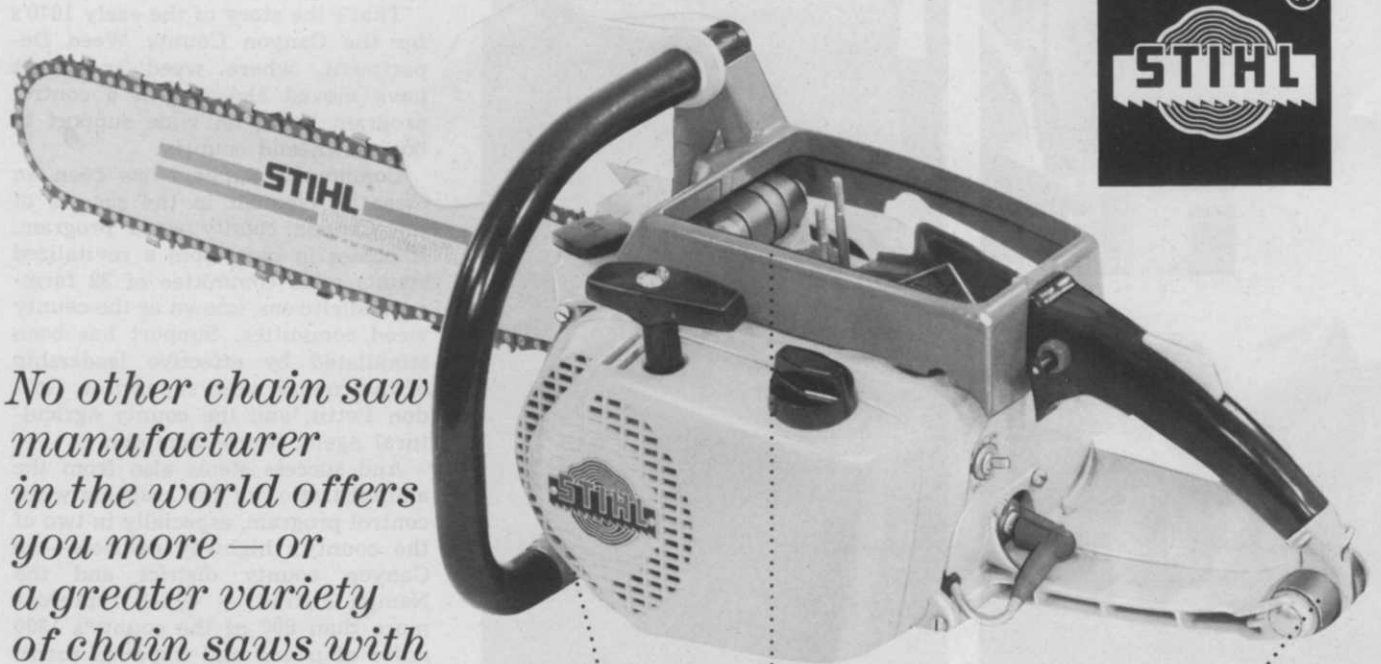


*When you want accurate facts  
about anti-vibration systems &  
about eliminating vibration in chain saws...*

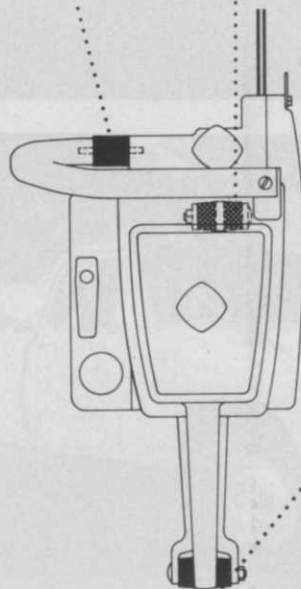
*Ask the people who gave it to you  
first and who know it best! STIHL!*



*No other chain saw  
manufacturer  
in the world offers  
you more — or  
a greater variety  
of chain saws with  
AV anti-vibration systems.*

STIHL was the first chain saw company in the world to introduce and manufacture an AV anti-vibration system on their saws — as far back as 1964 — and it has proven so reliable and popular with professional cutters, that we have had to make the AV system available in just about every saw in our line.

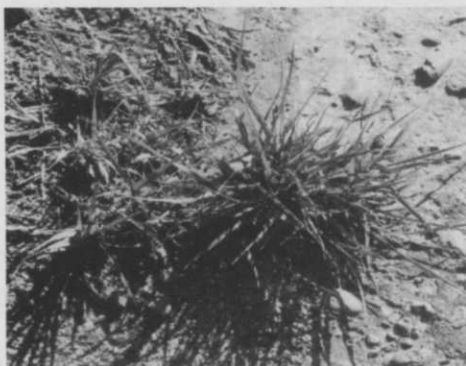
Our exclusive and patented AV anti-vibration system (as shown) consists of strategically positioned rubber shock absorbers mounted in the handles and body



of the saw. They serve to practically eliminate vibrations from chain and engine and let you cut longer, with less effort and fatigue, and without unnecessary discomfort to your hands, arms and back.

**STIHL American, Inc.**

107 Bauer Drive, Oakland, N.J. 07436,  
Area Code 201-337-0211



# Budgets Up Weeds Out In Idaho



**N**EW STANDARDS of roadside weed control are evident in an Idaho county known as one of the nation's top producers of seed.

That's the story of the early 1970's for the Canyon County Weed Department, where weed specialists have moved ahead with a control program based on wide support in both town and country.

Community support has been an essential element in the success of the Canyon county weed program. It comes in part from a revitalized county-wide committee of 32 farmers and citizens, known as the county weed committee. Support has been stimulated by effective leadership of the county weed supervisor, Gordon Pettis, and the county agricultural agent, Merle Sampson.

And success stems also from the administration of the roadside weed control program, especially in two of the county's highway districts—the Canyon county district and the Nampa district — which represent more than 800 of the county's 1300 miles of paved and unpaved roads. Here the involvement of road maintenance supervisors such as J. E. Howsmom and Floyd Davenport has been critical.

Behind the scenes, yet basic to the program, has been two years of trials with a variety of weed treatments and the decision to build the Canyon county roadside weed program around fall application of  
*(continued on page 32)*

(upper left) Gordon Pettis, county weed supervisor, has directed the program since 1970. He relies on company representatives such as Jim Ellis of Du Pont (middle left) to provide technical information. Road Maintenance Supervisor Floyd Davenport (lower left) of Nampa district coordinates programs. One of the big problem weeds is saltgrass (upper right). Krovlar I was used in the background (middle right) and the foreground is the check. Chemicals are applied with spray trucks (lower right) which have two booms and a 300 gallon tank.

# MUSKEG<sup>®</sup> BRUSH CUTTER



## All business from Bombardier.

Meet the sure-footed track star that goes where wheeled vehicles fear to tread.

Through muck and mud, slop and slime – you can't stop the Brush Cutter.

Built to make it farther. Faster. Up 40° slopes. Around towers in a 12-foot circle.

Diesel powered. With rubber-belted tracks reinforced by steel cables for strength. And a toboggan-type watertight chassis.

Up front, two rugged rotary mowers clear an 8-foot swath through the underbrush. All clearly visible from the centre-mounted cab.

Before your next job gets bogged down, give Brush Cutter the business. Contact your local Bombardier distributor.



**Muskeg<sup>®</sup>  
Brush  
Cutter**

**BOMBARDIER LIMITED**  
Industrial Division, Valcourt, P.Q. Canada



These leaves have decomposed into highly desirable organic matter. Enzymes developed by Judd Ringer Corp. break down cellulose and hemicellulose in the leaves. Shredder above pulverizes the humus.

## Gold Mine In Disguise

**I**F YOU THINK black gold is a term reserved for crude oil, you'd better think twice. It's now being used in conversations about leaves.

That's right. Leaves!

Since the environmental concern on pollution produced the ban on burning, leaf collection and disposal in small towns to major cities has entered the big time on most public works department's budgets. Land-fill sites are being squeezed to capa-

city with leaves. In some cities, public works officials have been forced to find additional sites for disposal. As one official wryly commented, "Everybody wants trees and leaves in the spring and summer, but nobody wants the leaves when they fall."

That problem can be licked, however. Leaves can be turned into black gold quickly and successfully, with minimum work and minimum investment. It's being done in Hennepin county, Minnesota and Maplewood, New Jersey, and this fall the Washington Park Horticulture Education Center in Cleveland plans to make black gold on it's property.

In early August, the Washington Park Center, which is part of the Cleveland Public Schools issued an all-points bulletin to the city and surrounding suburbs for leaves. The idea of someone actually wanting leaves is so radically different that more than 80 people attended a conference at the center to discover the reason why.

Their game plan is built around the need of the center for top quality fill — on the order of 200,000 to 250,000 yards — to bring about 56 acres of ground up to grade and up to useable condition. The technique involves leaves and a unique new culture which quickly and efficiently

turns leaves into valuable compost — black gold.

Composting is not new. Man has been composting plant wastes for a long time. The environmentalists and the organic enthusiasts have capitalized on this idea. But few, if any, have been able to make composting work on a massive scale. That is until recently.

Judd Ringer Corporation of Eden Prairie, Minn. has developed a batch of enzymes which can break down almost any plant waste in short order, efficiently and effectively. The enzymes can turn a pile of leaves six feet tall, eight feet wide at the base and of infinite length into valuable black gold in the space of a few months. When combined with dirt, the resulting mixture of dirt and organic matter becomes highly touted for use in lawns, gardens, potting soils and as top quality fill at the Washington Park Horticulture Education Center.

The enzymes basically throw Nature's natural method of decomposing into high gear. They speed up the action of the bacteria which attack cellulose and hemicellulose in the leaves and hasten the job of decomposing. There's nothing different about the enzymes. They are all found naturally. The only difference is that the enzymes have been hybridized.

There are four steps to success, says Don Lovness of Judd Ringer, efficient collection, planned deposition, uniform inoculation and adequate aeration. He points out that timing of leaf collection is highly important. Newly fallen leaves that are high in carbohydrates (energy)

*(continued on page 36)*



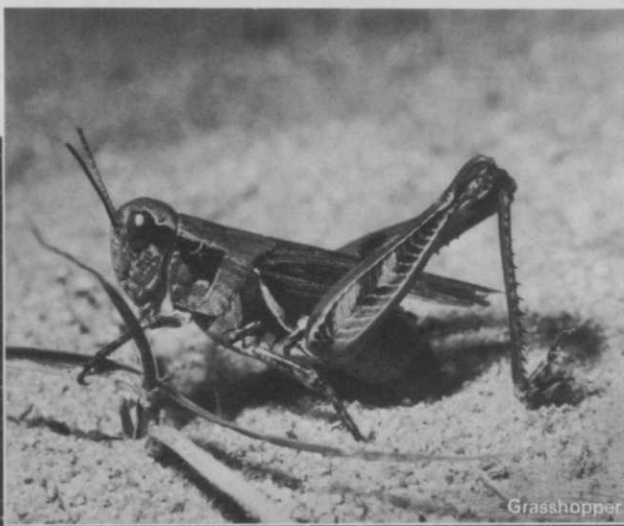
Skip Burkhardt of Lakeshore Equipment & Supply, Cleveland, examines the compost of leaves that's only a few weeks old.



Compost material here will be used as top soil fill for the Washington Park Center in Cleveland.



Leafhopper



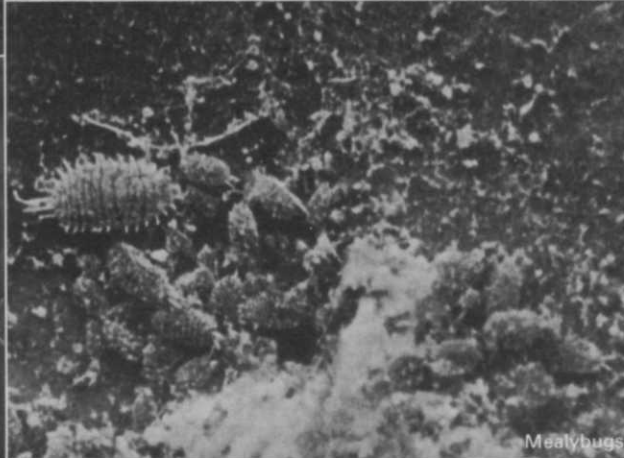
Grasshopper



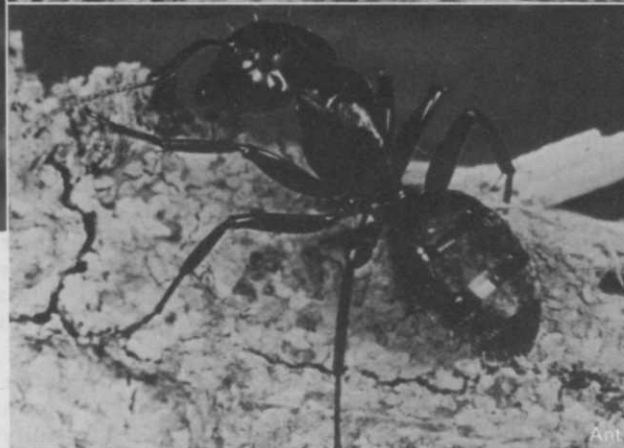
Hairy chinch bug



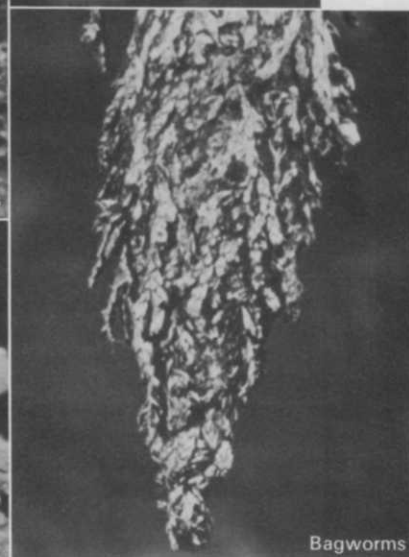
Cutworm



Mealybugs



Bagworm



Bagworms

Ag-Organics Department, Midland, Michigan 48640

## These are only seven of the turf and ornamental pests Dursban controls.

If we had more space, we could show you another seven. Like sod webworms, brown dog ticks, earwigs and *Hyperodes* weevils in turf. Or ornamental plant pests like mites, spittlebugs, exposed thrips, white flies and many more. But our point is, DURSBAN\* insecticide is the choice of professional lawn sprayers when they need to get the job done. DURSBAN insecticide is effective on a wide variety of insects—including resistant strains. And it's effective in a wide variety of applications. It's economical because a little goes a long way. It's non-phytotoxic, and it is biodegradable. So, if you haven't tried it yet, it's about time you did. Just remember to read the directions for use and follow the precautions for safe handling on the product label.

\*Trademark of The Dow Chemical Company



DOW CHEMICAL U.S.A.

For More Details Circle (131) on Reply Card



The two trees on the left were treated with 200 ppm of Maintain CF 125. The tree on the right was not treated. Note difference in foliage density and height.



Area to the left of this Montreal substation was treated with growth retardant. Note how tall the grass on the right (untreated) is on the right.

## Chemical Governor For Nature's Time Clock

**M**ORPHACTINS are a class of space-age compounds that have the reverse effect on Nature's fast moving time machine. They are used to s-l-o-w down plant growth.

Once an area is established, turfgrass managers, superintendents and others generally don the maintenance cap. Whether it is mowing, pruning, or some other form of maintenance, labor must be expended to keep green areas in optimum condition. Morphactins help reduce the maintenance load for the manager.

How? Chlorflurenol, a morphactin under the trade name of Maintain CF 125, has been successfully used to control turfgrass growth. It is absorbed by the leaves and readily translocated with a distinct systemic effect. In a test conducted in Atlanta, grassy areas which had been sprayed once were mowed only twice in a season, compare to five times per season in earlier years.

Nursery plants have been sprayed with Maintain to retard terminal growth. Tree care firms use Maintain A, an asphalt paint formulation, to paint pruning cuts and retard the growth of suckers which may result.

Regulating Nature's growth clock has given managers a new tool in the operation of their business. This is particularly true in maintaining turfgrass on highways. Interstates and tollways, as well as many state

highways, are now constructed with large grassy medians. Generally mowing crews find mowing these medians much to their disliking because of the potential accident factor.

Managers in many states are currently spraying the median with Maintain just after the first mowing. Turfgrass growth is retarded until much later in the season. On one median in Pennsylvania, the area did not need mowing again until just before Labor Day. This represented a savings in mowing costs, and a positive safety program besides.

Tests in the laboratory have now revealed another interesting development. The most effective growth inhibition has been achieved with a combination of chlorflurenol and maleic hydrazide. A distinct synergistic action is present by mixing these two materials.

The combination treatment: 1. interferes with the development of early growth stages of grasses, keeping the vegetative growth short and inhibiting the development of seed heads; 2. the active material translocates to the growing points of the grass and primarily retards the top growth, thus leaving the root system vigorous for a healthy turf. 3. keeps turf green for an extended period of time. 4. controls unwanted annual grasses and broadleaved weeds in the turf, thus improving the turf appearance and making moisture and nutrients available

which would otherwise be utilized by undesirable weeds.

It has also been determined that the combination gives consistent season-long control of a broad spectrum of broadleaved weeds.

U.S. Borax, manufacturers of the product, are now looking at data from tests conducted since 1967 on vines, shrubs and trees. Based on their information, the company has recommended Maintain CF 125 as a plant growth retardant in woody plants and vines.

A foliage spray should be made after a flush of growth or after pruning when the new leaves have fully developed says J. G. Bower of U.S. Borax. Spraying at this time will ensure the desired density, size and shape. Otherwise, tender new growth may curl or twist. Flowering species treated before bud expansion may have a blossom reduction.

Applications generally regulate woody plants by inhibiting terminal growth that develops after treatment. In general, retardation holds for two months (on rapidly growing and frequently trimmed hedges), to six months on vines such as Algerian Ivy, or a year or more on deciduous hardwoods.

Confers, junipers and other in the Gymnosperm family must be treated before buds expand in order to prevent distortion of new growth,

*(continued on page 52)*



# Davey comes equipped for Fall, so you don't have to be.

Fall and Winter are particularly good times to put Davey Tree's custom-built trucks, aerial basket units, hydraulic cranes, power saws, brush chippers, and other high-production tools to work on your grounds.

Our carefully trained crews and experienced supervisors know how to use this specialized equipment efficiently and safely. They'll help you get a lot done while parks, golf courses, and other civic and recreational areas are less crowded.

Even on dormant trees, they know how to prune

deadwood and open up vistas. They'll remove dangerous trees. And now is the best time to plant new trees, too.

Use the "off-season" months to catch up on some of the jobs you can't get done during busy Summer months. Or use our men and machines to help you get a head start on spring work.

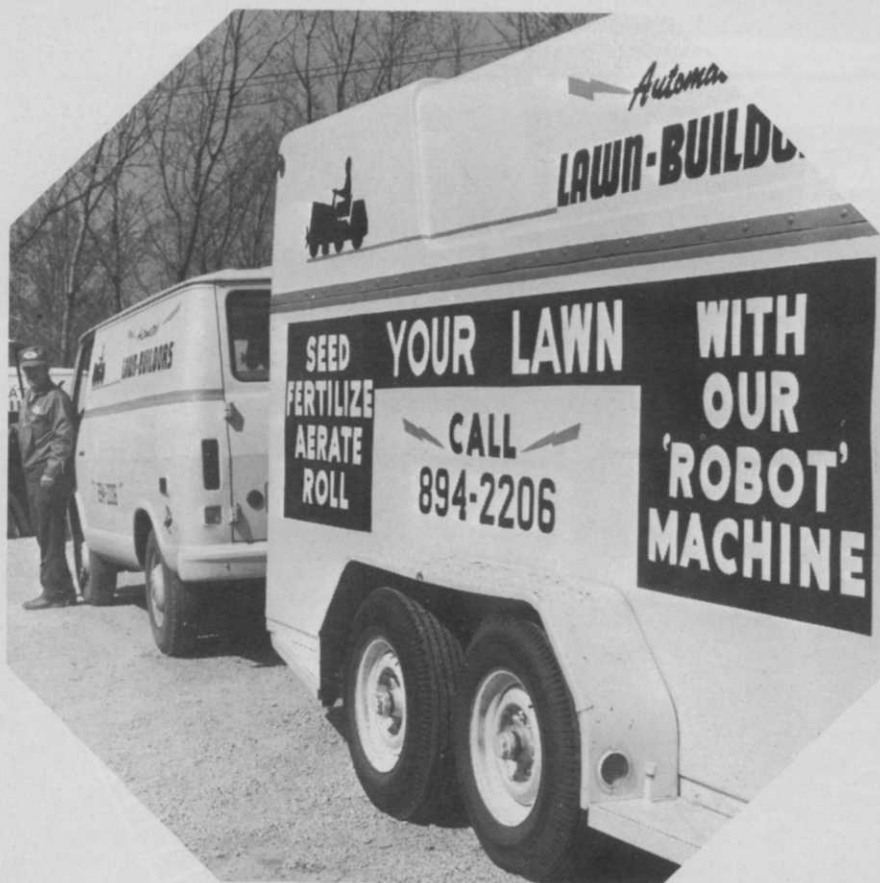
Check the Yellow Pages for the Davey representative nearest you. He'll be happy to give you estimates without obligation on Fall and Winter work. He's fully equipped and ready to start right now.

## DAVEY TREE

KENT, OHIO 44240  
Coast to Coast and Canada



For More Details Circle (125) on Reply Card



Lewis E. Coleman, of Automated Lawn-Builders, Inc. checks out equipment prior to a job. He's contracted 14 million feet of lawn this year.

## Home Lawn Care Boom In Chicago

**B**UILDING ATTRACTIVE, healthy lawns takes more than water and a fertilizer spreader!

Many homeowners around Chicago apparently are learning that lawn care isn't as easy as they thought it was, and that's why Lewis E. Coleman, general manager of Automated Lawn-Builders, Inc., of Roselle, Illinois, says his company is finding a steadily growing market throughout the Chicago area and its outlying suburbs.

"If the homeowner is after a good looking lawn," he says, "they're finding they often can't do it themselves. Or they just don't have the time to devote to it or the equipment."

"And since we can offer these services at a reasonable price to the homeowner, more and more of them are letting us take care of their whole lawn, doing everything except watering and mowing."

A complete lawn service package is a primary feature of the Automated Lawn-Builders program, with

varied programs for spring, late spring, summer and fall. Cost to homeowners is only three cents a square foot for the complete package of insecticide treatment, fertilization, dethatching, reseeding, aerification fungus control and spot weed control, due to the unique patent pending automated combine.

The complete program includes four regular visits; the first in the spring includes such items as seeding, fertilizing, crabgrass and spot weed control, aerating and a service recheck. Other programs include features needed at different times of the year; fungicide in late spring as well as grub proofing and further weed control. Fall application includes more reseeding, weed control and fertilization.

"As the service has expanded, we've found with the right kind of machinery, insecticide, fertilizer, seed and so on, we can offer the program economically, without having to finance reworking and call backs ahead of time, because we don't

have very many," Coleman points out.

"But it took quite a while to develop the program we're using now. We tried other insecticides before settling on Diazinon as the most effective for this area, for example. We've followed the same prices with other inputs for good lawn care," he adds.

An extensive advertising program has been a major tool in getting the young company rolling. Dennis D. Paige, president of the corporation, handles advertising duties himself, including extensive newspaper advertising in both daily Chicago papers and suburban papers.

The suburban papers have probably been more valuable to our business than the major dailies in the area," Coleman says, "since they reach the people who make up the majority of our prospective customers."

Another advertising tool was a tabloid newspaper size, four-page bulletin on Automated Lawn-Builders services. The bulletin even included a year-round "Guide to Better Lawns" for "do-it-yourself homeowners."

Concluding the "do-it-yourself" section is the comment, "If it sounds like work—it is. There's an easier way," etc.

Advertising and good results have gone a long way toward building the business, Coleman points out.

"When we have a customer, we mail a short letter to neighbors, mentioning whose lawn we're taking care of so they can be sure to take note of it. Often this technique has resulted in a number of new customers," he adds.

Developing the right chemical, fertilizer and seed formulas took quite a bit of time, Coleman concedes. "And we're still trying new programs as we hear about them," he adds.

"But for now we're pretty well settled, using Diazinon for chinch bugs and most other insects, Dacónil fungicide, and Sylvex 2,4-D for weed control. Fertilizer and seeds vary at times, but the seed mixtures have been developed for this area through work with the University of Illinois," he adds.

With a crew of five scheduled for this summer's work, Automated Lawn-Builders anticipates a good year. Roughly 14 million square feet of lawn has been contracted for 1973, Coleman says, almost double previous years with the sale of two new franchises.

"Not bad for only five years of work," Coleman concludes. □





The effect of fertilization rate and frequency on the establishment of St. Augustinegrass was discussed.



Delegates showed much interest in Floratam, a new variety of St. Augustinegrass.

## Texas Turf Field Day Draws Over 150 People

Blue skies, warm weather and a record-breaking attendance of over 150 persons was the story behind the June 27 Turf Field Day held at Texas A&M University.

The Field Day was sponsored by the Texas Agricultural Experiment Station and the Texas A&M University's Soil and Crop Sciences Department and featured a tour of the turf research plots and the renova-

tion of the campus golf course.

Dr. Richard Duble of the experiment station discussed research on bentgrass management. Penncross bentgrass has been outstanding in comparison with Seaside, Emerald and several vegetative selections, he said. Management practices examined included fertilization, aerification, top-dressing and disease control. Two experimental bentgrass greens of 5000 and 8000 sq. ft. constructed according to USGA specifications are being utilized for this research.

Other topics discussed included

thatch control in bermudagrass, golf green construction, weed control and St. Augustinegrass establishment and maintenance.

The final session of the program consisted of a tour of the renovation and construction of the campus golf course. The golf course has been completely renovated and redesigned according to the instruction of Jack Burke, Jr., golf professional, Champion's Golf Club, Houston, Texas. Burke has volunteered his services to this entire project and plans call for a fall opening date for the new facility. □

**Certain-teed makes  
the 2nd best irrigation system you can get.**

First best, we'll admit, is a good soaking rain. But an underground system using Certain-teed PVC pipe comes in second to nothing else.

**Economy.** The overall installation cost is less. Lightweight PVC requires no special handling machinery. Joints are quickly and easily made. You get a choice of FLUID-TITETM double-gasket joints, or deep-socket, solvent-weld joints. Fast installation saves money.

**No maintenance worries.** In the ground, PVC pipe is inert. It won't corrode, rot, or rust. Joints don't leak. And non-metallic PVC never needs protection against electrolytic action.

**More water for less pressure.** Smoothbore PVC is free of bumps

and other obstructions that could hinder water flow.

**Pays for itself quickly.** Because you spend less to install it, and practically nothing to maintain it. And you save because one man can easily handle a PVC system.

**Get it all from your Certain-teed distributor.** Including PVC fittings and all the expert supervision you need. If keeping the turf watered and green is your responsibility, specify Certain-teed PVC. You'll never have a big tournament called for lack of rain. For complete information, write: Certain-teed Pipe & Plastics Group, Valley Forge, Pa. 19481.

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# International

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### Built for mowing— from the grass up.

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A good one is squat and compact, clings to slopes without slipping. It's nimble. Brakes, turns on its own axis and steers like a sports car.

It's geared for every speed from creep-mowing next to fences and obstacles up to nearly 20 mph highway transport. It's versatile—works with a rotary mower, ganged reels, or flail in the rear, and at the same time can handle a cutterbar with its side PTO.

And because grass just won't wait, it's built with the power and strength to get big mowing done in a hurry. Without breakdowns. With a minimum of maintenance.

That's a *mowing* tractor.  
That's our 46 hp 2400A Lo-Boy.

Your International dealer has all the exact specs, including 9 ft. turning radius; hydrostatic power steering; 8-4 synchromesh shift-on-the-go transmission with Hi-Lo range and straight-line shifting; independent rear PTO, side shaft optional; big 11-inch Dyna-Life® clutch; wet disc hydraulic brakes—a package no other mowing tractor on the market can match.

Phone your dealer soon and let him prove it on your own turf.

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our business to get more of  
your business.**

**And keep it.**



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