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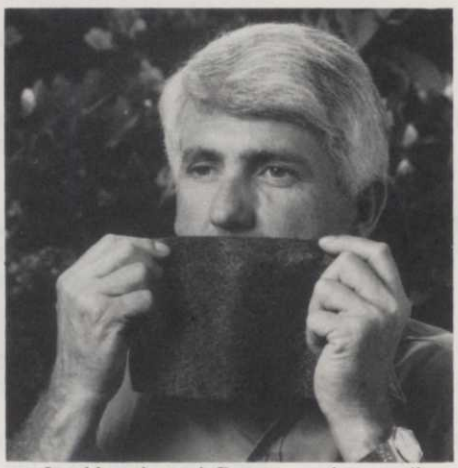

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Circle No. 144 on Reader Inquiry Card

TABLE 1

Patch Diseases of Turfgrasses

Disease and Season of Occurrence	Susceptible Grasses	Incitant
I. WINTER		
Spring Dead Spot	Bermudagrass	*Leptosphaeria korrae* in certain areas
Typhula Blight	annual bluegrass, Kentucky bluegrass, perennial ryegrass, red fescue, tall fescue	*Typhula incarnata* *Typhula ishikariensis*
Fusarium Patch	annual bluegrass, bentgrasses, Bermudagrass, Kentucky bluegrass, red fescue, ryegrasses, tall fescue	*Fusarium nivale*
Sclerotinia Patch	Kentucky bluegrass, red fescue, perennial ryegrass	*Myriosclerotia borealis*
Winter Crown Rot	creeping bentgrass, Kentucky bluegrass, red fescue, tall fescue	*Coprinus psychromoribidus*
II. SPRING AND FALL		
Necrotic Ring Spot	bentgrasses, Kentucky bluegrass, tall fescue, red fescue, chewings fescue, ryegrasses	*Leptosphaeria korrae*
Take-All Patch (Ophilobolus Patch)	bentgrasses, Kentucky bluegrass, red fescue, tall fescue, ryegrasses	*Gaeumannomyces graminis* var. *avenae*
Rhizoctonia Yellow Patch	creeping bentgrass, Bermudagrass, Kentucky bluegrass, tall fescue, zoysia	*Rhizoctonia cerealis*
Corticium Red Thread	bentgrasses, Bermudagrass, Kentucky bluegrass, red fescue, perennial ryegrass	*Laetisaria fuciformis*
Liminomyces Pink Patch	red fescue, perennial ryegrass	*Liminomyces roseipellis*
III. SUMMER		
Fusarium Blight	bentgrasses, Bermudagrass, centipedegrass, Kentucky bluegrass, red fescue, tall fescue, ryegrasses	*Fusarium culmorum* *Fusarium poae*
Sclerotinia Dollar Spot	bentgrasses, Bermudagrass, Kentucky bluegrass, red fescue, centipedegrass, zoysia	*Sclerotinia homoeocarpa*
Sclerotium Blight	bentgrasses, Bermudagrass, Kentucky bluegrass.	*Sclerotium rolfsii*
Pythium Blight	bentgrasses, Bermudagrass, Kentucky bluegrass, red fescue, tall fescue, ryegrasses, zoysia, St. Augustinegrass	*Pythium ultimum* *Pythium aphanidermatum*
Rhizoctonia Blight (Brown Patch)	bentgrasses, Bermudagrass, Kentucky bluegrass, red fescue, tall fescue, ryegrasses, zoysia, St. Augustinegrass	*Rhizoctonia solani*
Melanotus White Patch	tall fescue	*Melanotus phillipsii*
Senescence Syndromes: "Summer Patch"	Kentucky bluegrass	High air temperature stress + *Phialophora graminicola* (?)

MARKETING AND BUDGETING • VALUING A LAWN SERVICE COMPANY
SALES TRAINING • DEVELOPING AN ADVERTISING PLAN

1986 PLCAA ProManager Seminar Series Focuses on Growth and Profitability

FACULTY

John Linkhart
Currently the owner/operator of Hart's Lawn Service as well as a senior consultant for AGMA, Linkhart was formerly the V.P. Operations for Perf-A-Lawn. He has been involved in every aspect of operations from both the standpoint of an owner as well as operating his division for a major national company.

Rudd McGary
A senior consultant with AGMA, Dr. McGary was formerly on the marketing faculty at Ohio State. He has been involved with marketing and management in the Lawn Care Industry for eight years, helping design both marketing and management systems for a wide variety of over 50 companies in the industry.

Bob Robinson
Robinson is a senior consultant with AGMA as well as running his own mulch company. Formerly Robinson was in charge of all agronomic programs for Chemlawn, which included both the selection of materials as well as assessing operating costs.

Ed Wandtke
Currently a senior consultant with AGMA, Wandtke was the Corporate Finance Manager for Chemlawn. A CPA, Wandtke works primarily in the areas of finance and accounting for AGMA with a broad-based background in all operating areas of lawn care.

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Ask your turf chemicals supplier about SEVIN® brand SL carbaryl insecticide. It can help put your pest problems into perspective.

From the turf care group at Union Carbide

SPRING PATCHES, *from page 90*

causes necrotic ring spot.

None of the currently available fungicides are effective in controlling take-all patch. The most appropriate approach to dealing with disease outbreaks is to follow management practices designed to promote early recovery of the turf.

Rhizoctonia yellow patch

Rhizoctonia yellow patch, caused by *Rhizoctonia cerealis*, can be destructive to Kentucky bluegrass, but causes only slight to moderate damage to creeping bentgrass, tall fescue, bermudagrass, and zoysiagrass.

In the early stages of disease development, the affected turf develops light green to distinctly yellow-green patches two-to-three inches in diameter. As the disease progresses in Kentucky bluegrass, the color of affected areas fade to a light tan to brown and the size of individual patches may extend up to three feet wide.

...patch diseases can be brought on by a variety of causes other than the pathogenic activity of microorganisms.

With bentgrass, tall fescue, bermudagrass, and zoysiagrass, the color of the patches may remain yellow-green for several weeks, but fail to turn brown. Eventually, these plants may fully recover.

The "frog-eye" symptom pattern of distinct rings of yellow-green to brown grass with center areas of healthy-appearing grass is common for rhizoctonia yellow patch.

These patches often have a pronounced sunken appearance due to the rapid decomposition of the thatch.

Under conditions favorable for development of the disease, the leaves of the plants near the margins of patches will frequently have a characteristic reddish to reddish-purple tint, beginning at the leaf tip and moving progressively toward the sheath.

Another characteristic feature of diseased leaves prior to complete blighting is the presence of tan lesions with dark brown borders.

Considering that many of the field symptoms of rhizoctonia yellow patch and necrotic ring spot overlap and that both diseases can occur in the same location and at the same time of the year, laboratory examination of crowns and roots of diseased plants for the presence of the characteristic rhizoctonia mycelium is advisable.

The development of rhizoctonia yellow patch is favored by cool wet weather, primarily the 40 to 60 degrees F range.

When the leaf symptoms are in the early chlorosis stage of development, symptoms will disappear if temperatures drop below 40 degrees F or go above 75.

However, if the temperatures stay within the 40-60 degree range, the disease will progress to foliar blighting.

Attempts to control this disease with applications of fungicide have met with little success.

Research at Ohio State University has shown that Adelphi, Cheri, and Touchdown Kentucky bluegrasses are highly resistant to rhizoctonia yellow patch.

In the event of severe disease damage, overseeding the affected area with one of these cultivars will provide some protection against major outbreaks.

Corticum red thread

Corticum red thread has the distinction of being the first recorded foliar disease of turfgrass.

The fungus that incites the disease (*Laetisaria fuciformis*) was first observed on ryegrass in Australia in 1854. Red thread was first reported in the U.S. in 1931

In overall view, corticium red thread is seen as irregularly-shaped patches of blighted turfgrass, ranging in size from two inches to three feet in diameter. In large affected areas, the patches have a generally ragged appearance due to a fairly high population of unaffected leaves.

The disease is confined to the leaves and leaf sheaths only. At the points of infection, there are small, water-soaked spots which rapidly enlarge, covering a large portion of the leaf or leaf sheath.

As these water-soaked lesions enlarge, there begins a general drying out of the affected tissue, and subsequently, a gradual fading to a tan color that eventually involves the entire leaf.

Under favorable conditions for disease development, the leaves may be completely covered with the pink gelatinous growth of the pathogen.

Field diagnosis of corticium red thread is easiest when the disease is in the final stages of development. At this time, the leaves are terminated by fine, thread-like structures, 1/16 to 1/4-inch in length that are a distinctive, bright, coral-pink color.

In recent years, another disease has been described that has many of the field diagnostic features of corticium red thread. The disease, Limonomyces pink patch, is incited by the fungus *Limonomyces roseipellis*.

It is believed only to occur on perennial ryegrass and creeping red fescue.

The main field pattern that distinguishes this disease from corticium red thread is that the coral pink tendrils at the leaf tips that are so characteristic of red thread are absent. Otherwise, many of the field diagnostic features are identical.

Limonomyces pink patch cannot be controlled with the the fungicides that are effective against corticium red thread. Thus, in cases where the reddish threads are not present, samples should be collected and sent to a laboratory for verification of which fungus species is actually inciting the disease in question.

...the primary field diagnostic features for many of the patch diseases closely resemble each other.

Optimum weather conditions for the development of corticium red thread are air temperatures in the 68-75 degrees F range, coupled with prolonged periods of rainfall.

Nitrogen fertilization has a very pronounced effect on the development of this disease. The incidence and severity of red thread is much lower when the plants are grown under high nitrogen fertilization.

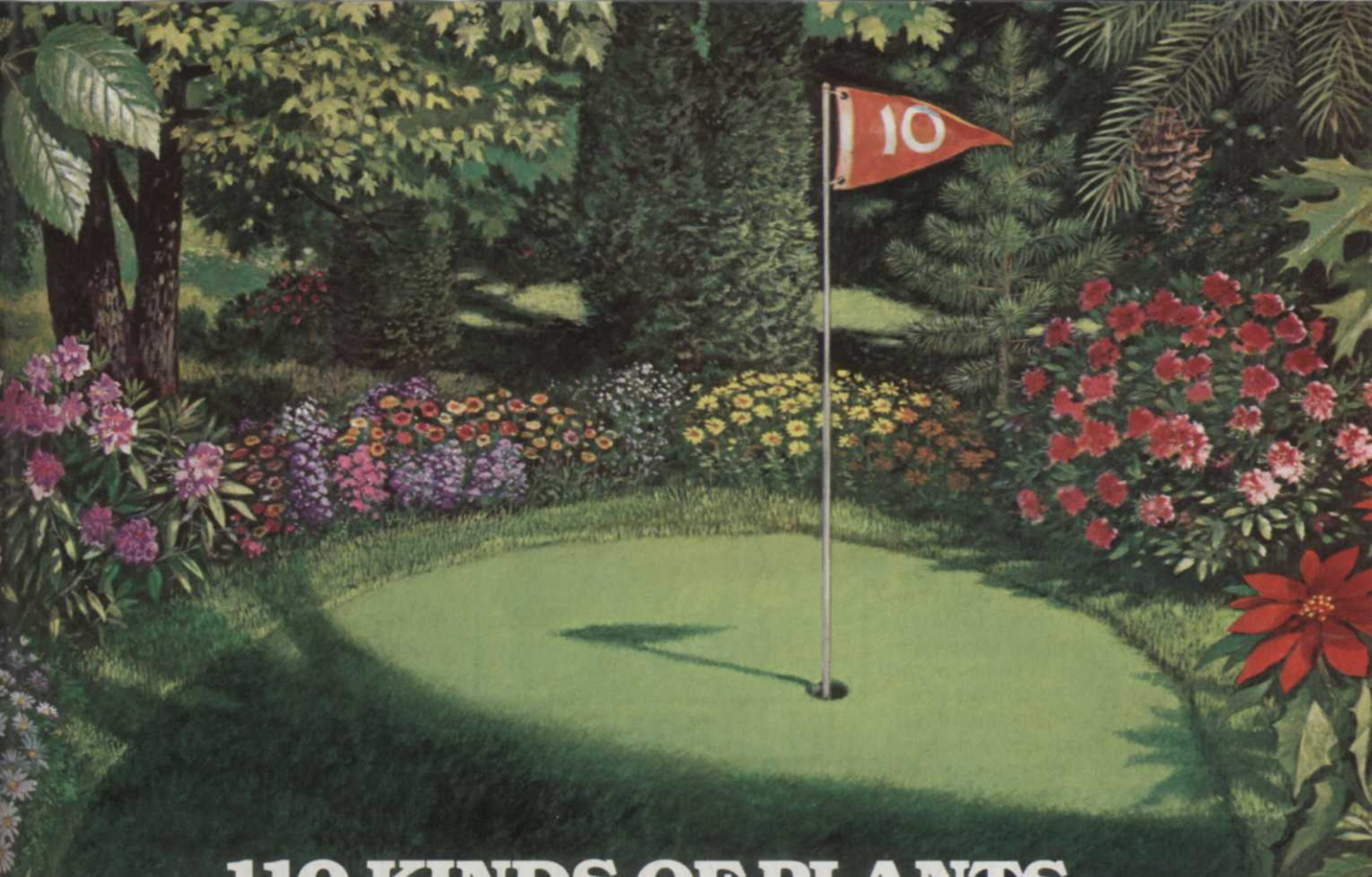
Of the cultivated turfgrasses that are susceptible to corticium red thread, perennial ryegrass, creeping red fescue, and Kentucky bluegrass are most vulnerable.

With the perennial ryegrasses, the cultivars Linn and Citation are among the most resistant, while Pennfine, Omega, Manhattan, and Caprice rank with the most susceptible.

The fungicides Bayleton, Cleary 3336, Fungo 50, and Daconil 2787 are labeled for control of corticium red thread.

For optimum effectiveness, these materials should be used in conjunction with a program of nitrogen fertilization that is at the upper level of recommended pounds of available nitrogen per unit of turf area. **WT&T**

Next month, Dr. Couch examines summer patch diseases.



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TO TRAIN OR NOT?

A booming green industry is becoming more competitive. Those who train employees may have an edge. Or do they?

by Rudd McGary and Ed Wandtke

The green industry is just now realizing the value of training courses.

We see trade magazine articles on the use of training systems to bring personnel into full production more quickly. Whether you are a golf course superintendent, a lawn care operator, or are working in lawn maintenance, the need for some type of systematic training becomes more and more important as market pressure in the green industry increases.

You can only maximize your personnel investment after you've properly trained your employees.

OJT training

The old style of training, still very much alive today, is called either apprenticeship or OJT (on-the-job training).

A new employee learns from an experienced one. Generally this is accomplished while doing the actual work required for the position.

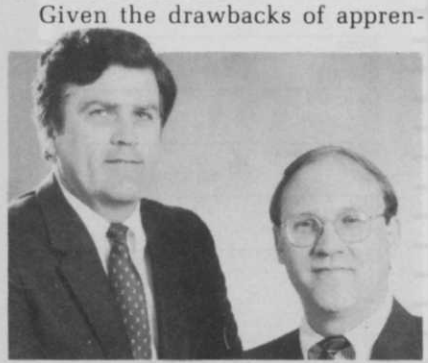
However, there are some issues to consider with this method.

First, does the person doing the training have any teaching skills? They may, but certainly they weren't hired as a teacher.

Second, is there a systematic training process that goes on during this OJT? Most often there is not.

Third, is everyone in the company aware of the particular tasks and responsibilities of their position? Usually not unless there is a central effort to educate and train.

Given the drawbacks of apprenticeship training, you should look at how to set up a training system which can be used to help train personnel more effectively. The system will help reduce employee turnover and increase the contribution of each individual to the company.



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

MANAGEMENT IN BUSINESS

Here are some key points in setting up a training system (warning- it may look simpler than it actually is):

1. **Define the reasons for the training.** Are you doing it to set the lowest acceptable levels of performance for the personnel? Is it to infuse new information into the organization? Is the training to raise the current level of personnel to a higher plane? Is is done to make the personnel more efficient in current positions? Why are you doing it? If you can't answer this basic question, don't bother to train. It will be expensive, and training for training's sake is a waste of effort and capital.

2. **Define the specific objectives of the training.** Each training course should have a concrete educational objective before beginning. Without an educational objective you won't know if the training is beneficial.

3. **Assess the resources available for doing the training.** You may find that you have valuable resources inside your own organization. If you don't have someone qualified to teach the course, go outside the organization. It may cost more but at least the training will be done professionally. In many cases training done by outside resources is better received than training done by in-house personnel.

4. **Determine the sequence of training.** Training for companies should be sequenced so that one course can lead to another. If you're only going to do one course a year, this isn't a problem. If you can relate everything you desire to your personnel in one course, call us. We can use someone who can do that. We can't.

5. **Determine the dates and costs of the training.** In the green industry, much of the training is done in the off-season. This is often the best time to bring all the personnel together and to have them free of outside pressures. This is particularly true if you're going to do longer two- and three-day courses. You might also consider some short courses during the season when the information given in the course is more immediately applicable.

Costs of the training involve the teaching staff, the facilities to be used, and time spent by the personnel in the course. Each of these is important in assessing the total expenditure for training.

6. **Design the materials to be used in the training.** Will you have manuals? Will the instruction be primarily verbal? Will you use audio-visual devices? Will you be doing hands-on training? Just how will the information be delivered? Answering these questions will help the instructor be effective during the presentation.

7. **Finally, you must have some sort of assessment of the training.** This is the one aspect of training that is most often overlooked. Many companies have training programs and then fail to assess their effectiveness. If you can set educational objectives you should be able to construct some means of assessing how well the participants learned the materials. Failure to do this may mean that you're simply giving courses which no one understands. That's expensive.

What type of organizations need training? All of them.

The green industry is growing, as is competition and costs.

Effective training systems will better assist in preparing personnel for their jobs and if done correctly, should be beneficial to both the participants and the company. **WT&T**

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EVENTS

APRIL

ALCA Student Field Days, April 4-6. Oklahoma State University, Stillwater, Okla. Contact Kelly Keith, OSU Dept. of Horticulture and Landscape Architecture, 360 Ag Hall, Stillwater, OK 74078.

Southern Tree Workshop, April 14-16. Cypress Gardens, Cypress Gardens, Fla. Contact Jack Siebenthaler, PO Box 6524, Clearwater, FL 33518, (813) 446-3356.

Southeastern Turfgrass Conference, April 21-22. Coastal Plain Experiment Station, Tifton, Ga. Contact Glenn W. Burton, (912) 386-3353.

Landscape Industry Show, April 23-25. Long Beach Convention Center, Long Beach, Calif. Contact Sharon McGuire, show coordinator, CLCA Headquarters, 2226 K St., Sacramento, CA 95816, (916) 448-CLCA.

National Institute on Park and Grounds Management Regional Conference, April 28-29. Reno, Nev. Contact regional conference, Box 1936, Appleton, WI 54913, (414) 733-2301.

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