

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.

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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

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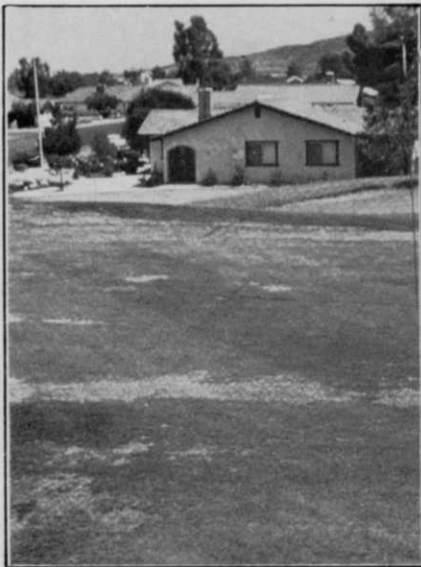
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Cover: Wide turf tires lessen equipment-caused compaction on the golf course. See Part 3 of Ron Fream's *Compaction on the Golf Course*, page 22.

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Compaction-hampered green, see page 22.

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Soiless Greens Mean Less Compaction and Better Turfgrass

The third part of Golf Course Architect Ron Fream's series on compaction on the golf course. Design and construction can outweigh maintenance considerations.

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Propagation Changes Result in Hardier, Regional Cultivars

Dow Garden's Douglas Chapman explores today's propagation techniques and their effect upon the speed and variety of landscape plants.

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Landscape Management Profile: Apartments and Condominiums

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Keep this page for quick reference to articles during the past year. Saves time and helps you find valuable references quickly.



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The standard of excellence in turf pre-emergence weed control will be back for the '83 season.

Whether it's crabgrass or 22 other annual grasses and broadleaf weeds in turf and ornamentals, nothing works better than Dacthal W-75.

Go with the best in '83. Dacthal W-75.

Dacamine® 360D herbicide. Kills

perennials better than ordinary 2,4-D. Dacamine 360D virtually eliminates the possibility of weed regrowth. Works particularly well on plaintain and 70 other tough perennials. Gets white clover* too.

Dacamine 360D also delivers broader spectrum weed kill than ordinary 2,4-D.

And since Dacamine 360D is non-volatile, it won't vaporize even in hot

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2 Plus 2 (MCP + 2,4-D Amine). Tough on weeds, easy on the pocketbook.

Designed in a convenient package mix, 2 Plus 2 delivers economical control of pesky common broadleaf weeds on turf and fairways.

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Amine 4D. Selective, effective and economical. A useful weapon for post-emergent control of a wide variety of broadleaf weeds including dandelions and plaintain.

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Especially effective on such tough weeds as nutsedge, chickweed, wood sorrel, crabgrass and many other grassy weeds.

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Your hard work and expertise and our fine line of Turf Care products are the perfect combination for healthier, more beautiful turf.

See your Diamond Shamrock distributor today.

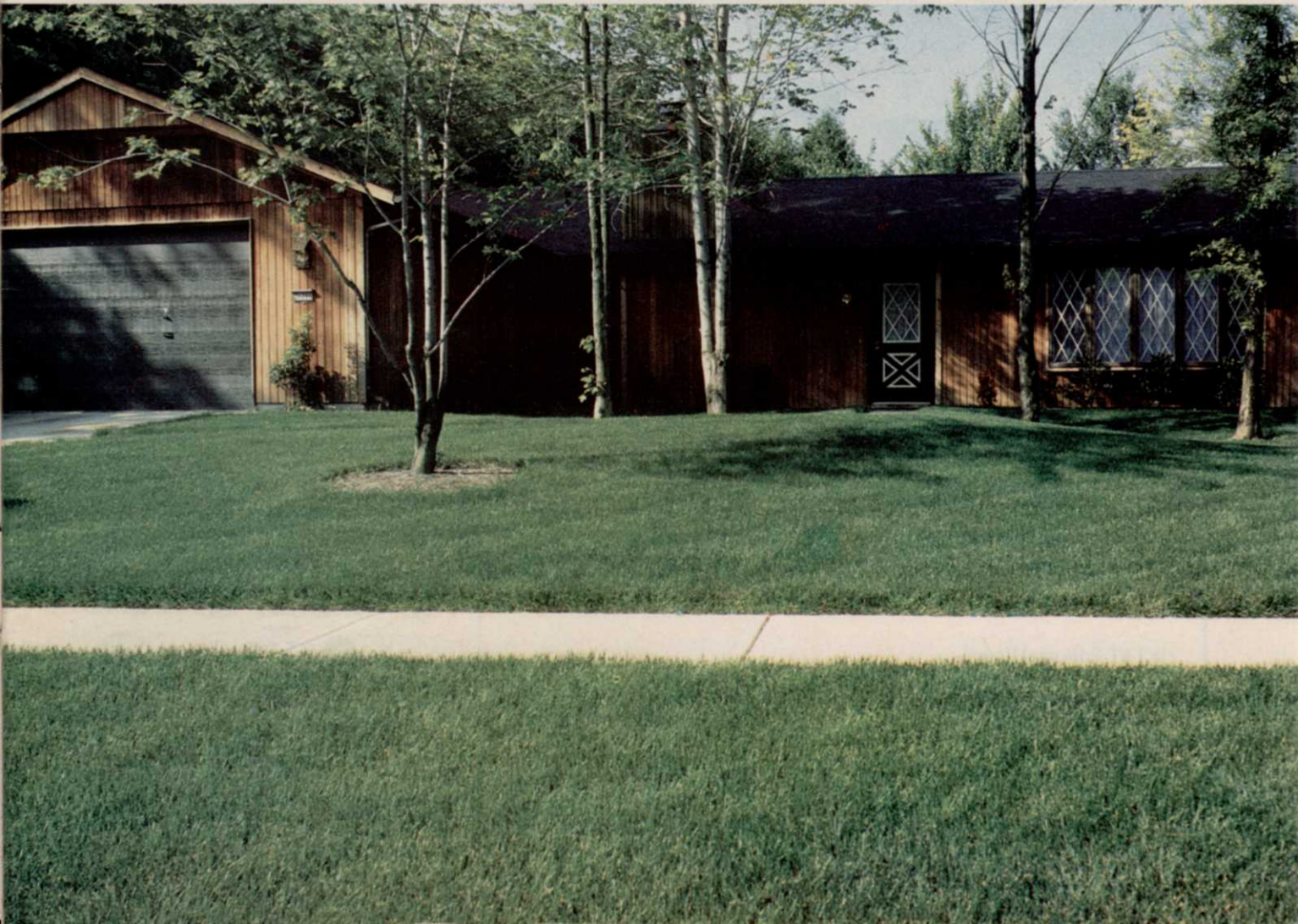
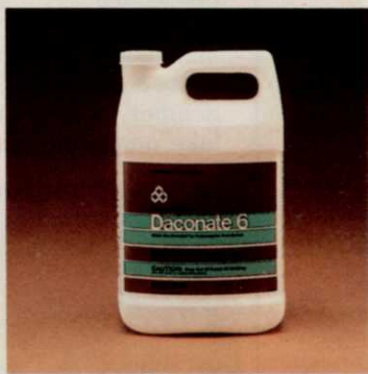
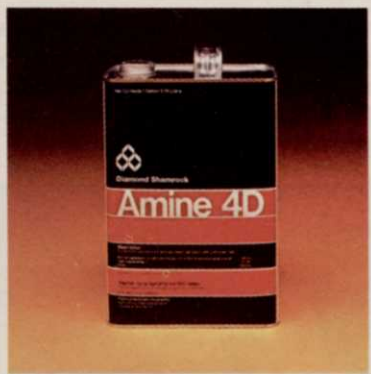
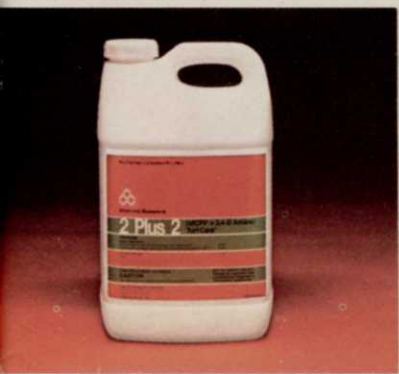
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Agricultural Chemicals
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Cleveland, Ohio 44114

Always follow label directions carefully when using turf chemicals.





WT&T

OUTLOOK

By Bruce F. Shank, Executive Editor

WT&T

The new domain of WT&T

Perhaps the most valuable experience for me professionally was my limited involvement in the construction and landscaping of our new office in Middleburg Heights, Ohio. I was an observer, watching the architect and the landscape architect work with the landscape contractor. If I had a responsibility it was to save money while preserving the landscape plan of William H. Benke and Associates.

For two years I visited the building site with our construction manager Ken Erman, the architect's representative Rich Kraly of Tufts & Wensel, Lee Benke, and the landscape contractor John Kramer. I'd wake up at night bothered by steep slopes, a leaking lake, and getting the lawn in before winter.



When the job was finished I got my papers for New York. For two years I wondered how the landscape looked as it grew.

Now, I see that award-winning landscape every day. It's gratifying to be attached to a sculptured piece of earth surrounding a modern building. It's also helpful to me to relate your business experiences against what happened here.

I get paid to put out a magazine, but I also derive satisfaction just by gazing at this reconstructed mass of clay. It must be something you have over others, that extra sense of accomplishment by having the results to visit and to watch your work grow. **WTT**

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MEET THE AERATOR THAT'S WORTH THE WALK.



Why are so many turf pros giving up the tractor ride and coming back to the self-propelled Ryan Greensaire® II?

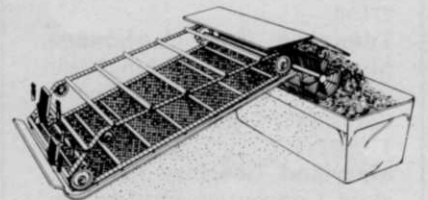
Better results, that's why.

They know the Ryan Greensaire's deeper penetration removes more soil, without tearing up turf.

And, unlike the rolling action of most aerators, Greensaire's tines penetrate the turf in a fast, straight up-and-down motion. The result, aeration so precise that even fresh holes shouldn't affect the roll of a golf ball.

They also like the fact that Greensaire's tines remove 36 cores, up to three inches long, from every square foot of turf.

Attach the Ryan Core Processor to Greensaire to aerate, collect thatch and break up the soil for top dressing in one quick operation.



The Ryan Greensaire II. When you see what it does for your greens, you'll know why it's worth the walk.

For more information about Greensaire II and Core Processor, call 800-228-4444. CUR 3-8785

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GREEN INDUSTRY NEWS

COMPANY ENCOURAGED

Toro reports first gain in past eight quarters

For the first time in the past eight quarters, the Toro Company has registered an increase in sales from the comparable quarter in 1981.

A net loss of \$100,000 or \$.09 per share on sales of \$50.7 million for the

fourth quarter (which ended July 30, 1982) was reported, compared to a loss of \$4.9 million or \$.95 per share on sales of \$42.1 million for the fourth quarter of the previous year.

For the fiscal year, Toro lost \$8.7 million or \$1.86 per share on sales of \$203.8 million. The loss was an improvement of \$4.4 million from the fiscal 1981 loss of \$13.1 million or \$2.66 per share. Sales that year were \$247 million.

Stephen F. Keating, Chairman of Toro's Executive Committee, said, "The year was characterized by restructuring and cost containment as the company moved aggressively to reduce the size of our debt and field inventories of products."

Keating said it was too early to predict a complete turnaround, but said the company was encouraged by the fourth quarter results.

He also declined to make projections for fiscal 1983, but did say the first quarter will show a loss, but that the loss will be "far smaller" than the \$6.5 million or \$1.24 per share lost in the first quarter of fiscal 1982.

Toro President Kendrick B. Melrose

said that 85 percent of the company's drop in sales from fiscal 1981 to 1982 could be attributed to the snowthrower product line.

"Our total snowthrower sales at the company level were just \$5.9 million," Melrose said. "That's down from \$38.2 million the year before and a peak of \$129.9 million in 1980."

Melrose said the two key improvements in fiscal 1982 were in the areas of debt and operating expense.

"We continued to reduce operating expenses during the year by \$19.5 million over the year before," he said, "and our average total debt was reduced by some \$18.6 million over the course of the year."

Melrose said sales for fiscal 1982 in the company's irrigation product area rose approximately 15 percent while sales in both consumer products and professional turf equipment were down due to already overstocked inventories.

Toro's international business was down 23 percent in sales, principally due to the weakness of the European economy and relative strength of the U.S. dollar.

COMING SOON

January State Turf Shows

North Carolina Turf Conference, Pinehurst Hotel, Jan. 4-6. Contact L. T. Lucas, 3409 Gardner Hall, NCSU, Raleigh, NC 27650.

Tennessee Turf Conference, Music City Rodeway Inn, Nashville, Jan. 6-7. Contact Brenda Goins, 2837 Logan St., Nashville, TN 37211.

Maryland Turfgrass '83, Baltimore Convention Center, Jan. 10-12. Contact Thomas Turner, 112 H.J. Patterson Hall, University of Maryland, College Park, MD 20742.

Nebraska Turf Conference, Holiday Inn, Omaha, Jan. 11-13. Contact Robert Shearman, University of Nebraska, Dept. of Horticulture, 377 Plant Science Bldg., Lincoln, NB 68583.

New Hampshire Turf Conference, Sheraton Wayfarer, Bedford, Jan. 13-14. Contact John Roberts, Extension Specialist, University of New Hampshire, Durham, NH.

Rocky Mountain Turf Conference, Colorado State University, Jan. 13-14. Contact Jack Butler, Dept. of Horticulture, CSU, Ft. Collins, CO.

Michigan Turf Conference, Lansing, Jan. 18-19. Contact Paul Reike, MSU, Crop and Soil Science, East Lansing, MI 48824.

Virginia Turf Conference, Norfolk, Jan. 18-20. Contact John Hall, Agronomy Dept., Virginia Polytechnic Institute, Blacksburg, VA 24061.

Bioengineers clone gene for herbicide resistance to Roundup

Horticulture may be on the verge of a technological breakthrough if Calgene Inc., Davis, CA, can successfully incorporate a herbicide-resistant gene into desired crops.

Calgene's Dr. Luca Comai and his team have cloned (reproduced) a gene (genetic unit) which works in plant bacteria to resist the effects of Roundup. The first crop to be studied for incorporation is cotton. "Cotton has many weed problems," said Calgene Vice President Al Adamson, "and cotton farmers could benefit from herbicide resistant varieties."

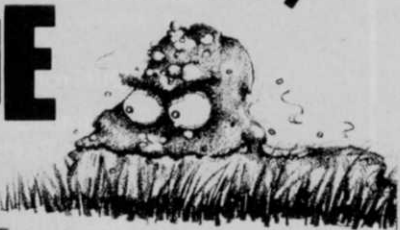
"Genetic engineering for herbicide resistance will have tremendous im-

act on productivity and production costs of agriculture," claims Calgene President Norman Goldfarb. He expects the research work of transferring the gene from the bacterium in which it is genetically constructed to a crop plant by sometime in 1983.

By developing herbicide resistance in desired plants, a broader range herbicide can be used to control weeds around the plant. Roundup is a broad spectrum herbicide from Monsanto used in both agriculture and horticulture. Monsanto has no involvement in Calgene or the research program. Calgene is discussing herbicide resistance programs with several companies.

NORTHROP KING PRESENTS

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No one grass seed combines every characteristic for every type of turf. That's why Northrup King research has developed a complete line of Medalist Turf Products to meet specialized professional needs.

MEDALIST TURF PRODUCT	MAJOR AREAS OF USE	SPECIAL FEATURES
Athletic Pro Mix	High maintenance athletic turf	Both are well suited for new seeding or overseeding. Fast establishing, excellent traffic tolerance, and rapid recovery. Provides good footing.
Athletic Pro II Mix	Low to moderate maintenance athletic turf.	
Boulevard Mix	Any area with high pH (roadsides, sidewalks, boulevards, beachfronts, etc.)	Contains both "Fults" <i>Puccinellia distans</i> and Dawson red fescue which thrive on high saline or alkaline soils. Performs at low to high fertility levels.
Landscape Pro Mix	School grounds, cemeteries, golf course roughs, lawns	Fast establishing. Adapts to broad range of conditions and management levels. Low to moderate fertility requirements.
Overseeder II Mix	Fairways, tees, athletic fields	Fast establishing, traffic tolerant, disease resistant, penetrates compacted soil.
Overseeder III Mix (Formerly Medalist North Mix)	Fairways, tees, cart paths, wear areas	Long term quality in high traffic areas. Clean mowing and disease tolerant.
Premium Sod Blend	Commercial sod producers	Fast establishing, exceptional dark green color, shade tolerant, superior disease resistance.
Special Park Mix	Parks, commercial developments, lawns	Low fertility tolerance, shade tolerant, adapts to wide range of soil types.

Ask your Northrup King distributor about the Medalist Turf Products for your needs. Or write Northrup King Medalist Turf Products, P.O. Box 959, Minneapolis, MN 55440.



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The new HF-5.

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- Out Front Mowing** – Cuts ahead of the wheels to eliminate tracking.
- Hydraulically Driven Reels** – Cuts wet or dry grass easily. Reels can be reversed from the operator's seat. Instant backlapping.
- Hydrostatic Variable Speed Transmission** – Variable ground speed to match terrain and turf conditions. Eliminates turf damage.
- Diesel Engine** – Power, economy and longer engine life.
- Hydraulic Lift Mowers** – 84" to 106" to 133" cutting width all at the operator's fingertips.

The new Turf King II.

Known for its maneuverability and quality of cut, in wet grass or dry, the out front mowing Turf King II is available in both 76" and 84" cutting widths. A versatile machine designed for comfort and the economy you need from a high quality triplex mower.

- Hydrostatic Drive** – Reel speed independent of ground speed. Variable forward and reverse controlled by single pedal. No clutching.
- Out Front Mowing** – Cuts ahead of the wheels to eliminate tracking.
- Limited Slip Differential** – Better traction on slopes and soft ground.

The new Turfcat II.

A year-round out front rotary system. Available in three engine sizes in either air-cooled gasoline or water-cooled diesel with a choice of three deck sizes and implements ranging from a flail mower to a snow blower. The rugged Turfcat II does more than maneuver, climb and trim. It lasts.

- Ducted, Screened, Air-Cleaning System** – Cleaner, more efficient cooling. Longer engine life.
- Hydrostatic Drive** – Cutter speed independent of ground speed. Variable forward and reverse controlled by single pedal. No clutching.
- Two-Speed Transaxle System Implements** – Dual speeds. Low 0 to 4.6 mph. High 0 to 8.8 mph.
– The Turfcat II system includes: 50", 60" and 72" rotary decks, 50" and 60" flail mowers, rotary brooms, plow, snow thrower and grass catcher.