, few if any of trees or shrubs are in full bloom. Even the perennials seem to take a break about then with only a few phlox and plantain lilies and hardy amaryllis blooming. But if one is into native prairie plants one can have a wealth of bloom in mid- to late summer with cone flowers, sun flowers, black-eyed susans, asters and more.

But really now, let's not again mislead the readers by calling spring midsummer.

Alyn Hess
Landscape Architect

Useful magazine

Please convey my appreciation to Douglas Chapman for his excellent series on trees. It expands our vision once again beyond the "old reliables" we repeatedly use.

In future issues, we would be interested in articles which dealt with topsoil: what is the accepted norm, typical specifications, modifications to improve, interpreting test lab reports, etc. Even among the "experts," we have

found a great range of opinions on all these items.

I know you continually do articles on grasses, but some get rather technical and don't always deal with the practicalities of specifying and using. We would like to see articles in the Doug Chapman vein, which dealt with bluegrasses, fescues, ryegrasses, clovers, etc.; what are the best types, new introductions which are proving successful and are available.

Dean A. Johnson, ASLA
Johnson and Dee

More foreman needed

I read with great interest your article in the August, 1981 issue of *Weeds Trees & Turf* on co-op landscape students. Being relatively familiar with the program at Mississippi and most of the employers interviewed, I found the comments most interesting. One in particular struck a nerve, that of Wally SaBell's, regarding the need for more two-year programs rather than four-year programs. We employ graduates in supervisory and management levels, but find a great void at the working foreman and crew leader level. It would be appreciated if you would consider doing an article on two-year Vo-Tech landscape schools or should you have a list of associates degree colleges with landscape criterias, I would appreciate your sending me a copy or steering me to a source of this information.

Thank you very much for your assistance and I'll appreciate any help you'll give me along these lines.

Marshall Muginer, President
Lafayette Nursery Sales
Lafayette, LA

Gypsy Moth Eggs

I enjoy reading *Weeds, Trees and Turf* as it helps me keep up-to-date on new endeavors, materials and ideas in the tree industry. However, when I see articles about subjects that I am familiar with and find misleading information, I have to question other articles. I am referring to your "Gypsy Moth" article. Gypsy moths don't lay eggs in April and May (Pages 28 and 34). Also, the paragraph on page 104 implies that the male deposits the eggs. I believe you were referring to a successful mating and the resultant eggs from that mating.

Robert Partyka
Director of Horticulture, Chemscape

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Dacamine 360D is an oil soluble formulation which penetrates weed leaves and translocates to the root system of the weed, killing the plant where it lives. Virtually eliminating the possibility of regrowth.

What's more, Dacamine 360D is non-volatile so it won't vaporize

even in hot weather. Once applied, there is no risk of injury to nearby ornamentals due to vapor action.

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It's ideal for early season weed control on established turf because it provides first rate killing power with gentleness to most tender grasses. And it can be applied around trees without risk of root injury.

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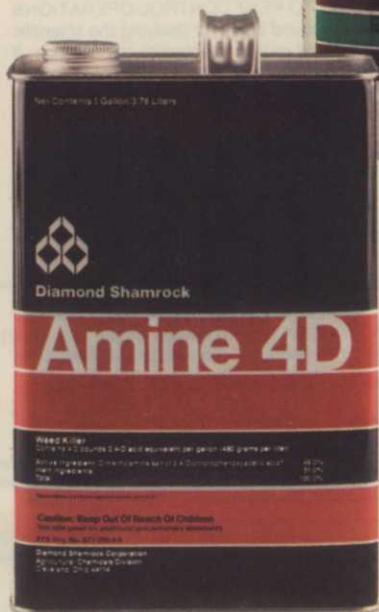
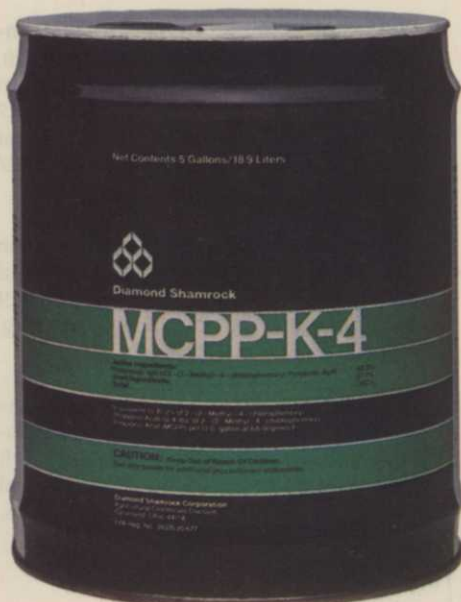
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WT&T EVENTS

The current issue of **WEEDS TREES & TURF** carries meeting dates beginning with the following month. To insure that your event is included, please forward it, 90 days in advance, to: **WEEDS TREES & TURF Events**, 757 Third Ave., New York, NY 10017.

Landscape Design Short Course for Residential Properties, Cooperative Extension Service, Ohio State University, Wooster, OH, **Dec. 14-16**. Contact Fred K. Buscher, Area Extension Agent, Landscape Horticulture, OARDC, Administration Building, Wooster, OH 44691, 216/262-8176.

Twenty-Second Annual Illinois Turfgrass Conference and Tradeshow, Prairie Capital Convention Center, Springfield, IL, **Dec. 15-17**. Contact Dr. Thomas Fermanian, 1707 Orchard St., Urbana, IL 61801, 217/333-7847.

Turfgrass Disease Minicourse, Blacksburg, VA, **Dec. 15-17**. Contact

Cooperative Extension Service, Virginia Polytechnic Institute and State University, Patton Hall, Blacksburg, VA 24061, 703/961-6491.

North Carolina Nurserymen's Short Course and Trade Show, Pinehurst Hotel, Pinehurst, NC, **January 3-5**. Contact William Wilder, NCAN, RT. 2, Box 397, Knightdale, NC 27545.

Maryland Turfgrass '82, Baltimore Convention Center, **Jan. 4-6**. Contact Dr. Thomas Turner, Department of Agronomy, University of Maryland, College Park, MD 20742, 301/454-3716.

Winter Turfgrass Course, Cook College/Rutgers University, New Brunswick, NJ, **Jan. 4-Mar. 12**. Contact Edward Lipman, Cook College, P.O. Box 231, New Brunswick, NJ 08903, 201/934-9465.

Mississippi Nurserymen's Association, Annual Membership Meeting and Seminar, Metro-Ramada Inn,

Jackson, MS, **Jan. 10-12**. Contact Walter E. Davis, P.O. Box 242, Poplarville, MS, 601/795-4526.

53rd Annual Ohio Florist Short Course, Ohio Center-Hyatt Regency Hotel, Columbus, OH, **Jan. 10-13**. Contact Harry Tayama, Ohio Florists' Association, Columbus, OH 43210.

1982 North Carolina State University Agricultural Chemicals School, Jane S. McKimmon Center for Extension and Continuing Education, Raleigh, NC, **January 11-12**. Contact Harry Duncan, Plant Pathology, Box 5397, Zip 27650, 919/737-2711.

Landscape Design Short Course for Residential Properties, Cooperative Extension Service, Ohio State University, Wooster, OH, **Jan. 13-15**. Contact Fred K. Buscher, Area Extension Agent, Landscape Horticulture, OARDC, Administration Building, Wooster, OH 44691, 216/262-8176.

Mid-Atlantic Nurserymen's Trade Show, Baltimore Convention Center, Baltimore, MD, **Jan. 18-20**. Contact Mid-Atlantic Nurserymen's Trade Show, Perry Hall, MD 21128, 301/256-6474.

52nd Annual Michigan Turfgrass Conference, Longs Convention Center, Lansing, Michigan, **January 19-20, 1982**. Contact: Paul Rieke, Dept. of Crop and Soil Sciences, Michigan State University, E. Lansing, MI, 48824, 517-355-0266.

Twentieth Nebraska Turfgrass Conference and Trade Show, Holiday Inn, Omaha, NE, **Jan. 19-21**. Contact Robert C. Shearman, Turfgrass Specialist, 377 Plant Science Complex, University of Nebraska, Lincoln, NE 68583, 402/472-2550.

Michigan Association of Nurseryman Convention and Trade Show, Grand Rapids, MI, **Jan. 20-21**. Contact Richard Ahti, P.O. Box 26008, Lansing, MI 48909, 517/394-0236.

Massachusetts Horticultural Congress, Dunfey's Hyannis Hotel, Hyannis, MA, **Jan. 20-22**. Contact Deborah Fanning, Massachusetts Horticultural Congress, 715 Boylston Street, Boston, MA 02116, 617/266-6800.

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Associated Landscape Contractors of America Annual Meeting & Trade Exhibit, Hilton Riviera, Palm Springs, CA, **Jan. 24-29**. Contact ALCA, 1750 Old Meadow Road, McLean, VA 22102, 703/821-8611.

New York Turf & Landscape Association, Long Island Gardeners Association, Hudson Valley and Long Island Cooperative Extension Service, Annual Turf and Landscape Conference, Tappan Zee Inn, Nyack, NY, **Jan. 27**. Contact Frank Claps, 136 Laurel Avenue, Larchmont, NY 10538, 914/834-6846.

Winter National Hardware & Home Center Show, Las Vegas Convention Center, Las Vegas, NV, **Jan. 30-Feb. 1**. Contact Winter National Hardware and Home Center Show, Cahners Plaza, P.O. Box 3833—999 Summer St., Stamford, CT 06905, 203/964-0000.

Twenty-Seventh Annual Southwest Park and Recreation Training Institute, Lake Texoma Lodge, Kingston, OK, **Jan. 31-Feb. 3**. Contact James W. Kitchen, Institute Director, Department of Park Administration and Landscape Architecture, Texas Tech University, P.O. Box 4169, Lubbock, TX 79409, 806/742-2858.

Park and Recreation Maintenance-Management School, Wilson Lodge/Oglebay Park, Wheeling, WV, **Jan. 31-Feb. 4**. Contact Alice Strickland, North Carolina State University, Division of Continuing Education, P.O. Box 5125, Raleigh, NC 27650, 919/737-2261.

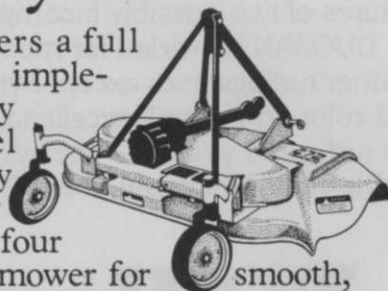
GCSAA International Turfgrass Conference and Show, New Orleans, LA, **Jan. 31-Feb. 5**. Contact Golf Course Superintendents Association of America, 1617 St. Andrews Drive, Lawrence, KS 66044, 913/841-2240.

Weed Science Society of America, Annual Convention, Boston Park Plaza Hotel, Boston, MA, **Feb. 7-11**. Contact WSSA 309 West Clark Street, Champaign, IL 61820.

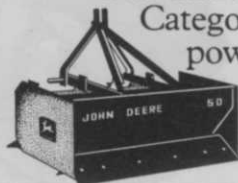
National Arborist Association 1982 Annual Meeting, Maui Surf Hotel, Maui, Hawaii, **Feb. 14-18**. Contact National Arborist Association, Inc., 3537 Stratford Road, Wantagh, NY 11793, 516/221-3082.

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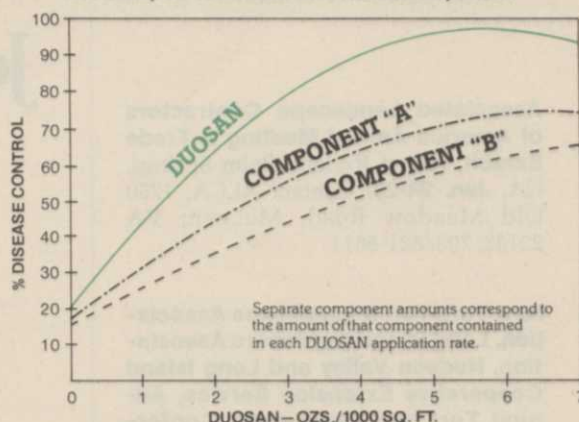
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"We expect an expanded international radio advertising program for NMC this coming year," said Bailey. "We intend to add more weekends and more weekdays to our advertising schedule—as support funds permit. We are looking at additions to the program, too, in the form of specifically-targeted advertising to narrowly defined markets—such as home-builders."

Bailey noted that major wholesale growers and suppliers are adding a voluntary NMC contribution to their invoices amounting to one-fourth of one percent. When their retailing customers include that amount in their payment, the grower or supplier matches the contribution and sends the total to NMC.

EQUIPMENT

OPEI Working On Shredder Standard

The Outdoor Power Equipment Institute has initiated a voluntary standards development program for shredder grinders. This program is virtually completed. The final proposed standard will be submitted shortly to the American National Standards Institute's Board of Standards Review. Final approval is expected soon.

An OPEI safety seal program for shredders will be initiated next year after the ANSI approval has been obtained.

Bannigan Named E-Z Go Vice President

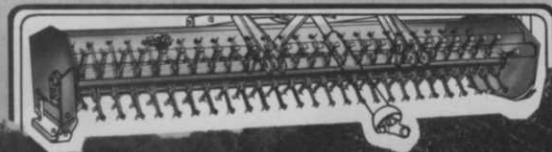
Ed Bannigan has been named vice president of sales of E-Z Go, Augusta, GA. Bannigan had previously been western regional manager of the company. He began his career with E-Z Go in May of 1978 as Branch manager.

Continues on page 57

mott HAMMER KNIFE Flail Mowers can cut your TURF CARE COSTS

Mott Flail Mowers reflect extra value through greater versatility, added production with longer trouble-free life, and safer operation. No other mowing system is as versatile as the flail. With only one mower investment, you can trim fine lawns, shred tough weeds, mulch, renovate, dethatch and scalp. You can work any area that is smooth or rough, clean or trashy, level or steeply banked, dry or "liquid wet". And you can operate with much greater safety than with rotary mowers. Mott Flail Mowers are built to last and can be used with most tractors. Models are available in widths from 38 to 88 inches. In combination, they will handle up to 19 foot swaths. Contact us today and discover how the extra value of Mott Flails can pay off by cutting your turf care costs.

MOW LAWNS ■ RENOVATE ■ MULCH LEAVES ■ SHRED WEEDS



Mott Interstater Cuts 19' Swath.



MOTT CORPORATION 514 Shawmut Avenue
P.O. Box 518, LaGrange, IL 60525 (312) 354-7220

Circle No. 123 on Reader Inquiry Card

PICKS UP LEAVES AND DEBRIS



lawn genie®

Pick-Up Mower



Why own three machines when one does the job?

Spring: Thatches, renovates and picks-up in one pass!

Summer: Mow and pick-up clippings.

Fall: Clean-up leaves, twigs and trash.

Simple—anyone can operate it. Built to take it all day, everyday.

Hopper empties from tractor seat.

Change mowing or thatching blades in seconds with M-C's patented spring-loaded hangers.



48" Pull-Type



72" P.T.O.



The only flail pick-up mower that thatches, mows and picks-up in one pass! Available in 36", 48", 60" and 72" cutting widths.

Mathews Company / Box 70, Crystal Lake, IL 60014 / 815-459-2210

Circle No. 120 on Reader Inquiry Card

WT&T

PRODUCTS

Advanced Drainage Systems is offering its corrugated plastic drainage tubing in a choice of two synthetic wrap



materials for protecting subsurface drains against the most challenging siltation problems. ADS Drain Guard, a 100% nylon envelope is an ultraporous filter that restrains and stabilizes problems solids such as fine sand and silts.

Circle No. 178 on Reader Inquiry Card



Finn Corp.'s T80 tank features a low profile tank design for ground level loading and a hydraulic powered, variable speed paddle agitator. The hydraulic seeder can be trailed to a site with ease and stability. It is a viable option to higher priced chasis-mounted units.

Circle No. 179 on Reader Inquiry Card

Wyo-Ben's Envirogel is manufactured from bentonite clay and is processed for use in reducing the seepage of fluids through porous soils. According to Wyo-Ben, bentonite can absorb five times its weight of water and expand to 12-16 times its dry volume.

Circle No. 180 on Reader Inquiry Card

The model 10 Turf-Truk is the latest addition to the line of Hester Ag-Truk three-wheeled ranch machines. The model 10, manufactured by Horizon



Services Company, features a two-passenger bench seat, electric start G300 Honda industrial engine, 3 ft. by 4 ft. cargo box and a load carrying capacity of 1200 lbs.

Circle No. 181 on Reader Inquiry Card



New Trailblazer™ sweeps turf/hard surfaces

At last! A rugged all-terrain sweeper that can clean both your turf and hard-surfaced areas. Provides productivity undreamed of before.

TENNANT® Trailblazer™ sweeps up to 3 acres of turf or 7 acres of hard surfaces per hour. Has more power than any turf machine. Lease/time purchase/rental plans available. Write: Tennant Company, 701 N. Lilac Dr., Minneapolis, MN 55440.



Climbs curbs, articulates to sweep hard-to-reach places.

TENNANT® MAINTENANCE SYSTEMS
sweepers • scrubbers • scarifiers • floor coatings

Call Toll Free: 800-328-5727 Ext. 768S

Circle No. 134 on Reader Inquiry Card



tractor. The Custom 300 cabs are ROPS-tested to meet OSHA requirements and feature all-steel construction, tinted safety glass, sliding rear window and vinyl padded interior.

Circle No. 182 on Reader Inquiry Card

Continues on page 53

3 GOOD WAYS TO IMPROVE YOUR QUALITY, PRODUCTION, SERVICE AND PROFIT WITH BROUWER!

1. NEW BROUWER HITCH-HIKER

Another Brouwer innovation in material handling

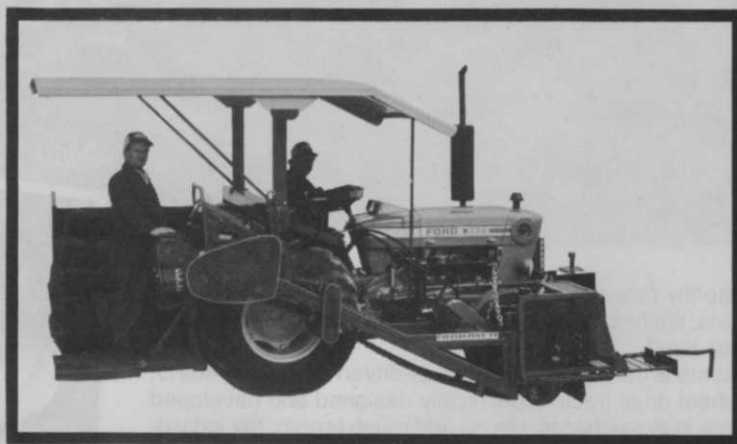
- Simple, safe operation
- Very lightweight design
- Excellent performance on all terrain
- Quick hook-up and release to any truck
- 8" side shift for tight loading
- High transport clearance
- 19 HP Diesel Engine
- Mechanical Drive System
- Immediate Pallet Return



2. BROUWER ECONOMY HARVESTER

- Operate off uncut turf
 - A more uniform cut
 - Less down time
 - Less top soil removal
- Available in 15, 16, 18 and 24 inch widths and choice of pallet sizes
- Cut, Roll, Slab or Fold 24 hours a day, wet or dry weather, all sod, all conditions.

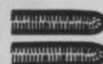
Top Turf men around the world use Brouwer Harvesters to assure top profit.



ROLL



SLAB

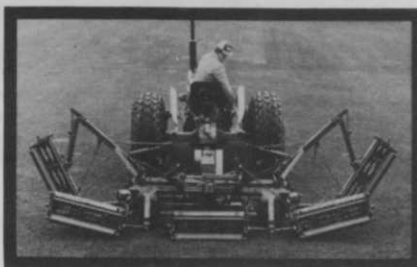


FOLD

3. BROUWER PTO MOWERS

FEATURING HYDRAULIC LIFT

WRITE FOR FREE BROCHURES.



Brouwer PTO Mowers for economy, reliability and cutting the toughest grass.

- Easy to transport
- Smooth cut at a low cost
- Lightweight, high-stress steel frame
- Simple "no-wheel and gear" PTO Drive
- No wheel tracks
- Track remover available
- Yours in 3, 5 and 7 gang combinations

BROUWER

The Turf Equipment People

Brouwer Turf Equipment Limited, Woodbine Ave., Keswick, Ontario, Canada L4P 3E9

Tel: (416) 476-4311

Circle No. 103 on Reader Service Card

EXCEL HUSTLER 602 D

Introducing the new six-wheel drive, self-leveling mower for rough, rugged, hilly terrain!



Consistently faced with the really tough slope mowing jobs? Are culverts, ditches, roadside berms and hilly terrain where your work takes you?

The answer is the new 27.5 hp, diesel-driven HUSTLER 602 D, the six-wheel drive tractor specifically designed and developed for bunkers, hilly roadsides, berms and rough terrain. Six individually-powered drive wheels deliver unmatched traction capabilities in all conditions. The 602 D's exclusive self-leveling feature automatically levels operator station and engine platform on slopes. Cab/engine platform leveling may also be manually controlled up to 27° right or left.

Another HUSTLER exclusive feature is the dual-hydrostatic drive system powering both sets of drive wheels independently. Twin steering levers control direction speed, turning and braking, giving you infinite maneuverability with simple, one-hand control.

Equip this rugged machine with HUSTLER attachments and you have four-season versatility. A 72" heavy-duty rotary deck, 60" flail mower, 60" two-stage snow thrower, 72" dozer blade, 72" rotary broom, cab enclosure kit and more are available with the 602 D.

Call toll free 1-800-835-3260, or write for the name of your HUSTLER distributor and free literature.



The four front wheels on the 602 D are mounted on a walking-beam suspension to allow the tractor to virtually walk over uneven, rutted terrain without loss of traction. Rear wheel hydraulic wheel lift allows smooth, easy turns.

The choice of the Pros.

EXCEL **HUSTLER**
Turf & Grounds Equipment

GPW-8-381

EXCEL INDUSTRIES, INC. • BOX 727 • HESSTON, KANSAS 67062 • (316) 327-4911 • (800) 835-3260

Circle No. 109 on Reader Service Card

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the
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numbers
of those
items of
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to you.

Inquiries serviced for 90 days from date of issue. For those countries outside the U.S., please apply appropriate postage before mailing.

READER SERVICE INFORMATION CARD 12-81 2

For more information on products or services mentioned in this issue, circle the corresponding numbers below, fill in appropriate information and mail today.

101	115	129	143	157	171	185	199	213	227
102	116	130	144	158	172	186	200	214	228
103	117	131	145	159	173	187	201	215	229
104	118	132	146	160	174	188	202	216	230
105	119	133	147	161	175	189	203	217	231
106	120	134	148	162	176	190	204	218	232
107	121	135	149	163	177	191	205	219	233
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109	123	137	151	165	179	193	207	221	235
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111	125	139	153	167	181	195	209	223	237
112	126	140	154	168	182	196	210	224	238
113	127	141	155	169	183	197	211	225	239
114	128	142	156	170	184	198	212	226	240

Your primary business at this location is: (check one only in A, B or C)

A. LANDSCAPING GROUND CARE FACILITIES:

- 0005 ☐ GOLF COURSES
 0010 ☐ SPORT COMPLEXES
 0015 ☐ PARKS
 0020 ☐ RIGHTS-OF-WAY MAINTENANCE FOR HIGHWAYS, RAILROADS, & UTILITIES
 0025 ☐ SCHOOLS, COLLEGES & UNIVERSITIES
 0030 ☐ INDUSTRIAL & OFFICE PARKS/PLANTS
 0035 ☐ SHOPPING CENTERS, PLAZAS AND MALLS
 0040 ☐ PRIVATE/PUBLIC ESTATES & MUSEUMS
 0045 ☐ CONDOMINIUMS/APARTMENTS/HOUSING DEVELOPMENTS/HOTELS/RESORTS

- 0050 ☐ CEMETERIES/MEMORIAL GARDENS
 0055 ☐ HOSPITAL/HEALTH CARE INSTITUTIONS
 0060 ☐ MILITARY INSTALLATIONS & PRISONS
 0065 ☐ AIRPORTS
 0070 ☐ MULTIPLE GOVERNMENT/MUNICIPAL FACILITIES
☐ OTHER TYPE OF FACILITY (PLEASE SPECIFY) _____

B. CONTRACTORS/SERVICE COMPANIES/CONSULTANTS:

- 0105 ☐ LANDSCAPE CONTRACTORS (INSTALLATION & MAINTENANCE)
 0110 ☐ LAWN CARE SERVICE COMPANIES
 0115 ☐ CUSTOM CHEMICAL APPLICATORS (GROUND)
 0120 ☐ TREE SERVICE COMPANIES/ARBORISTS
 0125 ☐ LANDSCAPE ARCHITECTS
 0130 ☐ EROSION CONTROL COMPANIES
 0135 ☐ EXTENSION AGENTS/CONSULTANTS FOR HORTICULTURE
 0140 ☐ IRRIGATION CONTRACTORS
☐ OTHER CONTRACTOR OR SERVICE (PLEASE SPECIFY) _____

C. SUPPLIERS:

- 0205 ☐ SOD GROWERS
 0210 ☐ EQUIPMENT DEALER/DISTRIBUTOR
☐ OTHER SUPPLIER (PLEASE SPECIFY) _____

Approximately how many acres of vegetation do you maintain or manage? _____

What is your title? (please specify) _____

NAME _____

BUSINESS NAME _____ ADDRESS _____

CITY _____ STATE _____ ZIP _____ TELEPHONE () _____

AREA CODE

I WISH TO RECEIVE (CONTINUE RECEIVING) WEEDS, TREES & TURF EACH MONTH ☐ YES ☐ NO

SIGNATURE _____ DATE _____



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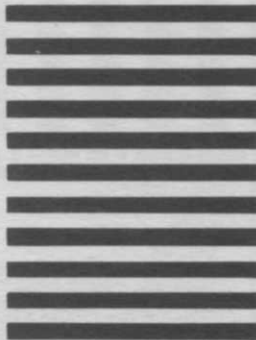
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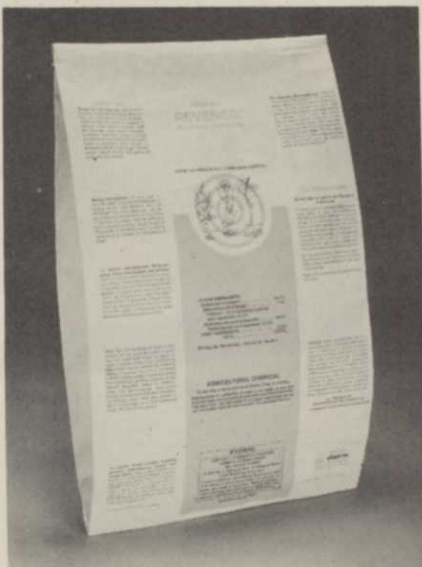
Vermeer TS-24 Tree Spade is designed primarily for digging and packaging small trees and shrubs. It is engi-



neered to work as a tree packaging attachment for any skid steer or front end loader with an auxiliary hydraulic hookup and a minimum capacity of 1,200 lbs. On skid steer loaders, the 910-lb. unit slips onto the lift forks.

Circle No. 183 on Reader Inquiry Card

Hopkins' Revenge is a double-acting systemic herbicide for control of established annual and perennial grasses on



non-crop land such as roadsides and rights-of-way. It contains two herbicides, Dowpon M and Sodium TCA and is formulated to combat Johnson-grass, Bermudagrass, cattails and other pest grasses.

Circle No. 184 on Reader Inquiry Card

Mertz, Inc.'s Drill King is a mobile hydraulic unit that can drill holes from 3 inches to 36 feet. The four-wheel-drive



drill is mounted on its own welded steel chassis, with articulated steering and hydraulic ground drives. All systems are operated by hydraulics.

Circle No. 185 on Reader Inquiry Card

Tennant Co.'s Trailblazer is a grounds maintenance machine that is manufactured to sweep turf and hard surfaces at rates of 3 to 7 1/4 acres per hour. According to Tennant, the machine uses either a brush or paddle to clean a 60-in. path and simply drives from one surface to another with no adjustments needed. A jet stream of air propels litter



into a 2.6-cubic-yard hopper and a 500-sq.-ft. filter permits nearly dust-free operation.

Circle No. 186 on Reader Inquiry Card

Standard Golf Co. has introduced a drag brush for topdressing greens that is designed to eliminate the stress caused by metal drags. The Pro-Line Brush-Easy mounts six heavy-duty brushes in an aluminum frame that has a total weight of 22 lbs. The tow bar is

Continues on page 56

Does the condition of your turf make you see red?

Switching to Pennfine Perennial Ryegrass could color your outlook. It's long been the standard of quality against which other varieties are compared. Why not simplify your life? Go with the most widely used fine-leaved perennial ryegrass in the nation. By the way, if you have trouble finding Pennfine, just ask the turf pro with the best-looking turf around. Chances are he's already using it. Pennfine Perennial Ryegrass, P.O. Box 923, Minneapolis, MN 55440

Circle No. 126 on Reader Inquiry Card

How to make a
great crabgrass herbicide
even better for turf.

About the only thing that could make
Chipco® Ronstar® G herbicide better for
turf would be to lower the cost. So that's
what we've done. Now you can get the
superior performance of Ronstar G at a



**REDUCED
PRICE**

CT NUMBER

"THE RIGHT APPROACH"® TO GOOD TURF

CHIPCO®

dramatically reduced price.

Nothing controls crabgrass and goose grass better than Ronstar G. And you get this great weed control for the whole season with just one easy, early application.

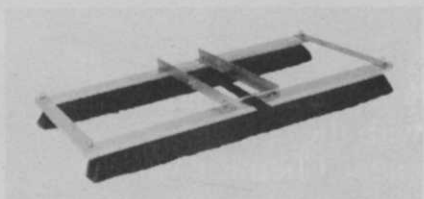
Treat your turf with Ronstar G. The great crabgrass herbicide with the better-than-ever price. Rhône-Poulenc Chemical Co. Agrochemical Div., Rhône-Poulenc, Inc. Monmouth Junction, NJ 08852.



RONSTAR[®] G

HERBICIDE

Circle No. 129 on Reader Service Card



designed so that the Brush-Easy may towed in either direction for longer brush life.

Circle No. 187 on Reader Inquiry Card

Excel Industries has introduced a V-blade snow removal attachment for Hustler grounds maintenance tractors



EXCEL HUSTLER V-Blade

with a free float feature to follow uneven surfaces. While many V-blade systems are ineffective on uneven surfaces, the Excel float feature permits the blade to follow contour and clear a swath 60-in. wide.

Circle No. 188 on Reader Inquiry Card

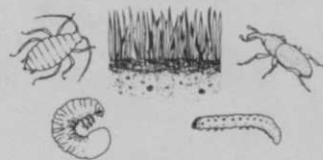
Bunton Co. has added the 19 H.P. Wisconsin diesel engine to its out-front rotary tractor line. The air-cooled engine has a forged crankshaft, cast iron



cylinder and die-cast aluminum crankcase. The fuel injection pump is automatically reset by the governor for quick starts and the two-cylinder unit weighs only 194 lbs.

Circle No. 189 on Reader Inquiry Card

DESTRUCTIVE TURF INSECTS



BY

DR. HARRY NIEMCZYK, ENTOMOLOGIST

Destructive Turf Insects by Dr. Harry Niemczyk covers pests of warm and cool season grasses and contains over 130 color photos. Included is a color photo guide to identifying insects and mites that inhabit the soil, thatch, leaves and stems.

Circle No. 190 on Reader Inquiry Card

ARE YOU A BUSINESSMAN INTERESTED IN EXPANDING INTO PROFESSIONAL TURF CARE?

GREEN PRO COOPERATIVE SERVICES is the only non-franchise organization that offers you complete training, economical equipment, all necessary forms, contracts, advertising and promotion training, proven advertising brochures, and COMPLETE BACK-UP.

We offer our complete services to those who do not want to give up their individuality—nor want to pay huge franchise fees—yet realize that guidance will propel them toward success faster and WITHOUT costly errors. Errors which are inevitable when "learning-by-doing-it-yourself."



Robert Riley

CALL

(516) 483-0100

or write

Green Pro Cooperative Services

380 S. Franklin Street • Hempstead, New York 11550

Circle No. 111 on Reader Inquiry Card

HORTICULTURE

HRI Names John Flemer President; Heard VP

John Flemer, Princeton Nurseries, Princeton, NJ, has been elected president of the Horticultural Research Institute. Flemer succeeds Robert Siebenthaler who will remain on the executive committee as past president.

Bill Heard, Heard Gardens, Des Moines, IA, has been elected vice president, while Bob Voorheis, Blue Ridge Nurseries, Kansas City, MO, has been elected treasurer. William Adams, Adams Citrus Nursery, Haines City, FL and Tom Pinney Jr., Evergreen Nursery Co., Sturgeon Bay, WI, have also been named to the HRI executive committee.

SEED

Tim Bowyer to head Sunbelt Seed Company

Tim Bowyer, PhD, has been named president and chief executive officer of Sunbelt Seed Co., Tucker, GA. Bowyer was formerly vice president of Southern Turf.



Bowyer has done extensive work in the areas of ornamental and turfgrass management. He was assistant extension plant pathologist at the University of Illinois and assistant professor of plant pathology at the University of Georgia.

Sunbelt Seed is a cooperative venture between Southern Turf Nurseries, Tifton, GA, and Loft's Seed Co., Bound Brook, NJ. Sunbelt markets a full line of grass seed for residential, commercial and athletic field applications.



Century Toro Distributors, in cooperation with Toro Co., has loaned two mowing units to the Ohio State University Turfgrass Research Program. A Turf Pro 84 and Groundmaster 72, which are valued at more than \$20,000, are expected to save the research program much time and expense in labor and equipment maintenance. Pictured (from left to right) are John Fitzgerald, General Sales Manager of Century Toro; Dr. Roy Kottman, Dean of the College of Agriculture; Dr. Berlie Schmidt, Chairman, Department of Agronomy; Dr. John Street, Turf Extension; Dr. Keith Karnok, Turf Research; and Mike Slinger, Sales Representative, Century Toro.

Does your turf make your reputation good as gold?

It does if it's seeded with Pennfine Perennial Ryegrass. Since its development by Penn State University in 1970, Pennfine has become the number one selling fine-leaved perennial ryegrass in the nation. And the thousands of turf professionals who continue using Pennfine are the biggest vote of confidence. You'll find top-quality Pennfine competitively priced and in ready supply. Pennfine Perennial Ryegrass, P.O. Box 923, Minneapolis, MN 55440

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RATES: 75 cents per word (minimum charge, \$20). Bold face words or words in all capital letters charged at \$1.00 per word. Boxed or display ads charged at \$70 per column inch (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 First 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.

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HELP WANTED

HELP WANTED: Sales Representative for Upstate New York territory with Jacobsen Distributor. Salary, expenses, vehicle provided, commission. Excellent benefit package. Send Resume to: S.V. Moffett Co., Inc., Thruway Park Drive, West Henrietta, N.Y. 14586. (716) 334-0100. 1/82

ESTATE GROUNDS SUPERINTENDENT—Unique professional opportunity at historic mid-western estate, now undergoing comprehensive site restoration toward eventual conversion to public institution. This fine property offers an exceptional challenge for an experienced, enterprising professional who seeks expanded career opportunities in estate horticulture and management. Qualifications: B. S. in landscape horticulture or equivalent; substantial experience in all aspects of greenhouse and grounds operation, management and administration; communication and public relations skills necessary. Attractive compensation package; position available January, 1982. All inquiries will remain confidential. For complete information, contact: Estate Consultant, P.O. Box 8665, Ann Arbor, Michigan 48107. Telephone: (313) 662-4457. 12/81

GROUND SUPERVISOR — UNIVERSITY OF NEVADA, LAS VEGAS — LAS VEGAS, NEVADA. Salary Range \$17,773/\$23,999 annual. Minimum Qualifications: A Bachelors Degree from an accredited college or university, with major work in ornamental horticulture or closely related field. With formal training in plant growth, soils, landscape architecture, fertilizers and pest controls and one year professional experience in landscaping parks maintenance or a closely related field. Fast growing young institution with excellent advancement program and fringe benefits. For information or application contact Charles N. Moody, Director of Physical Plant, University of Nevada, Las Vegas, Las Vegas, Nevada 89154 or phone (702) 739-3281. An Equal Opportunity Employer. 12/81

Golf Course Maintenance Supervisor — For an 18-hole and a 9-hole executive municipal golf course. Excellent benefits, vehicle provided. Salary range — \$17,000 to \$23,000. Send resume to Jerry Zwolag, Waukegan Park District, P.O. Box 708, Waukegan, IL 60085. 12/81

CORPORATE FIELD REPRESENTATIVE — Responsibilities center around servicing and advising our lawn and tree care franchises in Northern Illinois and Indiana. Within a year or two, there is a possibility of transferring to another city to manage the servicing of our franchises in that area. The ideal candidate will have at least Assistant Branch Manager experience and a good working knowledge of lawn care. A personable manner and well developed communication skills are a must. This is an exceptional opportunity with a young, but prominent, lawn and tree care company which is expanding and growing tremendously. Competitive salary and benefits. Send resume and salary history/requirements to: Spring-Green Lawn Care Corp., P.O. Box 908, Naperville, IL 60566. 12/81

TOP NOTCH CLIMBERS needed. Minimum 3 years rope & saddle experience in first quality residential tree work required. Top pay with established firm. Holcomb Tree Service, P.O. Box 28637, Dallas, TX 75225. (214) 327-9311 12/81

DEALER/REPRESENTATIVES NEEDED for Specialized Lawn-Shrub-Tree Care Products, Equipment, and Marketing and Educational Programs. Write: Green Pro Cooperative Services, 380 S. Franklin Street, Hempstead, NY 11550, Attn. R. Riley or Call (516) 538-6444. 12/81

POSITION WANTED

PARKS SUPERVISOR — available Jan. 1, 1982 — 3 years parks experience, 2 years nursery related work, B.S. in Horticulture. Seeking position with progressive public or private park. Resume and references on request. Reply to Parks, 148 Vine St., Athens, GA 30601. 12/81

WANTED

We are looking for a man or company with extensive irrigation and landscaping experience to move to Tampa, FL. Will consider purchasing company. Write P.O. Box 10828, Tampa, FL 33679 with full details on your company, years of experience, number of employees, etc. 12/81

Wanted Bermuda King PTO Sprig Harvester and PTO driven Sprig Planter — (513) 424-5722. 12/81

AUTHORIZED DEALERS WANTED to sell and distribute Roll'n Grow lawn products seeded grass, flowers, and vegetable mats. (Under new management.) More information call (309) 697-2424 or (309) 674-0250. Write: Roll'n Grow Lawns, 7100 Adams, Bartonville, IL 61607. 12/81

Large Lindig & Royer Soil Shredders, Lewis Equipment Company, 320 Third Street, SW., Winter Haven, Florida 33880. (813) 294-5893.

MISCELLANEOUS

COLLECTIONS A PROBLEM? Try our unique, effective yet inexpensive system. We are so confident that it will work for you that we offer to let you try it free. Satisfaction guaranteed. For details write—Collection, 5 Tuscan Court, Huntington Station, NY 11746. 12/81

KELWAY® SOIL ACIDITY TESTER, used by PROFESSIONALS nationwide. Direct reading, lightweight, portable, fully serviceable, no power source. Model HB-2 reads moisture too. Available through distributors. For brochure contact Kel Instruments Co., Inc., Dept. T. P.O. Box 1869, Clifton, N.J. 07015 (201) 471-3954.

LANDSCAPE DESIGN KIT, 37 rubber symbol stamps, ink pad, \$38.50 postpaid. California add \$2.16 tax. Stamps kit brochures available. American Stamp Co., Box 741, Dept. WT, Reseda, California 91335. Phone (213) 881-2808. TF

INTERESTED in expanding into **SHRUB & TREE CARE** (insect/disease control and feeding)? Attend our unique four-day **ACADEMY** January 13-16, 1982. Prepares you—just as if you bought into a franchise—to take advantage of big profits waiting for you. Tuition includes **EVERYTHING YOU NEED** to get started, including advertising, promotional pieces, specialized forms and, of course, **BASIC KNOWLEDGE** from several teachers with specialized experience you'll find invaluable. Call **GREEN PRO COOPERATIVE SERVICES** (516) 483-0100 or write to 380 S. Franklin Street, Hempstead, NY 11550. Remember, on-the-job tuition is the most expensive kind. Get it for a very small fee **before** you get on the job. We've already paid for the mistakes. 12/81

NEW BALL BARRIER NETTING: Made of olefin fibers. 6½ feet and 25 feet high. Strong and tough. Will not rust. Easy to handle. For Driving Ranges and Golf Courses. Keep golf balls from straying off-course. J.A. Cissel Co., Inc., Dept. JK, P.O. Box 339, Farmingdale, N.J. 07727. (800) 631-2234. 5/82

CHALLENGING CAREER. Above average pay. Two year associate in applied science degree in golf course operations/Landscape technology. Financial assistance available. Write Western Texas College, Snyder, TX 79549. (915) 573-8511. 2/82

USED EQUIPMENT

Jacobsen 524-100 Self propelled Aerator, De-thatcher, Overseeder. Used 10 hours, Mint condition. **WRIGHT Lawn Spray—East Amherst, NY 14051 (716) 741-3336.** 12/81

Lyons Green Turf For Sale

1979 Nunes vacuum turf sweeper—\$10,000. 7' wide with thatch beater, 13 yard hopper Hi-Boy dump.

1979 Nunes 14 ft. rotary mower, 3 gangs, 3 blades each—\$20,000. Mounted on Ford tractor, 420 hrs. use.

1978 Princeton Tow Boy sod harvester, model 4020—\$12,000.

1978 Roseman 15 ft. reel mower. 7 gangs, hydraulically driven—\$4,000.

1978 Kenworth cab-over tractor. 400 Cummins engine, 13-speed road ranger transmission, 165" wheel base. Only 67,000 miles use—\$50,000.

1978 Trailmobile 42 ft. trailer. Aluminum frame, set up to carry spider hyster—\$10,000. 1978 spider hyster—\$9,000.

(Package of tractor, trailer and hyster—\$70,000.)

Brillion grass seeder, 10 ft. wide—\$2,500.

Rt. 4, Box 240
Caldwell, ID 83605
(208) 459-7291

12/81

Continues on page 60

WE REACH THE PEOPLE YOU NEED TO REACH!

Place a recruitment ad in any of these HARCOURT BRACE JOVANOVICH PUBLICATIONS - and you know your ad dollar is wisely spent.

HBJ PUBLICATIONS does a better job of reaching those who count (*your potential employees*) than any other business publisher.

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Dental Laboratory Review	17184	Lawn Care Industry	12648
Dental Management	96222	Neurology	12032
Drug & Cosmetic Industry	7500	Paper Sales	12200
Electronic Technician/Dealer	49096	Pest Control	14498
Fast Service	50537	Professional Remodeling	32995
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Classifieds from page 58

7 gang Brouwer PTO Mower, Excellent, used 2 seasons \$5000; 7 Jacobsen Blitzer mowers, solid rubber—5—10" blades, excellent shape \$350 each, 1 Robark net setter with 10 rolls net, used on 40 acres, \$4000 or \$5500 with net—would consider trade above items for irrigation pipe. Selstad's—(406) 452-5158. 12/81

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seed feature, very good condition. IHC 4500B
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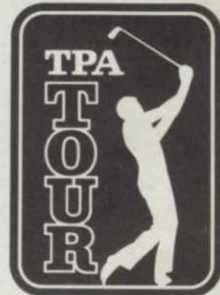
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