A POSITION STATEMENT ON REGULATORY ACTION RELATING TO THE USE OF D-Z-N DIAZINON

Recent regulatory action by the Environmental Protection Agency (EPA) has made it necessary for CIBA-GEIGY to make clear its position on the use of diazinon on golf courses and sod farms.

The <u>EPA has proposed</u> that diazinon no longer be used on golf courses and sod farms because the product may present undue hazards to birds, particularly waterfowl.

CIBA-GEIGY's Position

- 1. We believe that—with proper precautions and use practices—diazinon can be used on golf courses and sod farms without undue hazard to birds.
- 2. We have submitted a rebuttal to the EPA's proposal and are defending our current registrations of the product. Soon we will have an opportunity to present data on diazinon to the Agency's Scientific Advisory Panel.
- **3.** We are actively encouraging you, the turfgrass industry, to continue work-

ing to reduce potential hazards. In working with the Cooperative Extension Service at Cornell University, we have compiled several recommendations that help you significantly reduce potential hazards to birds when using D-z-n to control insects on golf courses and sod farms. To receive a copy, write to the following address:

D-z-n Diazinon Recommendations CIBA-GEIGY Corporation Agricultural Division P.O. Box 18300 Greensboro, NC 27419

CIBA-GEIGY believes that the Agency will conclude that our data and recommendations support the continued use of diazinon on golf courses and sod farms. A final ruling on the EPA's proposal will probably not be made for several months.

CIBA-GEIGY

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Circle No. 110 on Reader Inquiry Card

Summer Patch

To date, a dying-out of turfgrass referred to as "summer patch" has been reported on Kentucky bluegrass in New York. It also has been suggested that a similar disease pattern may be occurring in other northeastern states and in certain midwest states.

Outbreaks of summer patch reportedly develop in July and August during prolonged periods of hot weather. The symptoms reported include irregular patches of dull tan to brown grass. The individual areas may be more or less circular in outline and extend up to several feet in diameter.

Within the diseased stand of grass, there may be areas that show the basic frog-eye pattern of patches of blighted grass with center tufts of apparently

Rhizoctonia blight ranks as one of the most important diseases of turf and lawn grasses in the humid sections of the continental U.S.

healthy plants. Recent research at Cornell University indicates that the summer patch condition may be brought on by periods of temperature stress combined with close mowing or other management-induced stresses, and then the colonization of the weakened plants by the fungus Phialophora graminicola.

This particular fungus species is commonly found in association with the root systems of grasses. Its potential for affecting the health of grass plants has been the subject of considerable research by plant pathologists

in England.

English research has demonstrated that Phialophora graminicola is a very weak plant pathogen. Furthermore, it has been found that when this fungus is placed in the soil, not only does it not harm the turfgrass, but it protects the plants from infection by the takeall pathogen Gaeumannomyces gram-

Also, when the soil of stands of fescue and bentgrass is infested with Phialophora graminicola, the growth rates of the plants increase significantly, perhaps due to the fact that the fungus enhances nutrient uptake by the root systems.

The inoculation techniques that have been used in the Cornell pathogenicity tests with Phialophora graminicola have involved growing conditions that placed the plants under extreme stress.

For example, one set of experiments was conducted on seven-yearold Kentucky bluegrass field-grown sod cut at a depth of 3/4-inch and then placed over a 3/8-inch layer of soil in plastic containers.

These plants were then held in growth chambers under a continuous day-night air temperature of 85 degrees F for 15 weeks. Under these conditions, the mortality rate among the test plants was high.

These various research findings place summer patch in the category of symptoms known as senescence syn-

The symptom patterns in this grouping are caused by a combination of acute plant stress from weather and/or management practices followed by colonization of the weakened plant tissue by various microorganisms. Examples of other senescence syndrome patterns in turfgrasses are Curvularia blight and anthracnose.

The senescence syndromes sometimes place the diagnostician in a dilemma. For the question that must be answered is whether or not the invading fungi or bacteria are actually compounding the stress-induced problem by introducing an added measure of tissue degradation, or if the initial environmental pressure was severe enough in itself to lead to the ultimate death of the affected leaf, crown, or root system.

If the micro-organisms that are found in the diseased plant are indeed compounding the stress-induced phase of the problem by introducing an added measure of tissue breakdown, then the use of a pesticide might be in order.

However, if the initial stress that has been placed on the plant is severe enough in its own right to bring about death, then the establishment of a spray program to control the microorganisms would be a waste of time and money.

Much more field and laboratory research is needed before the cause and nature of the condition being referred to as "summer patch" is adequately understood and a positive determination can be made as to whether the use of fungicides to control the disease is feasable.

In the meantime, in situations where it has been decided that the problem at hand is summer patch, the best advice on fungicidal control that can be given is that if these attempts are made, one should keep the expectations for their success to WT&T a minimum.

the professional's



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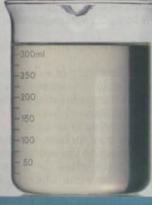
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LAWN PRIDE

Circle No. 103 on Reader Inquiry Card

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LEASING VS. BUYING

There is no easy way to figure out whether it's cheaper to buy or lease. So you've got to do it the hard way.

by Rudd McGary and Ed Wandtke

he decision whether to lease or buy equipment for most landscape managers is requiring more complex analysis. The evaluation can be quantitative but in the end, it's a case of choosing the "best fit."

For the proper analysis, you need to take into consideration the goals of your company, the effects of the Statement of Financial Accounting Standards No. 13 on the balance sheet and the income statement (this is available from the American Institute of Certified Public Accountants), the impact of any decision on the cash flow requirements of the firm, and income taxes.

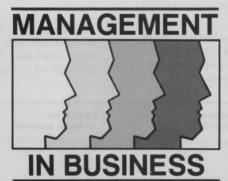
Leasing dates back to 1400 B.C. when the Greeks introduced maritime leases. Leasing today offers flexibilities not even considered then but which can be especially beneficial to a modern business. Leasing as a form of financial leveraging allows otherwise under-financed firms to obtain the needed capital to continue expanding their business.

Four types of leases are offered today: capital leases, leveraged leases, financial leases, and operating leases. One will be appropriate, depending on the equipment or vehicles being financed.

With the capital lease, nearly all the benefits and risks of ownership of the asset are transferred to the lessee.



Wandtke and McGary are senior consultants with All-Green Management Associates in Columbus, Ohio. McGary focuses on marketing and management issues. Wandtke focuses on operations and financial questions.



The Accounting Standards Board requires the asset and liability to be recorded on a firm's balance sheet.

The leveraged lease's principal attraction is the ability to secure financing from various sources to fund the acquisition of complex technologies involving \$1 million or more.

A financial lease provides the lessors an opportunity to transfer all their rights to the lessee for a fixed period of time (less than the economic life of the assets leased).

Operating leases allow the lessor to retain title, benefits, rights and the equipment that is being leased without the risk of owning the equipment.

The following will focus on leasing in general. It will not isolate specific risks, pitfalls or opportunities in using one of the types of leases mentioned above.

Leasing

Some of the advantages of leasing are:

1. Low costs can be passed on to the lessee because the lease's tax benefits are being retained by the lessor. In many instances, the lessee can not use the accelerated tax depreciation and tax credits available through purchasing.

2. Loan payments, though equal to lease payments over the life of the lease, are usually higher than early lease payments.

3. A lease can be structured to accommodate a lessee's desire to either have the lease "on" or "off" the accounting books (balance sheet).

4. Leases can provide financing for a company which may be otherwise restricted from incurring debt because of loan covenants.

- **5.** Having fixed-lease monthly payments may be a hedge against inflation.
- **6.** If technology changes, as seen with computers and telephone systems, you frequently are allowed to upgrade your equipment by breaking your current lease and signing a new one.
- **7.** Funds will be available to pursue other business options or requirements.

Some of the disadvantages of leasing are:

- 1. Initial flexibility of a lease may prove to be only illusionary if non-cancelable features are invoked when a piece of equipment becomes obsolete or expensive to maintain.
- 2. A lease may include a maintenance agreement on the equipment at a premium price when the maintenance could be done cheaper inhouse.
- **3.** You may pay a considerable premium for a lease when you add equipment to a lease that has a different useful life than the prime leased equipment. Example: tanks placed on a manufacturer's chasis.

Quantitative evaluation of the lease options comfronting most of us require that you also look at the implications of TEFRA 1982, ERTA 1981, SFAS No. 13, your firm's financial position.

Beware of the salesman who promotes leasing as a way to defer expenditure of capital. He is really saying you are deferring the expenditure of cash. Another line we just heard was that a tax timing advantage would result from leasing. When we reviewed the numbers he was correct, but the advantage went to purchasing.

Purchasing

There are several advantages to purchasing that must be evaluated before making the lease/buy decision.

The larger your firm, the more leverage you will have to choose purchasing instead of leasing. In addition, firms which have surplus cash, high liquidity, and use low technology assets should investigate buying.

Some of the advantages of pur-

chasing are:

1. Preferred interest rate from the financial institution that is helping you expand your business.

2. Investment tax credits are available to a purchaser but not available to a lessor except with a price increase in the lease.

3. Higher level of control over vendors who will deal with you.

4. Benefit of the ACRS tax advantages are available only to ownership.

After evaluating the above options of leasing versus buying, you will need to prepare a financial analysis of the options under consideration. Make sure that you compare apples to apples; all too often we see people comparing dissimilar features, such as the before-tax cost of purchasing and the after-tax cost of leasing. Use financial advisors to assist you in making this analysis, since the benefits in cost savings, improved flexibility, and profitability will be worth the additional input.

For the more adventuresome, computer programs are available for use on IBM and similar compatible hardware.

The analysis

The analysis should look at the net

Even though leasing of equipment continues to grow, purchasing continues to be the principle means of acquisition.

present value of the cash flow between the two options; the net present value of the monies to be expended; tax benefits of the options; depreciation benefits of purchasing; impact of the present low interest rates; and return on investments your firm is making on its equity.

The following list of information is needed to do a net present value

analysis:

1. Initial outlay (out-of-pocket costs) to acquire the asset net of any adjustment for investment tax credit.

2. Funds from the old asset's disposal, if any.

3. Tax effect of the gain or loss from selling the old asset.

4. Projected recovery from the disposal of this asset at the end of its useful life.

5. Annual revenue to be generated from acquiring this asset.

6. Annual costs of operating and maintaining this equipment.

7. Tax benefit from deducting total lease payment on tax return.

8. ACRS depreciation benefits of owning the asset.

9. Depreciation tax shield on disposal of the old asset.

While this list of information may look complex at first, once you begin to work with and understand the benefits of the analysis you will find the information necessary to make an intelligent decision.

Even though leasing of equipment continues to grow, purchasing continues to be the principle means of acquisition. Any company with liquidity, the ability to secure its own financing, or can use more tax benefits should consider buying over leasing.

Even though you may have found making a decision between buying or leasing is still confusing, your decision will ultimately be made on the basis of tax benefits and the ability to sustain the cash flow required. WT&T

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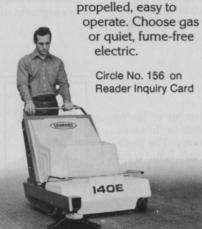
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PROBLEM SOLVERS

by Balakrishna Rao, Ph.D

Treating dogwood trees

Problem: We have seen dogwood trees with swellings on the tips of the twigs. Affected twigs look stunted and the portion above the swellings will be killed. What causes these and what can be done to manage this problem? (Tennessee)

Solution: From your description of the problem and symptoms, I feel that the swellings on the dogwood twigs are dogwood club galls, caused by a small reddish-brown fly, Mycodiplosis alternata.

In May the female fly lays eggs on young shoots near the terminal bud. The larvae hatch from the eggs, bore into the twig and cause swellings which are noticeable in a month or so.

Larvae grow inside the club galls and then drop to the ground by September to overwinter. The following May, the adult flies will emerge and repeat the life cycle.

If the problem is not very severe, simply prune the galls before August 1 and destroy them to minimize the problem. Galls can be prevented by applying insecticides like Sevin or lindane to the branches between May 1 and June 15. During this time frame, several applications may be necessary to obtain maximum protection. From the time mature larvae drop to the ground, around August 15 till September 15, they can be controlled by the application of insecticides on the ground.

Contact your local cooperative extension agents for the choice of insecticides to use.

Galls: an unknown

Problem: We have seen a number of sugar maples with large galls on the branches. What causes these and will they kill the trees? Is there something that can be done to prevent or cure these? (Ohio)

Solution: We have seen these large tumorous growths on the trunk and branches of red and sugar maple trees. Galls have been attributed to Phomopsis, a fungal agent. Very little is known at the present time about this disease. Often infected plants may produce several galls; however, the disease apparently does not spread easily from one tree to another.

There is no recommendation for chemical management of the problem. For aesthetic reasons, the galls can be pruned and removed.

Solving poor rooting

Problem: Last year we repaired a number of lawns which were severely damaged by insects or diseases. We used sod as a means for fast recovery. The problem is that the sod is not rooting very well. What is the problem? What can we do now? How can we avoid the problem in the future? (Pennsylvania)

Solution: Poor rooting of newly sodded turfgrass may be due to several factors such as lack of sufficient moisture, interface, and improper soil preparation at planting.

After sod installation, one must provide sufficient moisture during establishment. During high temperature periods, improperly sealed sod edges can lose excessive moisture. In addition, most sod is grown on muck soils and interface problems can arise when it is placed on clay-type soil without good soil preparation. The difference in soil type leads to incompatibility, resulting in poor penetration and surface runoff whenever watered. This affects proper rooting.

Prior to sod installation, the soil should be tilled and prepared for sod installation. At this time it is easy to incorporate phosphorus, a needed element for root development.

In the same way, any pH correction can be accomplished at this time. In the future make sure that the endrothrips soil is prepared properly for root penetration, and sufficient moisture is provided during the establishment period. The areas showing poor rooting can be helped by core aerifying in fall or early spring. If possible, aerify annually to hasten results.

Football fields, fertilizer, and lime

Problem: When trying to improve turf on football practice fields, can you use fertilizer or lime? How about adding round sand before coring to help increase rooting zone? (Ohio)

Solution: Based on soil test results, fertilizer and lime can be used as needed when trying to improve turf on football practice fields. Adding sand before coring is not be as beneficial as adding it after coring. By adding sand after coring, there is a greater chance for the sand particles to fall into the aerification holes. This is the preferred method.

Reports suggest that addition of medium to coarse sand (ranging from 0.25 to 1.2 mm in diameter) is useful to reduce compaction and increase root depth. Continued use of sand could lead to layering or the development of an interface.



Balakrishna Rao is Director of Lawn Care Technical Resources for The Davey Tree Co., Kent, Ohio.

Questions should be mailed to Problem Solver, Weeds Trees & Turf, 7500 Old Oak Boulevard, Cleveland, OH 44130. Please allow 2-3 months for an answer to appear in the magazine.

PRODUCTS

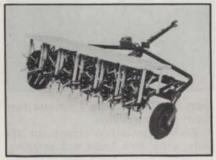
Tractor-drawn units aerate large areas

Two tractor-drawn aerators from Ryan offer a solution for aerating large turf areas like parks, athletic fields

and fairways.

Designed principally for large, flat areas, the Tracaire can be used with coring, slicing or open spoon tines, which leave a coring pattern of 6x6 inches penetrating up to four inches deep. The Tracaire can be mounted on tractors with a category one 3-point hitch with 1,000-lb. lift capacity.

For rolling uneven turf areas, the Renovaire features independently-



mounted tine wheel pairs that follow surface contours. Each pair of wheels also has a weight tray that holds up to 150 lbs. for more downward pressure. The Renovaire can also be equipped with coring, slicing or open spoon

Circle No. 190 on Reader Inquiry Card

Three herbicides added to industry's arsenal

The Specialty Products Group of Union Carbide Agricultural Products Co. has added three professional-use products: Weedone Ready-To-Use (RTU) brush and vine killer, Weedone Super D Pro amine herbicide, and



Zectran 2E mexacarbate pesticide.

RTU is designed for controlling unwanted bushes, trees and vines around buildings, roughs, fences, rights-of-way, and other non-crop

Super D Pro provides broadleaf weed control in ornamental turf areas such as golf courses and athletic

Zectran 2E controls snails, slugs,

aphids, and scales on ornamentals, flowers, shrubs, vines, trees, and turf. Circle No. 191 on Reader Inquiry Card

Ford doubles its commercial mower line

Three new commercial lawn mowers double Ford Tractor's selection. The models are the C38 Intermediate, the

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Kentucky bluegrass U.S. Plant Patent 3151 Canadian License No. 2133

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C24 High Wheel push-type and the C24SP High Wheel self-propelled.

The C38 has an 11 hp Briggs & Stratton four-cycle industrial/commercial engine with a five-speed heavy duty transaxle. It has a 38-inch full floating deck with anti-scalp rollers and skid

The C24 and C24SP mowers both have 24-inch decks. They have 5 hp Briggs & Stratton industrial/commercial engines and are designed for rough, irregular terrain, slopes or sandy soil where smaller wheels are less effective.



Circle No. 192 on Reader Inquiry Card

Portable lab for evaluating soils

LaMotte Chemical has introduced a test kit for on-site evaluations of turfgrass soils called the Turf Lab Model TL-1.

An improved colorimetric test method is used to achieve quantitative pH and phosphorus measurements. Using an Octa-Slide comparator, permanent translucent color standards are compared to clear liquid test samples for more accurate readings. The Turf Lab checks potas-



sium levels by using a unique turbidity reading device.

Each kit includes reagents for 200 tests, a six-inch brass soil sampler, soil report forms, and a copy of the 60page LaMotte Soil Handbook. All components fit into a rugged carrying case for dependable use in the field or

Circle No. 193 on Reader Inquiry Card

Chipco fungicide gets EPA approval

The EPA has given label approval to Chipco Aliette fungicide, a Rhone-Poulenc product.

The fungicide, which controls turfgrass pythium blight, features a systematic mode of action which pro-



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Circle No. 124 on Reader Inquiry Card

vides both upward and downward movement within the plan. Chipco Aliette is applied as a foliar spray.

Application calls for 4-8 ounces per 1000 sq. ft. at an interval of 14 to 21 days. Watering is not required following an application.

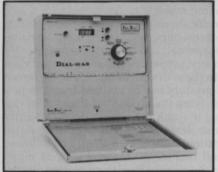
Circle No. 194 on Reader Inquiry Card

Single-dial controller is for residential use

Irri-Trol Mfg. has introduced a new single-dial residential controller. The new Dial AB features solid-state logic and split-second reliability.

The controller has a 12-position function dial and bright fluorescent

Also featured is sequential station



watering, a selectable 6- or 14-day clock, and an automatic safety backup program. No keyboard is required for setting the controller.

The Dial AB is available in 5-, 7-, 11-, 14- and 16-station models.

Circle No. 195 on Reader Inquiry Card

Many mower lines available from Alamo

Rotary, flail, and sicklebar mowers previously marketed individually by



Terrain King, Mott, and Triumph are now sold nationwide by the Alamo Group, Seguin, Texas.

Alamo has a brochure detailing all available mowers, featuring the Mott Interstater, Terrain King Versa series, Triumph Hydro-Clipper, and others. Alamo says all are designed to solve specific maintenance problems encountered by people responsible for maintaining highway rights-of-way, airports, parks, and other public lands.

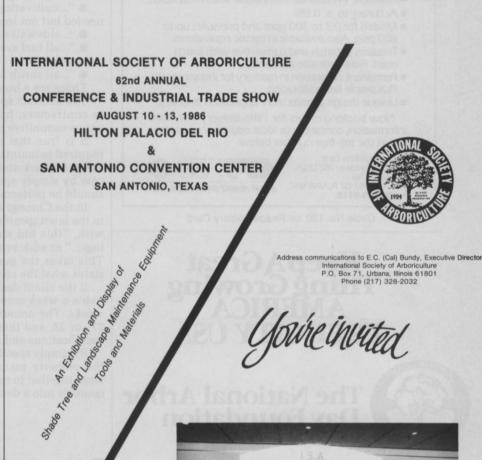
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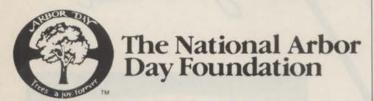
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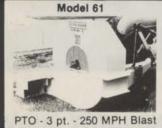
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Circle No. 141 on Reader Inquiry Card

LETTERS

Ambiguous contracts

To the editor:

For 14 years, my company has specialized in providing complete lawn maintenance service for townhome and condominium homeowner associations. We currently maintain over 7,000 units at more than 30 locations with gross sales of over \$1 million.

Over the years, I have been asked to bid on many properties-from the quite exclusive to the moderate-and usually the contract specifications were not well-defined.

They were unclear to both the contractor and homeowner.

The following are some of my favorite unclear quotes:

- "...cultivating of trees and shrubs shall be done as needed but not less than two times."
 - "...sidewalks and curbs will be edged as required.""...all turf areas shall be mowed approximately once
- per week."
 - "...all shrub beds are to be weeded periodically."

There are a hundred more!

The contract specifications are unfair and bewildering to contractors, homeowners, board members, maintenance committee personnel, and property managers.

It is true that many properties differ in the services required to maintain them to a particular level. However, the guesswork and mystery can be omitted from the process by simply specifying the amount of times a service should be performed to reach the client's desired results.

In the Chicago area, weekly turf mowing can be stated in the lawn specifications; however, it should be followed with, "this bid shall include 20 mowings... or 21 mowings..." or whatever the client's needs and budget dictate. This takes the guesswork out of estimating and clearly states what the customer can expect.

If the client desires to have superbly-conditioned turf, twice-a-week mowing would be necessary during certain weeks. The amount of mowings would change to 26 ... or 27...or 28, and this should be made clear in the contract specifications and stated precisely in the bid.

By simply specifying the precise frequency of a service, the property manager, homeowner, and contractor can work together to reach a desired level of maintenance that could fit into a desired budget.

Michael Cavaliere

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Taking the first step with pesticides

Your editorial in the March issue did a great job in alerting your readership to future problems with the EPA. They (EPA) are just now getting around to taking a look at non-food crops.

As an old hand in the ag chemicals business and being on the receiving end of their regulations since the day the agency was born. I can offer this gem of advice; you can expect to see a lot more EPA involvement in non-crop areas.

You have many counterparts in the ag business whose experience you could draw on, and who would welcome you as an ally. But you are already taking the important first step, and that is trying to get your readers to involve themselves in defending their "turf" (pun intended).

Your work is cut out for you, because most people will not even write their congressman, much less give a short speech at a local garden club, Kiwanis or Rotary meeting.