Make sure your lawn care jobs don’t come back to haunt you.

With labor and gasoline what they are today, the cost of a call-back is frightening. Add in the hidden costs of unhappy customers, and it’s enough to scare you to death.

That’s why you need DURSBAN* insecticide in at least two of your yearly applications. You see, in most parts of the country, insects are a problem in both the Spring and later on in the Summer. If they don’t get you the first time, they just might get you the second.

And that can mean costly call-backs. So think twice before you decide to skimp on DURSBAN. And think about how little it costs—as little as $3.50 for a 10,000 sq. ft. lawn. Which is a lot less than the cost of a call-back.

DURSBAN insecticide gives you results you can count on, too. It gets all your major problem bugs. And it controls them for up to eight weeks instead of the more common four to six.

DURSBAN. Makes sure all your returns are happy returns. Available in 2E and double-strength 4E formulations.

See your Dow distributor. Also ask him about our new “DURSBAN delivers the goods” incentive program. Be sure to read and follow all label directions and precautions. Agricultural Products Department, Midland, Michigan 48640.

DURSBAN
Call-backs haven’t a ghost of a chance.

DOW Chemical U.S.A.
*Trademark of The Dow Chemical Company.

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You’ll find Nitroform nonburning, nonstreaking, nonleaching. It's easy mixing and clean handling, too. This versatile nitrogen source is available in Blue Chip® for dry applications, Powder Blue™ for liquid use, and it can be mixed and applied with insecticides and fungicides.

When you’re buying a complete fertilizer be sure to check the label to see that it contains Nitroform, the most efficient source of Water Insoluble Nitrogen.

Nitroform can do beautiful things for your business.
Survey shows where we stand economically

The results of a survey we started in August to find out the effects of the recession on four segments of the landscape market are now tabulated. The results support much of the speculation by landscape managers.

The four markets polled were sod production, landscape contracting, golf course management, and park management. Results are based upon responses from 144 sod producers, 200 golf course superintendents, 160 park managers, and 200 landscape contractors. All were selected randomly from our circulation lists. We thank the participants for their involvement in this important poll.

The sod market is experiencing a business loss of 38 to 50 percent due to a drop in construction starts. Only 14 percent of the sod producers polled said construction had not hurt demand. More than a third of the sod growers have reduced production acreage and 44 percent have reduced prices to spur demand. Nearly 40 percent have converted acreage to another crop until the market returns to normal. Sales to landscape contractors have been cut the most.

To compensate for drop in demand, sod producers have cut back on labor and fertilizer. More than 80 percent say they have delayed equipment purchases due to high interest rates and cut seed purchases by an average of 50 percent. Almost a fourth cited the popularity of new perennial ryegrasses as a factor in reduced sales.

Landscape contractors, however, reported 1981 as a growth year. They do foresee problems in 1982 and some see it as a no growth year. Nearly two thirds of the landscape contractors have delayed purchasing equipment due to interest rates with the same number raising their prices to cover higher interest costs. Half of the respondents have cut credit use to buy equipment and cut credit terms allowed customers. More than 40 percent have avoided use of credit to finance expansions. Half have reduced their number of employees. More than 40 percent have expanded into new types of landscape service to counter rising costs (mainly design and lawn care). A third have moderated growth goals, tightened routing, and used smaller plant material when possible. A fourth have reduced chemical inventories and expanded into new business districts.

Golf course managers have reacted to rising costs as well by raising greens fees and membership dues 10 to 20 percent since 1970. This, however, does not keep pace with inflation. The main areas cut back to control costs are the size of the crew, rebuilding and renovation, size of highly maintained fairway area, irrigation and drainage improvement, and finally, fertilizer applications. All of these were utilized by more than a third of the superintendents. More than half the superintendents have delayed equipment purchases and almost half have reduced chemical inventories. More than half (57 percent) said they have delayed plans for course expansion or improvement. A bright spot is the increase in golf car rental frequency reported by more than two thirds of the superintendents.

The vast majority of park superintendents have not delayed equipment purchases. They are cutting crew size and ornamental plantings and more than a third report reduced fertilizer application, mowing frequency, trimming and edging, and applications of herbicides and insecticides. More than a quarter have increased contracting park work to landscape contractors.

Further cross tabulation will provide more data in future issues. We will pass it on as we continue to work with the data collected. WTT
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"Matched Precipitation" nozzles at 1.3, 2.5 or 5.0 gpm.

Adjustable arc: 45°-315° and full circle.

The nozzle pops up a full 2" to get above tall grasses.

Riser seal helps keep out sand and debris.

Our new Toro Super 600 certainly lives up to its name: it's versatile, reliable and economical. And it's specially-designed to pass sand and silt right through it.

The Super 600 is also so remarkably compact, it's a breeze to install.

The New Toro Super 600

$19.95*

*Manufacturer's suggested list price subject to local dealer option.

We've re-invented irrigation, from the ground up.

TORO Irrigation Division
Circle No. 145 on Reader Inquiry Card
SEED

Zoysia seeding may replace plugging

United States Department of Agriculture has discovered a method of propagating zoysiagrass by seed, according to the USDA. The discovery is particularly noteworthy to the turfgrass industry because zoysia's use has previously been limited by its inability to be adequately spread by seed.

Dr. Doyi Yeam and research agronomist Jack Murray first suggested an alternative technique to the traditional "plugging" method of zoysia germination while doing research at the USDA's Beltsville Agricultural Research Center. They found that by soaking seeds in a 34 percent potassium hydroxide (KOH) solution for 25 minutes and then exposing them to 48 hours of low intensity light, they could induce more than 90 percent of the zoysia seed to germinate within six days. Untreated seed takes six weeks to reach 30 percent germination.

The KOH solution breaks the seed coat and eliminates a growth inhibiting enzyme present in the seed, while the low intensity light stimulates rapid and uniform germination, explained Murray.

Zoysia propagated by treated seed was also found to spread at least twice as rapidly than when established by any other method. After only three weeks, 67 percent of the treated seed area was covered by grass, with an average of 218 plants per square foot. Untreated seed, by comparison, had covered only three percent of its area, averaging only seven plants per square foot.

Zoysia works best when applied on bare earth with a smooth roller after drop seeding. Despite the grass's knack for keeping weeds at bay, it performs poorly when seeded into existing turf.

CHEMICALS

Diamond Shamrock earmarks $20 million for Dacthal plant

Diamond Shamrock Corp., Cleveland, OH, has approved funds for the reconstruction of the Agricultural Chemicals division's Dacthal plant in Houston, TX.

Plant reconstruction will begin early in 1982 with the project scheduled to be completed by the end of the 1982 third quarter. The total cost will be in excess of $20 million. Dacthal herbicide is expected to be available for the 1983 growing season.

Engineering work for the plant's reconstruction is already underway. Demolition of the damaged portion of the plant has already been completed. Dacthal production was halted in July, 1981, when an explosion damaged the Houston plant.

In other Diamond Shamrock news, Kurt Schwartau has been named product manager for the Agricultural Chemicals division. Prior to his promotion, Schwartau was a sales representative in the division's midwest region. He has been with Diamond Shamrock since 1979.

Price cut announced At Ronstar G meeting.

A new, lower price for Chipco Ronstar G herbicide was announced by Rhone-Poullenc Chemical Co., Monmouth Junction, NJ, at its northeast distributor meeting held in Atlantic City, NJ.

New production efficiencies have permitted the average price to be reduced 12 to 14 percent below 1981 levels, according to Gerald Quinn, Ronstar G product manager. "Ronstar G can now effectively compete in a broad range of turf market," said Quinn. "Its ease of application and gentleness to a wide variety of turfgrasses and ornamentals make it one of the most cost effective preemergent herbicides available for the control of grassy weeds."

At the meeting Dr. Ralph Engel and Dr. Henry Indyk, both of Rutgers University-Cook College, presented results of their Ronstar G research. Continues on page 8.
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 reseeding 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.

For your copy write:

Tee-2-Green Corp.
Information Coordinator
1349 Capitol St. N.E.
Salem, Oregon 97303
Phone: (503) 363-1022

Look for us in Booth 27 at the GCSAA show.

Circle No. 143 on Reader Inquiry Card
### GCSAA Conference Schedule

The 53rd International Golf Course Superintendents Association of America’s Turfgrass Conference and Show in New Orleans, January 30 — February 5, is chock full of events, seminars and meetings. The following is *Weeds Trees & Turf*'s guide to what is happening and when it is being held.

#### Monday, February 1
- 7:30 Prayer Meeting
- 9:00 Opening Session — Keynote Address
- 10:30 Newsletter Editors' Reception
- 11:00 Press & Speakers' Luncheon
- 12:00 Spouses' Opening Luncheon
- 1:00 Water Symposium I
- 1:00 Distributor Show Review
- 2:30 Spouses' CPR
- 4:30 Meet The Candidates
- 5:30 Mardi Gras Reception

#### Tuesday, February 2
- 7:30 New Member Orientation
- 9:00 Ribbon Cutting Ceremony
  - Show Officially Opens
- 9:30 Certification Committee Meeting
- 10:00 Spouses' Tours
- 11:00 Membership: Long-Range Planning Briefing
- 12:00 Voting Delegates' Luncheon
- 1:00 Water Symposium II
- 4:30 Membership: Long-Range Planning Briefing
- 6:00 EAC Dinner Meeting

#### Wednesday, February 3
- 7:30 President's Council Breakfast
- 9:00 USGA Green Section Program
- 9:00 Spouses' Program
- 10:30 Spouses' Program
- 12:00 Education Committee Luncheon Meeting
- 1:00 USGA Green Section continues
- 3:00 GCSAA Annual Meeting
- 6:00 President's Reception (By Invitation)

#### Thursday, February 4
- 7:30 Executive Committee Breakfast
- 9:00 E.F. Hutton
- 10:15 Thinking Superintendent
- 10:15 Course Drainage
- 11:00 Putting Green Speed
- 1:30 Communications
- 2:00 Show Officially Closes
- 2:45 Thinking Superintendent
- 2:45 Tree Management
- 2:45 Golf Cart Management
- 4:30 IRC Meeting
- 6:00 Banquet Reception
- 7:00 GCSAA Annual Banquet & Show

#### Friday, February 5
- 9:30 Superdome Tour

GCSAA publishes its Proceedings of the show each year. If you must miss the conference, write GCSAA for the 1982 Proceedings, GCSAA Director of Education, 1617 St. Andrews Drive, Lawrence, KS 66044.
Inquiries serviced for 30 days from date of issue. For those countries outside the U.S., please apply appropriate postage before mailing.

**READER SERVICE INFORMATION CARD**

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

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

What is your title? (please specify) ________________

NAME ____________________________ BUSINESS NAME ____________________________

CITY ____________________________ ADDRESS ____________________________

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