

# Take the guesswork out of turf managing

by William E. Lyons

Being a turf manager, golf course superintendent, greenkeeper, golf course owner, teacher, or student, we are all in a guessing game much like a golfer who has to guess which club to use to score well.

True, it is an educated guess, one which becomes more accurate with experience — it's never a driver out of a bunker or a wedge off the tee on a par 5 — but other than those easy decisions, there are many tough ones to be made.

The golfer has a scorecard to record his performance on each hole, and the businessman has records by which to measure his accomplishments, but up to now the turf manager had nothing to "mark his score" for each day's program.

With the help of many of our leading turf specialists, we have developed a daily turf manager's scorecard, called a Daily Weather & Turf Report. It goes with the Lyons Turf Test Kit. Used properly, these reports and tools can take the guesswork out of turf management; they can help make quick on-the-spot judgements that can save time and turf and even help reduce costs.

## How to use them

The turf manager seldom hears his wife say, "Breakfast is ready!" He is too busy listening to the all-important weather forecast on his NOAA weather monitor, radio, or television. He knows very well that the day's work and planning must be built around weather.

Arriving on the job well ahead of the crew, begin using the most difficult instrument of them all — the pencil — on the Daily Weather & Turf Report. First, check off the five phases

of weather which will govern the day's operation. Next, the three phases of the previous day's weather: high and low temperatures, rain fall, high and low humidity — it just might be pythium weather.

Go right on down the list. Was there a lot of dew (guttated water) this morning? Should it be washed down (recycled) before mowing? The nitrate color test is simple to use, and it will give the answer.

Are the greens too wet to take fertilizer (liquid) today? A moisture meter will show the percent of saturation from 1 inch to 8 inches. At 25 percent, water will be needed; at 40 percent, turf has to be watched closely — sun and wind may dry it quickly and cause wilt.

Grass roots lose some of their ability to function as soil temperatures rise. At 70°F., don't rely on roots to transport food to the leaves. Apply a very small amount of 45 percent urea which will be taken into the leaves. This should not be washed down, and the rate should be not more than 1 pound N per 5,000 square feet — approximately 2 pounds of 45 percent urea. Since temperature is important, a good thermometer is in the Test Kit.

## Non-daily data

For the past 35 years we have relied on clipping tests to determine the needs of the turf for N-P-K. To make the tests, an N-P-K test is in the test kit. This is a very valuable guide. If we are lacking in N, we apply some. But how much is "some"?

A basic rule is 1 pound of N per 1,000 square feet when the soil temperature is between 50° and 60°F. Use ¾ pound as temperature rises above 60°, and only ½ pound when above 70°, using soluble quick-acting sources of N.

We never apply nitrogen alone. Using water-soluble fertilizer, we apply a 1-½-1 ratio of N-P-K. The potash (K) makes the turf tougher; it will take more wear and seems to give better disease control. Nitrogen in the ammonium form can leach the potash from the root zone, so carry some to the turf when fertilizing.

Before the days of science in turf

DAILY WEATHER & TURF REPORT: SITE: T F S : Hour _____ Date _____	
Today's Forecast: Temperature: High _____ Low _____	
Sunny _____ Partly Cloudy _____ Cloudy _____	
Chance of Rain: Morning _____ Afternoon _____ Evening _____	
Thunderstorms: Morning _____ Afternoon _____ Evening _____	
Windspeed: _____ Direction _____ Barometer R F S _____	
Previous Day's Temperature: High _____ Low _____ Total _____	
" " Humidity: High _____ Low _____ Total _____	
" " Rainfall: Inches: _____ Evaporator (William's) _____ Inches	
Nitrate Urea Test (Kor-Less Powder) High _____ Med _____ Low _____	
10-Day Surface Temp (Hand Test) Hot dry _____ Hot moist _____ Cool moist _____	
Soil Temp: 1" to 4" _____ soil moisture: 1" _____ 2" _____ 4" _____	
I R R I G A T I O N	
Automatic from PM _____ PI to _____: Minutes _____ Inches _____	
Manual Start _____ PI Minutes per area _____ Inches _____	
Diseases Present: _____	
Fungicide to apply: _____	
Insects Present: _____	
Insecticide to apply: _____	
weeds: _____ Control _____	
Notes on Turf Areas: _____	
Non-Daily Data	
Clipping Test N P K: Nitrates: high _____ Med _____ Low _____	
Phos: High _____ Med _____ Low _____	
Potash: High (3ppm) _____ Med (20) _____ Low (10) _____	
Observed Chlorosis: none _____ Light _____ Severe _____	
Fertilizer to apply: Lbs per 100 sq ft: N _____ P _____ K _____	
Thatch Test (Purple) Green _____ pH _____ Outer area _____ pH _____	
Treatment: _____	
Course or Club: _____ recorded by: _____	

management, greenskeepers like the late Jack Way, of Canterbury Country Club in Cleveland, did not have a tool box of good scientific instruments, but he always had two "tools" with him. His hand was one, and it was used to test surface temperatures. The second was a big pocket-knife with an illegal blade, like the one carried by The Greensmaker, James L. Holmes of Bryan, Tex., to get the feel of the temperature and moisture in the root zone. Jack and Jim would stick their big blades into the turf and could tell if a dry zone was developing. Obviously, that takes years of experience.

Today we can rely on instruments to tell us when the turf needs help. An example: Is the light green color due to nitrogen? Or is it chlorosis (lack of iron)? The latter is often the case with a high soil pH, and this might be caused by the water supply.

From the late George Hoffer we learned that when in turf trouble you should ask the turf. Out of this reality, a thatch test kit was developed. It is included in the Turf Test Kit.

What can you expect from the instruments in the tool box? The first tool is the Daily Weather & Turf Report. It will assist in planning your day's work with less chance of error, and it will give you a record of successes and failures. We learn from experience.

If you are challenged by your employer, your daily records will show why, how, and when each job was performed. This may prove to be a major part in holding jobs in these days of tough competition.

Properly used, the Turf Test Kit can aid in producing superior turf. That is the job we are being paid to do.

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"Old Bill" Lyons has been caring for golf course turf for more than 30 years. Besides being president of Lyons Den Golf Inc. of Canal Fulton, Ohio, Bill is past president of the National Association of Public Golf Courses, a director of the Musser International Turfgrass Foundation, and a member of the GOLF BUSINESS Advisory Board. He was a founder of the Midwest Regional Turfgrass Foundation and the originator of Nimisila bentgrass.



Bill Lyons has put together a limited number of the Lyons Turf Test Kits mentioned in the preceding article. Each tool box includes a year's supply of Daily Weather & Turf Reports in a three-ring binder, plus all the tools needed for moisture and

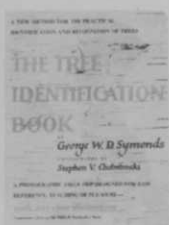
temperature sensing and for chemical testing of dew, clippings, and thatch. It even includes a weather radio. For further information contact Bill directly at Lyons Den Golf Inc., Canal Fulton, OH 44614 (phone 216/854-9910).

## Inventive: another word for superintendent?

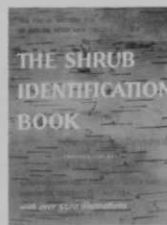
Golf course superintendents must be about the most inventive people on earth. Just about every one we've ever met has some piece of equipment, some procedure, some special thing that he has created to fill a need in his operation — just like Dave Harmon's touch-tone remote irrigation shutoff or Bill Lyons' Turf Test Kit.

If you have invented or improvised something that other superintendents might be able to copy for use on their golf courses, we'd like to know about it so we can tell them about it. Just send us a brief write-up about your invention — a description of what it is, what it does, and why you invented it — along with a photo or two. We'll publish the best ones in future issues of GOLF BUSINESS, and we'll pay \$25 to the inventors of non-commercial inventions selected for publication. Write to Editor, GOLF BUSINESS, 9800 Detroit Ave., Cleveland, OH 44102.

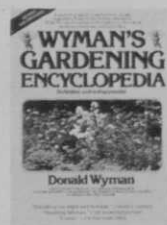
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