issues the ear plugs, he adds, must be under medical supervision. They should never be issued from a tool crib without supervision.

Conclusions, however, about the general environment should not be drawn from changes in the hearing of any individual because of the wide variations in individual susceptibility to noise. Conclusions can be drawn from the average changes, or lack of them, of a group of people, exposed to the same environment, says Van Atta.

The final step in a noise program, he points out, is repeated noise surveys to locate changes in the environment and to assess the effects to engineering and process changes.

Copper Algaecides Patent Gravited Applied Biochemists

A patent covering a new formulation for copper algaecides has been granted by U.S. Patent Office to Applied Biochemists, Inc.

Specifically, Patent No. 3716351, issued February 13, covers a method of preparing copper and triethanolamine which results in increased shelf life and substantially improved effectiveness of the copper-triethanolamine complex as an algaecide.

The newly-patented process is not new to Applied Biochemists. It has been used the past two years in manufacturing the algaecides CU-TRINE and CUTRINE Granular (for potable water, lakes, ponds, etc.)

The previous copper-triethanolamine patent, which expired in February, was purchased from the inventor when Applied was formed as a marketing entity in 1969. Instability of the complex was a drawback at that time, leading to development and subsequent patent application for the improved method.

Trees Pick Up Lead From Polluted Air

Trees help to get the lead out of the air downwind from incinerators where sewage sludge is burned, Connecticut investigators report.

George Stephens and Lester Hankin, of The Connecticut Agricultural Experiment Station, and William Glover, Jr. then of the State Department of Health, examined tree foliage near two Connecticut sewage treatment plants, both serving industrial as well as residential areas.

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EVENTION

Best results have been obtained with CLEARY'S 3336 when it has been applied as a fungistat - before disease occurs. Weekly sprays on greens through the disease incidence season has resulted in diseasefree greens with superior color. Many golf course superintendents have reported excellent disease control on fairways with applications at 3 to 4 week intervals with as little as one ounce per 1,000 sq. feet.

Check with your distributor or write for the nearest available source from W. A. CLEARY CORPORATION, 1049 Somerset St., P.O. Box 10, Somerset, New Jersey 08873 or Telephone 201-247-8000.

Cleary's 3336 turf fungicide is a non-toxic, non-mercurial product. Note: Used in New York State for experimental purposes only.



For More Details Circle (165) on Reply Card

At one of the plants, they determined that about three-quarters of a pound of lead a day goes up the incinerator stack and into the air, and at the other, about a quarter of a pound.

3336

Samples of foliage taken near the first plant showed an average of about 50 parts per million of lead, at the second, about 15 parts per million. This compares with 6 parts per million on trees in northwestern Connecticut, far from major highways, industrial plants, and incinerators.

The investigators determined however, that automobile exhausts apparently were responsible for about 60 percent of the lead they detected near the first treatment plant. The incineration of sewage sludge was responsible for the other 40 per cent. Traffic in the immediate vicinity of the second treatment plant was so light that it probably contributed little lead to the foliage examined, the investigators report.

SOD INDUSTRY SECTION

Sod Growers Report Progress

EDITOR'S NOTE: Every so often it's a good idea to stop where we are and analyze ourselves, where we are, where we've been and where we're going. This is what John R. Hall, turf specialist at the University of Maryland has done below for the state of Maryland. By showing the progress made in this sod market you will have a chance to compare your own programs and achievements. JAS.

Through the efforts of many individuals in the state of Maryland, 1972 can be considered a progressive year for the turfgrass industry.

How do you measure progress in something as ubiquitous as the turfgrass industry? A measure of progress in our industry can come from the answers to the following questions:

Did the knowledge of turfgrass management in the industry in-



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crease? Were new chemicals, machines, or methods made available which made turfgrass management easier? Were research, teaching, and extension capabilities strengthened to meet increased demands? Did we establish new markets, interest and demand for turfgrass in Maryland? Did the members of the industry make more money in 1972? Did our industry communicate with other segments of society and upgrade the image of the professional in the turfgrass industry? Did we increase our ability to communicate between segments of our industry? Did our industry become more united or more fragmented?

Educational programs sponsored by the Mid-Atlantic Golf Course Superintendents Association (M.A.-G.C.S.A.), Maryland Turfgrass Association, Professional Grounds Management Society, Maryland Cooperative Extension Service and other organizations served to disseminate research information of practical value to turfgrass managers.

The Baltimore Conference, conducted by M.A.G.C.S.A. in January 1972 provided excellent programs directed at the golf superintendent.

The Seventh Annual Maryland Sod Conference held in March of 1972 presented an educational program beneficial to sod producers in Maryland.

The department of agronomy and the cooperative extension service provided educational programs for turfgrass managers at the December Agronomy Short Course. All of these educational programs served to increases the knowledge of turfgrass managers in Maryland.

We witnessed Environmental Protection Agency (EPA) labeling of many materials in 1972 that were previously held in limbo by lethargic administrative procedures. We are witnessing the increased promotion and usage of organophosphate insecticides such as Trithion carbophenothion, diazinon, ethion, malathion, and Dylox trichlorofon in place of the long residual chlorinated hydrocarbons such as chlordane and methoxychlor. This is, of course, in response to environmental concern voiced by the public.

Increased use of systemic fungicides was witnessed as a result of a combination of their increased residual effectiveness and the economic impracticality of short residual fungicides.

As labor costs continued to rise in 1972, we witnessed the increased popularity of labor-saving machinery such as the sand trap rake, triplex mower, truckster spray rigs, verticutters, spikers and topdressers.

A management method becoming increasingly popular in Maryland is winter fertilization of cool season turfgrass. The advantages of increased rooting depth and carbohydrate reserves, early green up, and less crabgrass competition for nutrients are being realized.

Research capabilities in 1972 at the University of Maryland were enhanced with the employment of Dr. Douglas T. Hawes in the department of agronomy. Dr. Hawes is beginning studies to determine the practicability of utilizing zoysia grass alone and in combination with bluegrass on golf tees in Maryland.

New markets for turfgrass in Maryland were developed in the sod industry. In 1972 we witnessed increased utilization of quality sod specifications that were demanding Maryland State Certified and Approved Sod. The trend will continue toward tighter and tighter specifications for quality sod.

Sod market potential will closely parallel the economic trends of 1973. The Maryland Turfgrass Association's efforts to upgrade the quality of sod in Maryland is now being observed in increased prices and demand for quality sod. Much still needs to be done in promoting the importance of and need for turfgrass in Maryland.

An attempt is being made to upgrade the professional image of the golf course superintendents through their national certification program. In this program the superintendents are rigorously examined to determine the extent of their turfgrass management knowledge. If they meet the high standards set by the National Association they are classified as "Certified Golf Course Superintendents". This provides the superintendents with a status in their profession not unlike lawyers who have passed bar examinations or public accountants who have become

Certified Public Accountants. It is a means of establishing professional image for their occupation. As of October 1972, five superintendents were currently "Certified" in Maryland.

Attempts to increase communication between segments of the turfgrass indusry in Maryland were made by the people involved in the formation of the Marvland Turfgrass Council. This Council was formed to promote and unite the interests of individuals, organizations, public and private institutions, and industry for the improvement of turfgrass in Maryland. The organization hopes to bring together people from all segments of the turfgrass industry and move toward the achievement of common goals. Whether or not the Maryland Turfgrass Council can achieve these objectives remains to be seen, but their objectives are in the interest of the Maryland turfgrass industry.

Progress has been made in 1972. More progress will be made in 1973. Plans are already made for the Eighth Annual Maryland Sod Conference to be held in College Park, March 8. This and other educational programs will continue to increase the body of turfgrass management knowledge in the industry.

Research on quackgrass and bermudagrass eradicating chemicals and management procedures will continue in 1973 as will variety evaluations and studies designed to increase our understanding of turfgrass management.

We must continue in our effort to unite as an industry and establish lines of communication between the segmented turfgrass interests.

We must continue to promote programs that raise the image of our profession.

We must get about the task of determining the importance of turfgrass to the people of the State of Maryland. Progress requires *time* and people with *determination*. The Maryland turfgrass industry has both.

Environmental Color Film Promotes Wise Herbicide Use

A new film, "In Harmony With Our Environment" has just been released by Amchem Products, Inc.

According to the company, the film helps bridge the gap in associating the use of herbicides with man and his environment. Amchem says that the continued use of weed and brush control chemicals is absolutely essential to man's continued well being. At the same time, they believe applicators must thoroughly understand herbicides and use them properly.

The film shows long shots and close ups of herbicide application along utility rights-of-ways with helicopters. It also depicts the testing and analysis a candidate chemical is subjected to before it can be registered by the Environmental Protection Agency.

Accompanying the film is a new brochure which answers questions about herbicides.

For more information about this 16mm color film write: Amchem Products, Inc., Ambler, Pa. 19002.

Plant Resistance To Pollution Is Maryland Research Project

A botanist at the University of Maryland is conducting research on the ability of plants to withstand disease after exposure to low doses of ozone, an air pollutant.

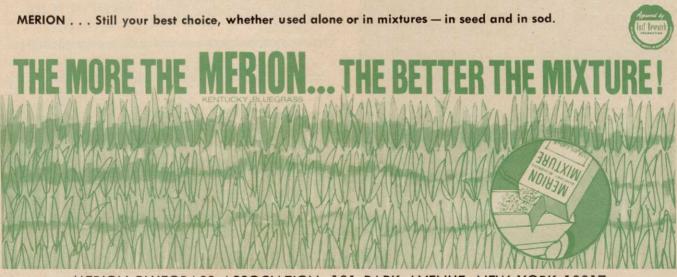
According to Dr. Charles R. Curtis, an assoicate professor specializing in plant pathology, the combination of automobile exhaust and sunlight produces ozone, a highly reactive gas which is extremely toxic to plant cells. Dr. Curtis' research will help to establish the degree of influence which ozone has on the susceptibility of plants to disease-causing organisms.

He explained that the work is important because there is a "critical lack of basic scientific data concerning ozone damage to plant enzyme systems associated with plant disease-resistance mechanisms."

Because all enzymes are proteins, Dr. Curtis is studying protein structure in plants to determine the ozone damage to the plant enzyme systems. He is using a relatively new technique in his research, called two-dimensional electrophoresis, which provides a visual image of plant enzymes present.

By comparing the enzymes from ozone-treated and untreated plants, some idea of the ozone effect on plants may be found.

After completion of the study, Dr. Curtis will apply the same techniques to studying effects of sulfur dioxide on plant enzymes. Sulfur dioxide is an industrial air pollutant, but is not as toxic to plant cells as ozone.



MERION BLUEGRASS ASSOCIATION, 101 PARK AVENUE, NEW YORK 10017

Calif. Advisors Course Slated For April 2-13

A concentrated study-training course for pest control advisors will be offered at Crescent City, California, April 2-13, 1973 for those persons who must pass state examinations for licensing in the agricultural pest control advisors specialties.

A pest control advisor is defined as "any person who, as a requirement of or incidental to his employment or occupation, offers instruction or advice to a producer of an agricultural product or to any public or private agency concerning the use of any pesticide, method or device for control of any plant or animal pest or plant growth." The course will be of value to many others as well.

The anticipated Federal Environmental Protection Agency requirement that all pesticide applications be prescribed by Pest Control Advisors and all applications of pesticides be made by certified applicators, makes the content of this course valuable to farmers, ranchers, pesticide dealers, pesticide salesmen, ranch foremen, nurserymen, foresters and others.

The course will utilize the study guides, slides and tapes for pest control advisors Examinations developed by the University of California. They will be supplemented by presentations from University specialists, the Agricultural Commissioners office, the California Department of Agriculture and members of the class who may possess expertise in one of the license specialties.

Attendance may be for the entire course or for any portion(s) of the course, however registration must be in advance in order that suitable quarters, study manuals, forms, etc. can be obtained.

There is no course registration fee for verified California residence. Out of state registration will be \$20.00 per person.

Individual, personal copies of the Study Manuals are recommended and these may be purchased from the School District on April 2 at the attendance desk. Write: Agricultural Commissioner, Del Norte County, P.O. Box 159, Crescent City, Calif. 95531.

Every effort will be made to have

extra study manuals available for classroom use by persons who do not desire to purchase a personal copy.

The California Department of Agriculture, Bureau of Agricultural Chemicals has advised that, given sufficient applicants, they will administer the Law-Regulation and Safety Examination to prospective pest control advisors. Specialty subject matter examinations will be given as already scheduled.

Seed Marketing Service Offered To Green Industry

Paul Florence has announced a new turfgrass seed marketing service to provide sod growers, and other professional turf managers, special lots of the favorite turf varieties.

Selected for maximum purity, the seeds are given exensive tests to detect the presence of troublesome contaminants. The buyer is given facts to help him determine seeding rates and to give him a comparison of the inherent vigor of different lots of seed. This vigor analysis is a new laboratory process offered exclusively by this seed marketing service.

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84

Mauget Tree Injection To Hold DED Meetings

A series of 15 meetings in as many states on the control of Dutch Elm Disease have been scheduled for arborists by the J. J. Mauget Co., Burbank, Calif.

Purpose of the meetings, according to Del Kennedy, vice president of Mauget, is to gain a greater understanding of the Mauget tree injection technique. The Mauget system utilizes a feeder tube and capsule through which Benlate benomyl fungicide is injected into the tree.

Benlate was registered by the Environmental Protection Agency about a year ago as an aid in the control of DED. The Federal label recommended its use on elm trees as a foliar spray or trunk injection. Only trained arborists may apply the compound.

Kennedy said that seminars conducted last year throughout the eastern and midwestern states provided the necessary training needed by arborists to use the injection system. This year's meetings will present new information on the Mauget injection system as well as new methods and available products. He further stated that those who attended previous meetings are invited to see improvements and new techniques this year.

Dates and meeting sites are: Phoenix, Ariz., Holiday Inn, airport, March 27; Spokane, Wash., Ramada Inn, March 29; Houston, Texas, Holiday Inn, airport, April 9; Oklahoma City, Okla., Holiday Inn-West, April 11; Little Rock, Ark., Holiday Inn, North Little Rock, April 13; Atlanta, Ga., Holiday Inn-South, April 23; St. Louis, Mo., Holiday Inn-North, April 25; Louisville, Ky., Holiday Inn-South, April 27; Denver, Colo., Holiday Inn, airport, May 7; Minneapolis, Minn., Holiday Inn, airport #2, May 9; Chicago, Ill., Holiday Inn., O'Hare airport, May 11; Cleveland, Ohio, Holiday Inn., airport-west, May 15; Philadelphia, Pa., Holiday Inn, airport-south, May 28; New York, N. Y., Holiday Inn, LaGuardia, May 30; and Boston, Mass., Ramada Inn, Logan Int. Airport, June 1.

An \$8 per delegate charge payable to J. J. Mauget Co. has been set as the cost for the meeting. This includes a coffee break and lunch. It is requested that registration for the meetings be placed at least 10 days prior to the meeting date. For more information, write: Del Kennedy, P.O. Box 365, Ukiah, Calif. 95482.

EDITORIAL (from page 11)

cerned groups received special invitations to submit comments and suggestions on implementation of the new law's provisions.

As we go to press, we are not aware of any Green Industry organization's feedback either to EPA or to the membership through newsletters. Yet this law affects every Green Industry member to one degree or another.

Complacency has no place in an industry as dynamic as ours. An active membership recruitment program is desperately needed if this industry is to become strong. And active organization in key local, state and national issues by executive secretaries, executive groups and legislative committees is the catalyst that triggers the response from members.

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Jacklin has built a reputation for fine quality and service over 30 years. You can count on purity of content, high quality and sure germination.

*Available only through breeder and owner outlets.



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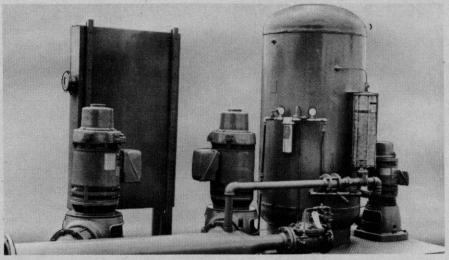
Pump Station Problems Solved By Texas Firm

What's the source of most of the problems facing owners and operators of golf course sprinkler systems?

It's the pump station. At least that's the view of Venable Sprinkler Sales, Inc., a Texas-based company which designs, supplies and installs sprinkler systems.

According to Robert T. Venable, executive vice president, there are two reasons why the pump station is the source of so much trouble in connection with installing a sprinkler system. "There are many competent irrigation contractors, but few of these are good at installing pumps. As a result, there is a tendency to either get a bad total system because the pump station was installed by unqualified contractors, or the responsibility is divided between the pump and irrigation contractors with neither wanting to take the responsibility for the job."

The solution, according to Venable, is a pre-assembled, pre-wired pump station, with pre-built flume and could be used with their systems.



Pre-assembled, pre-wired Pump-A-Matic has been developed by Venable Sprinkler Sales, Inc. The new pump station will solve many of the basic problems for sprinkler systems. Electrical panel permits easy wiring to an irrigation system.

adjustable pre-built stacks.

The company originally built this pump station and designed it so it They report that golf course architects who have seen the unit like the fact that it can eliminate unsightly pump stations on the course.

The unit can be installed in two days after arrival on the job site. No welding is necessary since it is pre-built, with only a minor amount of bolting required. The flume and the stacks, the discharge for the pressure relief and bypass of the double dogleg from the pump header are all that need to be bolted. Wiring also is held to a minimum because much of it is done prior to shipment.

Called Pump-A-Matic, the unit

For More Details Circle (150) on Reply Card



features various options including a high-volume cutoff which turns off all the pumps in case of pipe break in the field at night. It also has a high-pressure cutoff which turns off the pumps if, for example, the controllers were to turn off all of the valves while the pumps were turned on manually.

The only wiring required is the tie-in from the transformer to the pigtails coming out of the all-in-one panels.

For more details, circle (721) on the reply card.

Ohio Nursery Short Course Attracts Record Crowd

The Ohio Nursery Short Course for arborists, turf management specialists, landscape contractors, garden center operators and nurserymen held in Columbus, Ohio in January attracted a record crowd of 1,800.

The 65th annual meeting of the Ohio Nurserymen's Association, the annual meeting of the Ohio Chapter of the International Shade Tree Conference and a meeting of Chapter 1 of the American Association of Nurserymen were held in conjunction with the short course. This event is sponsored by The Ohio State University, Ohio Nurserymen's Association, Inc., and Ohio Chapter, I.S.T.C. in cooperation with the Ohio Agricultural Research and Development Center and Ohio Cooperative Extension Service.

The educational sessions highlight the Ohio Nursery Short Course, however, a 70 booth trade show was also featured along with numerous displays of an educational nature.

For the first time, at the "Annual Ye Olde Tyme Dinner," two O.N.A. Distinguished Contribution Awards were presented. One was awarded to Joseph Strickfaden of Strickfaden Nursery, Sandusky, Ohio. Joe has been the general chairman of the L. C. Chadwick Research Fund which is now past the half-way point in the goal to raise \$100,000. In addition, he has served in numerous capacities in the O.N.A. for many years, including the presidency in 1953.

The second recipient was Dr. Kenneth W. Reisch, associate dean, college of agriculture, The Ohio State University. Dr. Reisch, known as "Ken" in the industry has been executive secretary of the O.N.A. for the past 11 years and a co-chairman of the Nursery Short Course for 20 years.

R. Henry Norweb, Director of the Holden Arboretum, Mentor, Ohio was awarded Affiliate Membership to the O.N.A. in recognition of outstanding service and contributions to the nursery industry through the Arboretums many activities.

Newly elected officers of O.N.A. are: William Thornton, Thornton Environmental Industries, Cincinnati, president; Edward Losely of Herman Losely & Son, Perry, vice president; Pete Olmsted of the Ohio Hardware Association, Columbus, executive secretary.

The new members of the O.N.A. executive committee are: Larry Riegel, The Andersons, Maumee, Ohio; Jack Goode, J. S. Goode Nursery, Circleville, Ohio, and Gied Stroombeck, Roemer Nursery, North Madison, Ohio. The remaining members of the executive committee include: immediate past president, Robert Siebenthaler, The Siebenthaler Co., Dayton, Ohio; Dale Manbeck, Manbeck Nurseries, Inc., New Knoxville, Ohio; Kenneth Natorp, The William A. Natorp Co., Cincinnati, Ohio, and Eldon Studebaker, Studebaker Nurseries, Inc., New Carlisle, Ohio.

Elected as governor from Chapter 1 (Ohio) of the A.A.N. Board of Directors was Zophar Warner, Warner Nurseries, Willoughby. Serving as lieutenant governor will be Joseph Strickfaden, Strickfaden Nursery, Sandusky.



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It's fast. Silvex speeds up the whole weed-control process and gives you added,



effective control over chickweed, clovers, and other tough weeds.

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Use 3-D Weedone. For great results on turf. Any turf.



Amchem Products, Inc. Ambler, Pa. 19002

For More Details Circle (172) on Reply Card



ARBORIST SHOP TALK

By Hank Harvey Jr. Rutledge, Pennsylvania

More From Your Tools

Whether you are employed by someone else or run your own business, the success of your daily operations can be dependent on the tools you use and the condition they are in.

If you are the man on the job, the difference between a good, sharp, well oiled, splinter-less tool and a beat up dog, can make the difference between a good day and a good job, and an eight hour struggle that leaves you feeling mad at the world and indifferent as the quality of the job.

If you are an employer the difference between good tools and satisfied men and rough-to-use tools and disgruntled workers can mean a difference in dollars and cents for you.

But more important than either of those considerations is the fact that tools in poor condition are often dangerous or lead to dangerous improvisations by the people who must use them. For example: Two men go out on a job to do some light pruning. The pole-clip won't work right so one of them decides to use the rootloppers while standing on a creaky stepladder, borrowed from the customer or a neighbor. He falls and gets hurt.

Whose fault is it that defective tools ever reached the job site in the first place? The worker who fails to report a tool that is too dull or rusty or has a cracked or splintered handle? The foreman who knows the tools need attention but who gets out too early in the afternoon and in too late in the morning to ever get around to fixing them? Or is it the fault of the employer who doesn't get on-the-job enough to see for himself the condition things are in. They are all to blame, of course, but that *still* doesn't get the tools fixed, does it?

Here are some suggestions to help keep things ship shape on your operations.

If you are the worker on the job, check out every tool every time you use it. (Usually that only means looking at it, or feeling the edge or teeth to make sure it is sharp). If it isn't okay, tell your foreman and ask for another or ask if you can sharpen it or repair it yourself before you use it. If he refuses that, you'll probably have to get by the best you can for the day, but insist it is repaired before you have to use it again. If it is obviously dangerous, (such as a sledge hammer or ax with badly cracked handle or loose head), courteously refuse to use it, period! (Don't worry about your boss getting mad at you. No court of law in the country would allow you to be fired because you refused to endanger yourself or others . . . and he knows it).

If you are a foreman or crew leader you should check out the equipment your crew uses, daily when it comes in. If it is faulty it should not go out again till repaired. Hand tools such as hand saws, pruning shears, etc. should be individually assigned. This will not only reduce loss and theft, but the tools will be better cared for usually if the users know *they* will always have to use them and account for loss or damage.

Every climber should have his own rope. He and he only should coil it up after each use. That way he personally can feel for nicks, or burns or other damage to the rope on which his own life depends.

When checking over hand tools, look for dull edges to be sharpened. Working parts to be oiled. Loose handles to be tightened up. Or cracked handles that make tools hard to use or are dangerous. Look for parts missing. Check pole-saws and pole-clippers for loose heads, dull blades, damaged pull ropes and splintery handles. Pole saw blades get slight bends which make them next to impossible to use, look carefully for them.

If you are the employer you should realize that keeping good equipment is as important to the success of your operation as is good personnel. By scrimping on tool maintenance, you will only out-cheap yourself in the long run.

Periodic in-the-field checks should include careful examination of the equipment condition. Your worker and foreman should know that you feel that their safety and working conditions are important to you.

If your operations are large enough perhaps you should incorporate a regular tool inspection and maintenance program. In any case you could have someone working on rainy days, on tool repair and maintenance.

It doesn't take any mental giant to see that everybody benefits from tools kept in good repair and everybody loses if they are not. Then what is everybody waiting for? There's nothing to it but do it!

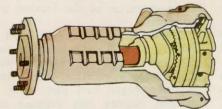




New Ford 3550: Landscape Special.

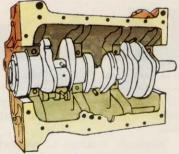
Here's a fresh combination of new power and equipment for your loader and landscaping operations. With new 56.4 bare engine hp diesel engine . . . ¾ cubic-yard loader . . . and heavy-duty final drive . . . new Ford 3550 has everything it takes to step up operations.

Big double-reduction final drive is carried in a husky rear axle housing with 9,000-pound overall capacity. Final drive features inboard planetaries to reduce stress on transmission gears . . . with multiple disc brakes sealed in oil to dissipate



heat and give long, troublefree service.

New 56.4-hp diesel features heavy, strong parts in a short, rigid block; famed Ford 3-cylinder design for long life and low maintenance. Add the



torque converter option with power reverser and you've got the engine and transmission combination to step up all operations with loader or 3-point hitch equipment.

Power-assist steering eases maneuvering. Optional diff-lock keeps you moving where others spin out. And heavy-duty front axle with 28,000-pound maximum strength rating resists the stresses of rough going under heavy front-end

loads. Try the 3550, landscape special from Ford. Your Ford tractor and



equipment dealer is listed in the Yellow Pages under "Tractor Dealers" or "Contractors' Equipment & Supplies." See him for information on how to buy, lease, rent or finance.

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"EVER-GREEN" TURF IRRIGATION VALVE BOX COVERS...



... other advantages are more obvious!

Golf courses, estates, parks, cemeteries, private clubs, landscaped lawns—why put up with ugly concrete or rusty cast iron turf irrigation valve box covers? Now you can have green covers that blend beautifully with the turf. And they're made of tough SUPERFLEXON® thermoplastic that lasts and lasts. Thermoplastic valve and meter boxes are resistant to moisture, and unaffected by temperature changes. They're also less brittle than concrete or cast iron ... and much lighter, easier to install and to store. And they cost less! Thousands are in use from coast-to-coast—Philadelphia, Pa. to Sunnyvale, California.

Thermoplastic turf irrigation valve boxes with "ever-green" covers offer a new dimension in appearance as well as utility.

For complete details, write: AMETEK, INC., Plymouth Plastics Division, 502 Indiana Avenue, Sheboygan, Wisconsin 53801.



Meter Pits (round) and Meter Boxes (rectangular) can be supplied with "ever-green" cover.



Also available: Durable, easyto-install AUTOSTOP®, less costly than concrete curbs. Weather and crumble proof. Never needs painting; impregnated yellow, green, forest brown or white. Write for facts.



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Soil Fumigation Study Shows Nutsedge Control

Soil fumigation has been an accepted practice for about 20 years among nurserymen who desire healthy ornamental plants that are free of soil-borne diseases and insects.

Now horticultural research workers associated with the University of Maryland at College Park have shown that soil fumigation each fall at sufficient rates and proper soil temperatures also can control yellow nutsedge—a pesky perennial weed—in the following growing season.

Research findings to support this conclusion were formally presented in February by Dr. C. Edward Beste, extension horticultural weed specialist for the University of Maryland. Dr. Beste spoke at the 13th annual meeting of the Weed Science Society of America.

His published report represents the finale of a three-year study begun by the late C. Dwain Altman, also a Maryland extension horticultural weed specialist. Altman's project was prompted by observations from fumigation studies involving soil-borne diseases.

The Beste-Altman study involved three commercial fumigants, Vorlex, Telone C and DD-PIC. It showed that commercially acceptable yellow nutsedge control was obtained with Vorlex at 30 gallons per acre, and with Telone C or DD-PIC at 40 gallons per acre applied in the fall.

Effectiveness of nutsedge control with all three fumigants was reduced measurably as soil temperatures at the six-inch depth fell from 50 degrees F. to 40 degrees F. at the time of fumigation.

Effectiveness of Vorlex in controlling nutsedge, for instance, dropped off from 80 percent to only 20 percent with a 10-degree drop in soil temperature at the six-inch depth.

The other two commercial fumigants each showed an effectiveness drop from 80 percent to 60 percent for nutsedge control under identical temperature conditions in the Maryland study.

Dr. Beste concluded that the fumigants should be applied in October. This timing would normally allow at least two weeks with soil temperatures of 50 degrees F. or more at the six-inch depth.

Delaying treatment beyond late November would permit too much chance of lower soil temperatures and consequent ineffective control of nutsedge.

Another practical aspect of the Maryland study was that it was done without using plastic tarpaulin soil coverings following fumigation. This means a significant reduction in labor and material costs.

NE Weed Science Society Explores Growth Retardents

Government and industry research continues to uncover Organic molecules which affect the growth of woody plant species. The goal here is to modify plant growth to suit man's needs without eliminating the plant in question. The effort entails the discovery of such compounds which do not change the basic character of the treated tree or shrub.

These chemicals may be used to modify plant growth beneath electric power lines and along highway and railroad rights-of-way. Ornamental hedges, and turf areas so treated require less clipping and mowing.