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**Diamond Shamrock**  
AGRICULTURAL CHEMICALS DIVISION

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## It takes a boy to do a man's job.

Our Cub 185 Lo-Boy® was built to do a man's work. And what makes him such a hero is the way he can manicure the largest lawn areas. His low profile gives him greater cutting stability on inclines and embankments, greater maneuverability under trees and close to bushes, and even easier cutting through thick and thin weeds and brush.

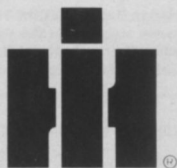
With the extra muscle of the new 18.5 hp engine the Lo-Boy won't be just a fair weather worker. Add a snow-thrower or a front blade, and the Lo-Boy clears out driveways and parking areas fast. Come spring, he's rarin' to go on landscaping, tilling, earth moving and hauling. And remember, there's a whole range of optional attachments avail-

able. All of them easily operated by the hydraulic lift and the independent PTO—sure fire ways to keep a Lo-Boy working your property year 'round.

But the Lo-Boy is more than rugged, it's dependable, too. Built-in IH quality, plus the new Service Maintenance Agreement, and ever reliable IH service will keep your Lo-Boy in great shape for years and years.

And the thing that really makes it easy to take on a Lo-Boy is the flexible finance plans available through an IH dealer. They require little or no down payment to qualified buyers.

Stop in to see your dealer soon, and take a look at the Lo-Boy. He's all the help you'll need.



**INTERNATIONAL HARVESTER**

# WEEDS TREES & TURF®

May 1975, Vol. 14, No. 5

**10 RAILROAD WEEDS: One Headache You Can Do Without** — Ask Alexander Hamilton McAfee, president and general manager of Stone Mountain Scenic Railroad, about his weed control program and he whips out a big smile. He's got every right to smile, because McAfee maintains a weed-free trackside with an effective herbicide program.

**16 The Great Mower Debate** — Newly proposed power equipment standards may require a computer programmer to operate future mowers if these standards are accepted. James Walker brings us up to date on the Federal Consumer Products Safety Commission proposals.

**22 Turf Subirrigation — Technique of Tomorrow?** — Subirrigation, a method used mostly in agricultural crops, is being explored for turf irrigation. Jeffrey Krans reports on a recent field study of subirrigation on high maintenance bentgrass turf during prolonged heat stress.

**24 Corrosion on a PVC Irrigation System** — A situation occurred a few years ago where the copper fittings on a plastic piping system corroded and resulted in severe leakage. Dr. L. W. Gleekman conducted a thorough investigation of the system, soil conditions and installation. He reports here on his findings.

**38 Protecting Your Investment in an Irrigation Installation** — Contracting an irrigation installation job is tricky business. To protect the sizeable investment involved, author Bob Cloud lists the step-by-step procedures to insure success.

**56 A Boost for Water Quality** — Inventor Robert Eron is concerned about water quality. This concern led him to the development of the Eronator, an aerator and water treatment device, which is said to improve water quality in a multitude of applications — sewage disposal plants, lagoons, city water supplies.

**60 Big Canyon, An Engineering Marvel** — A semi-arid area is converted to a lush 6,800 yard golf course. The turfgrass varieties had to be carefully selected to withstand year around play and high daily temperatures.

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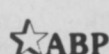
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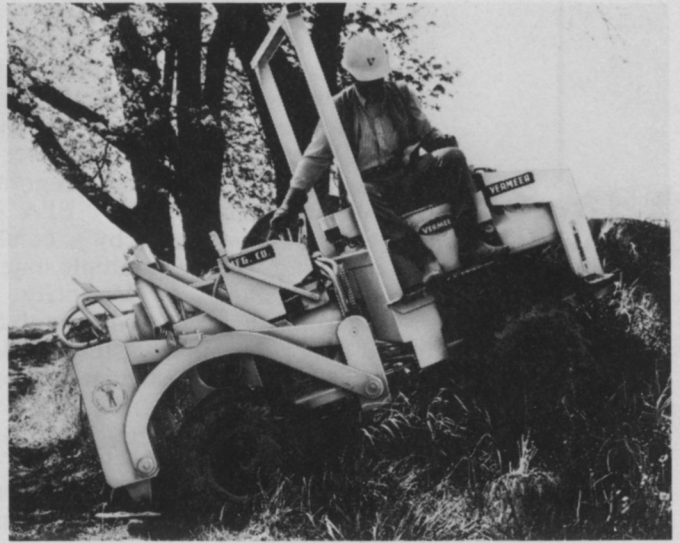
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**THE COVER** — A Hi-Rail truck moves along about 15 miles per hour spraying trackside weeds on Stone Mountain's Scenic Railroad. Background displays the "1880 motif" seen along the track.

# New Vermeer LM-18 Plow: In A Class By Itself!



What makes the compact Vermeer LM-18 unique? With a 48" width, it weighs twice as much as similar machines (4,000 lbs.). With 8-ply flotation tires, it hugs lawns and surfaces and installs cable up to 320 fpm, down to 18" deep. And yet, you've barely scratched the surface. Smooth hydraulic drive, with variable speeds lets you "fine-tune" this "Diggin' Dutchman" unit to match various soil conditions. Then add one-hand, hydraulic steering plus center-pivot articulation, plus 4-wheel drive, plus dual hydraulic systems, plus a powerful 30 hp engine, plus a machine balance and design that gets you through tight areas without sacrificing efficiency. Interested?



Write, or better yet, call "The Diggin' Dutchman" (515/628-3141) for complete information.

## VERMEER THE DIGGIN' DUTCHMAN

VERMEER TRENCHER—PLOW DIVISION  
7205 NEW SHARON ROAD • PELLA, IOWA 50219



Complement the LM-18 in your service line work with the T-300A Trencher. Digs 6-16 in. wide, 60 in. deep. Blade, boring tool and root cutter attachments also available.



... or get even greater versatility with any one of six multi-purpose, articulated, rubber-tired trenchers from Vermeer. Photo (above) shows M-440 Trencher with backhoe-blade.



"The Diggin' Dutchman's" big M-50 demonstrates direct burial with 2 in. cable, down to 30 in. deep . . . Features both hydrostatic drive or torque convertor REVERS-O-MATIC.

# Editorial

EPA needs to clear up some gray areas relating to user certification which will suddenly come about in October 1976. The effect of certification hasn't been fully realized by many in the business of supplying and using pesticides.

An early step needed by EPA is an agreement on reciprocity among states. Custom applicators, dealers who do custom work, company sales representatives who do demonstrations, and others many times find themselves working across state lines. Since each state will administer and regulate its own certification program — with standards approved by EPA — a situation is created whereby a commercial applicator will need multiple state certification. Without a reciprocity program, certification can become both costly and time consuming for the individual applicator. Varying standards among states will naturally create a problem in any program of reciprocity but this can and should be solved by EPA.

Another area which appears gray is the certification programs being set up by the 50 states. We can't see how this can be achieved without the restricted use pesticide list which is to be supplied by EPA. The list insofar as we know is not ready —

and a further burden is shared by those setting up state programs and by manufacturers who would like to develop their marketing programs.

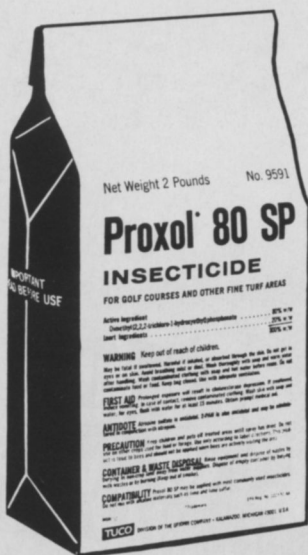
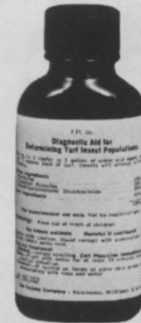
EPA Administrator Russell E. Train, speaking recently to the Weed Science Society of America, stated, "Our role it to ensure that essential and environmentally acceptable pesticide tools are maintained, but that also the benefits of these tools are not at the price of an ecological disaster." We would agree that this mandate is acceptable and simply stated. But its application to the specific pesticide industry and the effect on the nation's best interests are areas which are not so simple.

We are anxious for EPA to apply the "get tough" policies and regulations which were first anticipated with passage of amended Federal Insecticide, Fungicide and Rodenticide Act in 1972. Easing off on deadlines and penalties now is a mistake and unfair treatment for good custom applicators and basic manufacturers who have spent plenty of money in getting ready to comply with a stringent program backed by tough penalties. To let shoddy operators slip through because government hasn't fully prepared and clarified a program is unthinkable.

## Take the guesswork out of turf insect control

### Diagnostic Aid from **TUCO**

Many turf insect larvae are night feeders, so the first evidence of their activity frequently is damaged turf. Diagnostic Aid, applied to turf as directed, causes insects to emerge to the surface within 10 minutes. They can be identified and counted to determine the level of infestation and whether an insecticide should be applied. It also can be used after insecticide application to measure the control obtained.



### Proxol\* 80 SP Insecticide from **TUCO**

Proxol is the one insecticide developed especially for use on fine turf and ornamentals. Sod webworms and cutworms are two major groups of turf insects controlled by Proxol. It is estimated that each sod webworm larva can chew up 20 square inches of turf in its average life span of 20 to 40 days; the cutworm larva can devour up to 36 square inches. With 300 to 500 larvae generated from each adult in a period of 10 to 21 days, it becomes apparent why early detection and control are desirable. Using Diagnostic Aid and Proxol together lets you program insect control.

\*Trademark

One bottle of Diagnostic Aid FREE in each case of Proxol 80 SP.



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If you're considering a TORO conversion, you may already be half-way there . . . considering that a TORO automatic system can probably use most of your existing pipe. Find out how to go all the way to TORO results.

*Write today for a complete conversion brochure: TORO Irrigation Division, Dept. W-575, P. O. Box 489, Riverside, CA 92502.*



**TORO**

*... making your great outdoors even better.*



# RAILROAD WEEDS: One Headache You Can Do Without

Top: That's the famed sculpture of Jefferson Davis, Robert E. Lee and Stonewall Jackson at Stone Mountain, Ga. The carving is 90 feet tall and 120 feet wide. Bottom: Moving along at 15 mph, the truck sprays the entire five-mile track with a residual herbicide eight feet from the center.



WEEDS ARE a problem in any railroad operation. They obstruct view of the track, hinder maintenance, interfere with equipment, create a fire hazard, and they hold water so it doesn't drain off ballast properly. No matter how many miles of track you've got, weeds are one headache you can do without.

Alexander Hamilton McAfee, president and general manager of the Stone Mountain Scenic Railroad, only has five miles of track to worry about. Not a big problem as far as railroads go. After all, there are more than three million acres of railroad rights-of-way in the country today.

In fact, unless you're a native of the South, chances are pretty good you've never heard of the Stone Mountain Scenic Railroad, or of Stone Mountain, Ga., either. The mountain just happens to be the world's largest solid-granite outcrop, with the world's largest piece of sculpture. The railroad is the largest full-size, standard gauge park railroad in the country.

Both are located just east of Atlanta on U.S. 78, where the mountain rises some 1,683 feet above sea level and around its base some 3,200 acres have been set aside as a state park.

The railroad, considerably newer than the mountain or the sculpture (which was first commissioned in 1915 by the United Daughters of the Confederacy), made its first official passenger run in 1962 and is a railroad buff's dream. The five-mile track circles the mountain, and unlike many other railroad attractions, the equipment is authentic. All of the locomotives are live steam with 4-0-4 wheelbases. The engines and coaches have been remodeled, however, to give them the appearance of railroad equipment in use during the 1880's.

Since that first run, the Stone Mountain Scenic Railroad has carried over three million passengers, and better than 350,000 ride her rails

each summer. Ask McAfee about the problems of keeping the track and engines in operation and you'd better have a couple of free hours to listen. Ask about his weed control program, however, and he whips out a big, broad smile.

Any weed can be a problem, but McAfee's special nemesis is kudzu — a hardy Japanese import that will take over everything once it gets a stand. Uncontrolled, it can cover a track in a matter of weeks in the warm, moist Georgia climate. Kudzu, along with mixed grasses and broadleaves, accentuates this problem for the Stone Mountain line. Part of the trip requires the engines to pull a grade, and with a full complement of passengers, a wet track can cause wheels to spin — another hazard. Passenger safety demands such problem weeds be eliminated, and after more than 10 years of trying everything, McAfee finally found the answer last spring.

The answer was 15 pounds of Krovar I weed killer with six pounds of 2,4-D per acre. Krovar I is a residual herbicide. Absorbed through the roots, it moves into the plant's water stream where it interferes with the plant's food producing mechanism. Effective over a relatively long period of time, it reduces the necessity of multiple applications. A broad spectrum product, it is effective against perennial grasses and broadleaf weeds.

The 2,4-D is a selective systemic, and while it has very little effect on grasses, it is effective on broadleaf weeds and woody vines. It knocks out some of the weeds that are up and growing, while Krovar I provides more thorough, longer-lasting control.

And that's exactly what the Stone Mountain line got — effective control. "It's never looked this good," says McAfee, "and we've tried everything we could get hold of."

This was also McAfee's first time  
*(continued on page 53)*