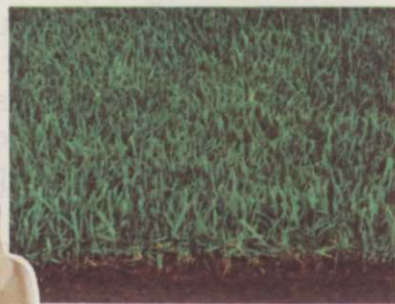
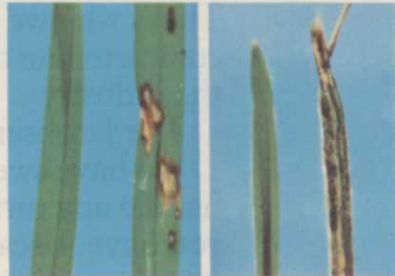


WINNER in all categories

0217 brand Fylking Kentucky bluegrass is elite and exceptional in every way, proven in 12 years of international tests. Check and compare these Fylking virtues:

1. Fylking has superior disease-resistance to leaf spot (left), stripe smut (right), stem rust, and leaf rust, as rated by every major university and institution where tested.
2. Fylking's rhizome root system develops so thickly sod can be lifted in 90 DAYS. (see right)
3. Fylking seed tests show 97-99% purity, and 85% germination.
4. Fylking seeds germinate and grow faster. 11-day comparison with another elite bluegrass shown below right.
5. Fylking can be mowed at 3/4 inch (even 1/2 inch) and thrive.
6. Fylking greens up earlier in spring, stays greener in summer heat, remains green longer into fall.
7. Fylking is a superior mixer. With other lawn grasses it greatly improves turf quality and density.
8. Fine texture, short sheath and abundant tillering create luxuriant, deep-green, uniform appearance.



U. S. Plant Patent 2887. Another fine product of Jacklin Seed Company,

FYLKING

0217

KENTUCKY BLUEGRASS



The Cleanup Line-Up.

Jacobsen Distributors know that everybody doesn't have the same kind of turf cleaning problem. That's why we carry the most complete line of turf sweepers in the industry.

The Jacobsen Sweeper line.

We have sweepers that can handle any turf cleaning problem you have. Because only Jacobsen can give you a sweeper with the patented pick up system.

The Rubber Finger Pick Up.

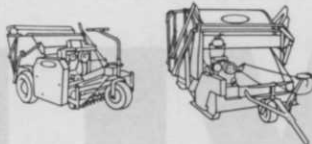
These exclusive rubber fingers pick up all types of debris on your turf. Grass clippings and leaves, wet or dry. Broken branches. Rocks. Bottles and cans. Even small things

like cigarette butts and matchsticks.

The Jacobsen Sweeper line has many labor saving accessories. Curb Brooms. Electric starters. Bagging attachments. And a special Thatch/Thinner attachment that dethatches, sweeps it up, and picks up other debris all in one smooth operation.

Many models to choose from. Power take off sweepers. Self-propelled units. Two sweepers have hydraulic lift dumping systems.

Contact one of us about the line of Sweepers from Jacobsen. If you've got the turf, we've got the sweeper.



Your Jacobsen Distributors.

Before we sell it, we buy it.

For the name of the distributor near you write: Jacobsen Turf Distributor Directory, 1721 Packard Avenue, Racine, Wisconsin 53403

For More Details Circle (126) on Reply Card



SHARPEN TO PRUNE

By ROBERT A. FANNO

The Fanno Saw Works

Chico, California

A DULL pruning saw is about as useful to a tree climber as a 100 pound backpack. There's a drag on both that can't be tolerated very long.

Pruning saws are at the heart of the business for the professional arborist. A recent survey of professionals in this field showed more than 25 percent of every job bid involved pruning and trimming. With this kind of interest, tree care men have a high stake in keeping prun-

ing saws in top shape.

Yet when it comes to keeping this important tool sharp, few arborists know the steps involved in successful saw sharpening. Basically, there are five critical steps to sharpening: joint, shape, set, bevel, file.

The pictures tell the story. Note that you can usually tell whether a saw needs sharpening by the bevel and the unevenness of the teeth.

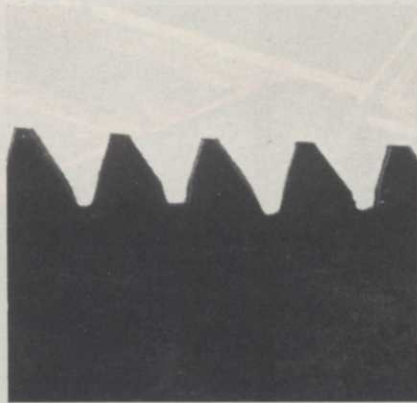
By jointing, the teeth are brought to a standard height. This step gives

the saw sharpener a new starting point to continue with the rest of the sharpening steps. It is best accomplished by using a large flat file. One or two strokes of the file across the tips of the teeth will usually be sufficient. The trick is not to file off any more of the teeth than necessary to bring all of them to a standard height.

Shaping comes next. Nine out of ten times this step can be avoided. It's only needed on saws that have



This is a typical saw that needs to be sharpened. Notice how the teeth are uneven in height and bevelled wrongly. It does not cut cleanly or smoothly.



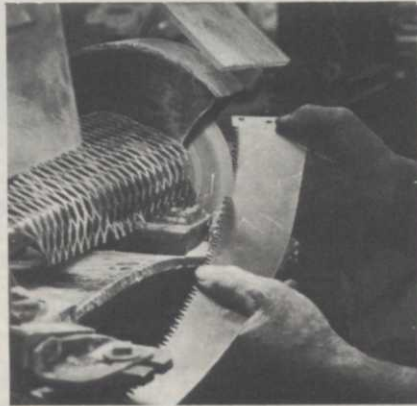
The blade above has now been jointed. Jointing is the process where the teeth of the saw are brought to the same height. This gives you a starting point.



Use a large flat file to joint curved pruning saws. Usually one or two strokes across the tips of the teeth running the blade length will do it.



For straight saw blades, use a jointing tool. Note how saw blade is securely held in the vice so it won't wiggle or come loose.



This is called shaping. You can avoid this step most of the time. It's only needed if saw is badly sharpened or neglected.



What you see is the set of the saw. It refers to the alternating tooth pattern while looking down from above. It's important that saw set is correct.

been badly sharpened or neglected. Shaping brings the teeth back to their original size and shape. Generally, a grinding wheel applied lightly to the teeth will quickly accomplish the job.

Probably the most important step in sharpening a pruning saw is setting. The set of a saw refers to the alternating tooth pattern. You can see this by looking down on the tops of the teeth. The average of amount of set is .025 to .030 inches for each tooth. This means that each tooth should be set left or right of tooth center by just a fraction of an inch.

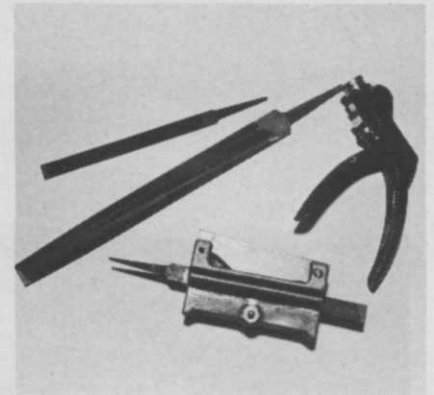
When cutting green or fibrous wood, you'll need more set. Some arborists refer to this as bite. Hardwoods and deadwoods need a lighter set in the saw. The set of the saw determines the amount of cutting edge exposed to the cutting surface. You can put set in a saw by hand or by machine. Stanley Tools makes a pistol-grip saw setting tool that is easy to use and accurate enough for the professional arborist. If you hand set your saws you set the teeth on one side and then turn the blade

over and set the other side. A good vice is a must.

If you are looking for shortcuts, consider a combination of the last two steps. In the process of filing, you also put a nice bevelled edge on the tooth. Our saws at Fanno Saw Works have the edge of the teeth bevelled about 15 degrees. Other saw manufacturers vary. We also have a four degree negative hook on our saw teeth. This refers to the direction of the teeth and also where the cutting edge is placed in relationship to a given centerpoint. We've found this to be of real advantage in terms of life of a given saw.

That's about all there is to sharpening pruning saws. Note the difference between the dull, disjointed blade in the beginning and the same blade when sharpened. Quite a difference! The sharp saw has uniformity between teeth and exhibits a keen edge that will cut quickly and true.

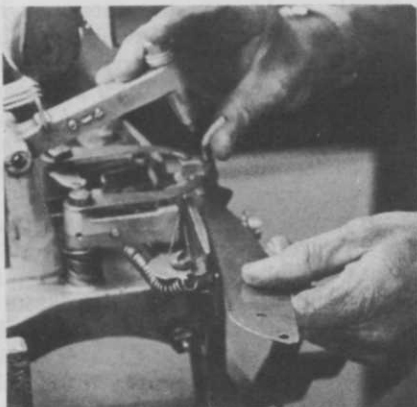
One special tip on saw sharpening. We've found that if you run a hon-



Here's the tools you need to sharpen your own saws: a six-inch Cant saw file, large flat file for jointing, pistol-grip saw set tool, and jointing tool for straight blades.

ing stone down the saw blade after you've filed it that the edge will be even sharper when you use it. The honing stone takes off the metal burrs.

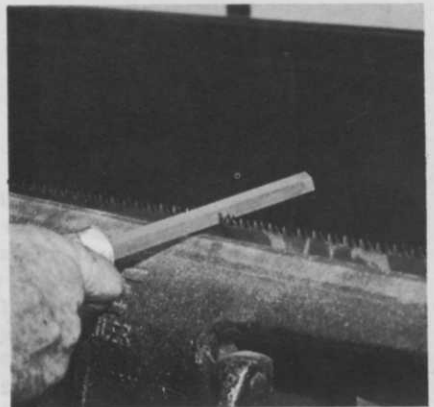
Saw sharpening is not difficult. If you're still in doubt about sharpening your saws, consult a professional. □



Not all saws have the same set. The average amount is .025 to .030 inches for each tooth. You need more for fibrous wood; less for deadwood.



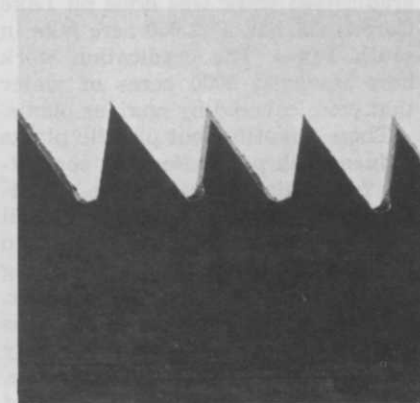
You can buy a pistol-grip saw setting tool for your saws. Stanley Tools makes an acceptable unit. Set the teeth on one side first and turn saw over.



When you file a saw, you also put a nice bevelled edge on the tooth. Fanno saws are bevelled about 15 degrees; other saws vary.



This man has been making and filing saws for 35 years. Note how he holds file. Saw vice holds saw firmly leaving blade exposed.



Here's a freshly sharpened saw. Compare it to the first two pictures. Note the joint, shape, bevel and file. Saw will cut fast in this condition.



A final saw tip. Lay saw on flat surface. Run a honing stone down the saw blade to take off metal burrs. It will put a professional touch to your work.



This is the way Buffalo Cove at Lake Corpus Christi looked prior to treatment. Water Hyacinths are so thick that small boats become entangled.



Following treatment, the same area now appears clear and inviting to area residents and sports fishermen. Applicators used 2,4-D B.E.E. to control the weed.

We Could Have Looked The Other Way

By L. V. GUERRA

Fishery Biologist, Region V
Parks and Wildlife Department
Austin, Texas

WATER HYACINTHS *Eichornia crassipes* (Mart.) Solms have been present in many Texas lakes since 1935.

This placid looking green plant with "bulb-like" petioles and a blue lavender and orchid-like flower standing majestically on top of the plant cluster makes a beautiful sight to behold. Often times in early summer literally thousands of acres of water turn from green to lavender blue with the profusion of blooms of this foreign entry into our aquatic habitat. In a relatively short time this water environment that was being used for water recreation is no longer useable.

Since March 1970, when the Texas Parks and Wildlife Department of the State of Texas entered into a cooperative contract with the U.S. Corps of Engineers, over 20,000 acres of water hyacinths have been removed from our ever diminishing public lake waters. This removal or destruction was accomplished by using a government approved formulation of 2,4-D B.E.E. (2,4 Dichlorophenoxy-acetic acid, butoxy-ethanol ester) that has been registered for use in potable waters.

It became necessary that this plant

eradication work be done in many public lake areas. Boat traffic was no longer possible. Floating hyacinth mats prevented any type of troutline fishing or skiing. Many good black bass and crappie "fishing hole" areas were now closed by hyacinth plants. Many lakeside home owners could not launch their boats. The plants trans-evaporation processes were reducing the drinking water supply to a precarious level.

The preliminary phase of this eradication work was done on Lake Corpus Christi, a 21,000 acre lake in south Texas. The eradication work here involved 8000 acres of water that were covered by noxious plants.

These beautiful but prolific plants reduced fish populations by competing for available water space, resulting in an over-abundance of small undesirable fish. This in turn led to less use of our precious, diminishing public fishing and recreation water.

These newly opened lake areas with the plants removed and safely settled in the bottom of the lake, were now available for the use of fishermen and other water oriented sports.

Census surveys showed that in this area the average sports fisher-

man spends an average of \$15.50 per day in connection with his fishing pursuits. In this daily cost are included meals, motel, gasoline, and various kinds of refreshments. The newly opened water areas had a fishermen usage potential of 80,000 man-days, which means that 100 people could now use these newly created 8000 acres of available fishing and recreational areas. Fishermen alone spent \$1,240,000 per year.

The recreational value of these areas based on 50¢ per day for the 80,000 man-days amounts to \$40,000 for the year.

Hunting revenues for these areas is low for there is not too much water fowl hunting activity, but duck hunters did contribute \$6250.

The use of the lake and surrounding areas by sight-seers, hikers, bird-watchers who come to this south Texas coastal area for the winter added \$10,000 to the local economy.

The total recreational value based on 8000 acres amounted to \$1,251,000 per year.

State and government personnel engaged in the professional field of plant control and management are often guilty of not taking full credit for all of their work. The satisfaction seems to come from a job well and safely done.

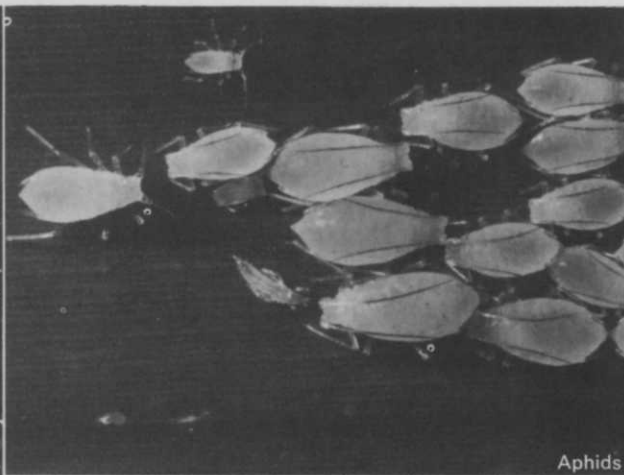
There are other benefits that result as an end product of our efforts to reclaim our lost aquatic environment. Benefits are also accrued to real estate and land values. Plant removal or aquatic environment management is not an easy matter, time and money must be spent to realize our goal.

In the Lake Corpus Christi area the property owners of the 200 miles of shorelines benefited by at least

(continued on page 38)



Leafhopper



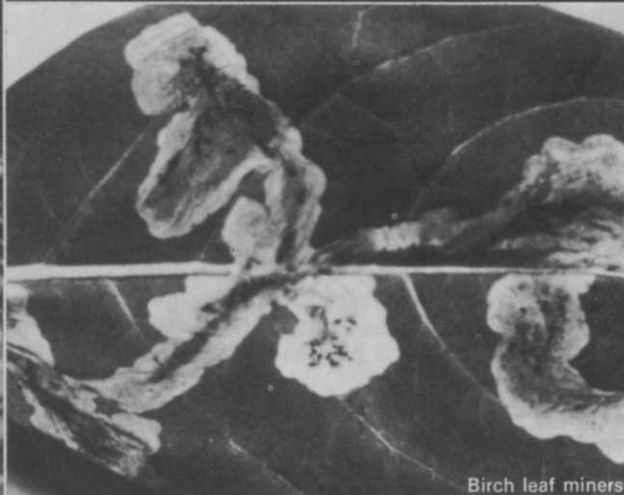
Aphids



Cutworm



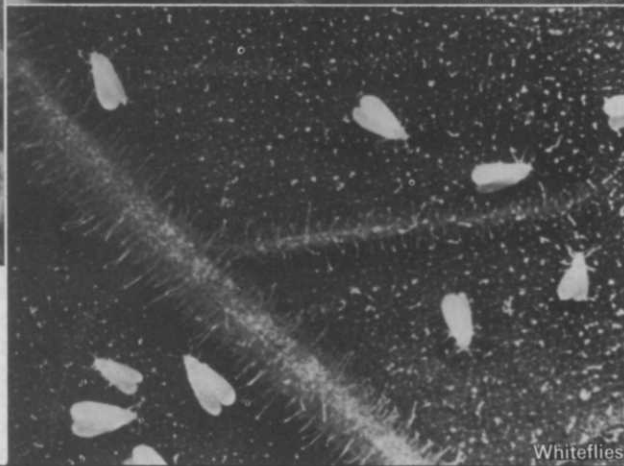
Mealybugs



Birch leaf miners



Looper



Whiteflies

Ag-Organics Department, Midland, Michigan 48640

Bet you can't name another insecticide that kills as many bugs as Zectran.

That's because there's nothing quite like ZECTRAN* insecticide. It's the powerful, general use product that may replace other insecticides you're now using. ZECTRAN insecticide works on almost all major foliage-feeding insects—including hard-to-kill kinds, foliage-feeding worms and caterpillars, even many major turf pests. And more. ZECTRAN insecticide is also effective against slugs and snails. Use ZECTRAN on over 600 different flowers, ground covers, trees, shrubs, house plants and turf. It's biodegradable, easy to apply—in either liquid or powder form. Just remember to read and follow all the directions for use and precautions for safe handling on the product label.

*Trademark of The Dow Chemical Company



DOW CHEMICAL U.S.A.

For More Details Circle (130) on Reply Card



Systemic Fungicides

Powerful Tool In Disease Control

By **DR. PAUL SARTORETTO**
Technical Director
W. A. Cleary Corporation

SYSTEMICS are expensive. So make sure you are getting your dollar's worth. Use them properly and try to milk all the protection you can get out of them.

Improper use of systemic fungicides has resulted in disgruntled customers and a condemnation of these excellent fungicides. In addition, there are instances of "systemics" tolerant to dollarspot, a disease that has proven to be a pushover for these "systemics."

Of all diseases, the most prevalent and the most easily controlled disease by these "systemics" on golf courses is dollarspot. It is possible that tolerant strains are developing and will become significant, but we must await future developments. In the reported instances of failure to control, investigation of conditions indicate that severe attack of dollarspot was in progress even before the first application of the systemic. With that kind of head start, the dollarspot had an opportunity to reach full bloom before the systemic had a chance to attack it. There is also confusion in the accurate identification of the fungus.

A systemic fungicide is distinguished from contact fungicides because of its ability to also diffuse into the plant to give curative action. This is accomplished not so much through foliar absorption, but mainly by way of soil-root diffusion and thence by transpiration action throughout the grass blade cells. When sufficient systemic works its way into the plant tissues, it immunizes the grass blade against the fungus surface attack.

The process does not happen overnight. As a matter of fact, most of the systemics are incapable of move-

ment or activity until they begin to hydrolyze to soluble active metabolites. Laboratory tests indicate that this chemical procedure is slow, often taking as long as two weeks before even 50 percent of the active metabolite is available. Reports on some "systemics" indicate that more than six weeks are required for 90 percent hydrolysis.

This phenomena should not be construed as a disadvantage or a deterrent to the use of "systemics;" indeed, it can be capitalized upon and converted to the golf superintendent's benefit.

If the golf course superintendent were to draw upon his many years of experience and knowledge of working with slow release organic fertilizers and apply that same concept to "systemics" he can begin to appreciate the necessity for proper timing and use of systemic fungicides.

The "systemic," through both contact protective as well as slow release systemic action, is very much like ureaform. It experiences slow release and long residual. On the other hand, the contact fungicide acts very much like the water soluble fertilizer that is immediately available for activity, and just as suddenly dissipates.

The superintendent has learned by experience that the slow release nitrogen will last for several months, and may take him through the entire summer depending upon the rate of his spring application.

On the other hand, he may elect to supplement his spring feeding with small increments of more ureaform throughout the summer. With a slow release nitrogen he has latitude, whereas with a soluble fer-

tilizer he is confined to a constant demand feeding rate.

Systemic fungicides do not last nearly as long as ureaform, but can be expected to last four to six weeks. However, the repeat application should be applied before the first application is completely dissipated. Therefore it would appear that a substantial application of systemic fungicide in early spring would be in order, followed by a constant release of active metabolite. This is ideal for fairway applications.

Greens, however must be treated differently. Because the green clippings are collected, it is estimated that as much as half of the systemic could be lost via the clippings during periods of frequent mowing. This is why the rate of treatment is usually doubled and the frequency of application is recommended at weekly or ten day intervals. The pattern begins to develop in the mind of the superintendent that the systemic is a powerful tool; and, that he should strive to maintain a release of miniscule amounts in the plant to kill the germinating spore in much the same way that a pre-emergent herbicide works on the weed seedling.

The success story of systemic fungicides is definitely tied into their role as preventives (fungistatic activity) as well as curative for specific disease organisms. There is still need to leave the role of fungicidal control for non-sensitive organisms up to the powerful, quick acting contact fungicides supplementing the systemic whenever the occasion arises. This should seldom occur if the systemic is applied properly. □

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Tournament Triplex Greens Management System that takes care of four back-breaking, time-consuming jobs. Or our self-propelled Flex-a-matic, the most field tested self-propelled gang mower ever introduced.

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Hahn

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world-wide distribution

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Mr. Toro, the highest award the company can confer on one of its distributors goes to Ben G. Reemelin (l) Zaun Equipment, Jacksonville, Fla. E. S. (Duke) Newton, Jr. (r) Zaun's VP and gen. mgr. helps receive the award presented by David T. McLaughlin, Toro's president. Presentation was made at the company's annual distributors convention.

Green Industry Newsmakers

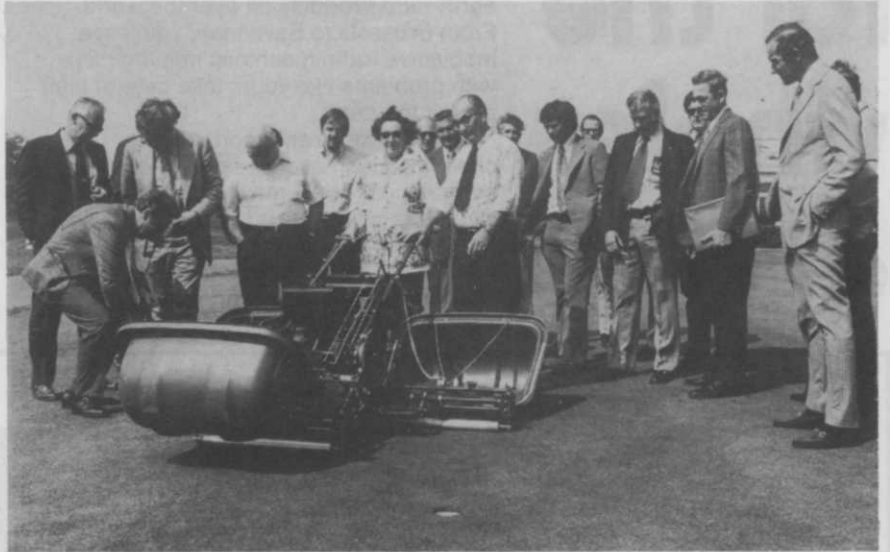
PEOPLE PLACES EVENTS



What caused this vertical split of tree bark? Lightning. Davy Tree Expert Company officials say that positive lightning protection for trees is totally practical and not injurious to the tree. It's not a do-it-yourself project, though. Remind your customers that this job calls for professional tree care service. It's a shocking experience to tamper with electricity.



Ted Collins' Tree and Landscape Service has piggybacked a message on the rear of 25 regional transit service buses in Victor, N.Y., a suburb of Rochester. The buses are used exclusively for suburban, and park and ride service. Collins calls them "taillight spectaculars." There's three messages, all color coded. The Collins logo is on the left so it can be seen by passing cars. This is a followup to a 1972 campaign where he bought every bus card inside and out on a selected suburban route.



The scene: Pleasant Valley Country Club, Sutton, Mass. The purpose: demonstration of new production models of Maxi II and Greensmower. The people: They are Locke Mfg. dealers from the New England area who were guests for the day. Results: A seminar that will be repeated across the country. Dealers were impressed by the new features of these units.



Here's a growing market for the custom applicator. It's injection fumigation, and it is considered more effective for nematode control than the older drench method. Nematicide is injected into turf at a depth of three to five inches using a coulter and shank unit. This custom applicator is using Fumazone. Dow Chemical Company estimates that the cost of treatment, chemicals and custom application, is about \$50 per acre.