

Turfgrass Questions Answered

By FRED V. GRAU

Dr. Grau will welcome questions on course maintenance subjects from superintendents, green chairmen, club and public course officials. There is no charge or obligation attached to this service. Address Queries—Grau, Golfdom, 407 S. Dearborn St., Chicago 5, Ill.

"MANAGEMENT" has become one of the most important words in the turfgrass industry.

At conferences and meetings all over the country we hear more and more discussions on the management of many things relating to the turf on golf courses, including soils, grasses, water, chemicals, fertilizers, machines, and men. The obvious implication is that management is a function of men and their decisions. At the recent Penn State Conference Prof. Higbee said that man's worst enemy is man himself. At the same conference this writer said that one of the most important basic causes of poor turf is people. The two statements say virtually the same thing.

Dr. James Watson repeatedly has said that the most important thing in management is man. This writer has taken the word a step further.

The next syllable, age, implies that we have left the era of cheap hand labor and that we are now in the Machine Age when we need to train men to know what a specialized machine is designed to do, to learn how to operate it properly and to keep it in perfect operating condition.

Men, the third syllable, characterizes the workmen that the superintendent must train to do these special jobs with the aid of precision powered tools. Thus, if the man in management (the superintendent) has surrounded himself with the modern precision tools of the machine age, and has adequately trained his men in their use in relation to the grasses and soils, then the turf that he produces will suit everyone to a "T". This is our concept of the turfgrass implications of the word

To us, the superintendent rates another upward rung in the ladder of professional and financial achievement by virtue of the fact that he is by necessity

a teacher with grave responsibilities.

Upon him rests the burden of teaching every man under him the basic principles of management as they apply to soils, grasses, machines, techniques and everything else. He must train his men to recognize quality as well as flaws, deficiencies as well as excesses, beauty as well as utility.

The management of golf turf for the enjoyment of people has little in common with what is best for the grass or the soil or the machines. To please the people the superintendent must do many things that are contrary to his better agronomic judgment. It becomes his inescapable responsibility to make the decisions that will provide his people with enjoyable turf in spite of the imposed handicaps of excess traffic from dawn to dark, a four-some every six minutes, wet grass every morning when the greens have to be mowed, constant trampling on wet soils bringing about compaction, and so on *ad infinitum*.

The amazing thing is that so many golf courses have such surprisingly good turf which, naturally, the members simply take for granted. It is a great tribute to the management ability of the golf course superintendents who, I am sure, won't mind being "taken for granted" providing they are given the men, the money and the machines with which to do the job, and are given the chance to do their work unhindered.

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Q—What is the true relationship between the use of Nitrogen and the occurrence of dollarspot and brownpatch? (N. J.)

A—Dollarspot is worst under conditions of nitrogen starvation. With ample nitrogen dollarspot is virtually non-existent. Just the reverse is true with brownpatch. The answer is a moderate level of nitro-

GIVING TURF TROUBLES THE AIR



(L) Superintendent Vince Crockett on a green of seaside bent at the Del Paso CC, Sacramento, California. The green had been aerified earlier in the summer. When disaster hit and most of the seaside bent was destroyed by disease, thatch, humidity and heat, the grass around each Aerifier hole remained green and healthy.



(Above) Vince Crockett cut plugs and found root growth in the openings in the center of each living patch of grass. Evidently excess water contributed greatly to the destruction of grass. Even the roots in the openings were discolored, indicating saturated conditions and lack of proper oxygen supply.



(L) Supt. Vince Crockett and asst. (left) try a new cure. Green was aerified with $\frac{3}{4}$ " special thatch spoons to remove troublesome deep thatch and mat. Vertical mower, (center) was used after aerifying, then top-dressing worked into openings to provide channels of sandy top-dressing soil. Area was dragged and mowed, leaving fine, firm playing condition. Interested onlooker is Alec Engart, Chrmn., Northridge (extreme right) and next to him John Reeves, H. V. Carter Co.

gen feeding with due regard to preventive fungicides, prevention of excessive thatch and other sound maintenance practices.

Q—Our association is thinking of putting out a Spring Lawn Bulletin for the members of our clubs. Do you think this is a good idea and where can we get help on it? (Ohio)

A—We applaud the idea. It is an excellent way to gain greater recognition for the members of your association and to make the club members aware of your abilities and helpfulness. You can get help

from your county agent's office, from the state experiment station, and from the several agronomists associated with phases of the turfgrass industry as manufacturer's representatives.

Q—Where can I buy polycross bent seed? (Iowa)

A—Polycross bent is named Pennncross creeping bent. At the moment there is no seed available anywhere. Seed is being produced and there should be a limited supply on the market late this summer.

Q—Why do some strains of grass pro-

duce usable seed while others do not? (Mo.)

A—The grasses have become intermixed over the years through cross pollination and some do not hold true to type where seed is used. Three vegetatively-produced parents were used in the production of the Penncross strain. Many off-types were produced and discarded before the best three were put together.

Q—Of what benefit is it to have roots in a putting green below the depth of $2\frac{1}{2}$ "? (Mass.)

A—Some of the good putting greens that we have seen have roots occupying the full depth of the top 12 ins. of soil. Some go even deeper. Grasses that are growing with deep extensive root systems like this are better able to withstand shock and they can go longer periods without water because the roots are ranging through a greater depth and volume of soil for moisture and nutrients.

The extra root cushion will mean a great deal in playing conditions giving a resilience to the turf that cannot be obtained with a shallow-rooted grass.

The grass growing on a deep extensive root system like this is much more likely to be healthy because it is more able to obtain a steady constant supply of moisture and nutrients and proper balance thereby enabling the grass to keep ahead of diseases. A deep extensive root system constantly dying and decaying is continually improving soil structure.

Q—Is methyl bromide dangerous to use? (Texas)

A—There is little horizontal movement of this material so only the treated area is affected.

However, caution should be observed for shrub roots growing near treated area. Usually treatment should be no closer to the base of a tree than the drip line, although it has been reported that citrus trees have been treated very near the trunk with no adverse effects.

Contact with the material is hazardous to personnel. Sensible precautions should be observed and do be accurate in following the manufacturer's directions for use.

Q—Is there yet a chemical treatment to control poa annua? (Ill.)

A—One of the things you can do is to apply lead arsenate at the rate of 10 lbs. to 1000 sq. ft. To obtain uniform distribution mix the material with topdressing and put it on early in the spring when the poa annua is just beginning to grow. This will retard the poa annua consider-

ably and should help the situation until we have something better.

However, where there is a high level of phosphorous in the soil the results may be disappointing.

Q—I believe I can save our club money by building a fairway spray rig. What width and capacity do you recommend?

A—Frankly, we don't recommend building your own equipment. There is a considerable investment in the turf on a golf course and it is well worth while to invest the money in good standard equipment to take care of that turf.

Although "tailor-made" equipment may be slightly more expensive than home made, it has the advantage that replacement parts will always be available from the local supplier.

In case of a breakdown repairs can be made almost immediately to avoid possible loss of grass. Very often standard parts will not fit pieced-together "bastard" equipment, and then there may be a delay of days or even weeks before parts can be obtained. There can be a serious loss of turf during that waiting period.

We have seen too many cases where supposed savings on equipment turned out to be very poor economy. It is better to buy a standard make so parts and service will be available promptly.

Q—Is it absolutely necessary to water after fertilizing? (W. Va.)

A—The reason for watering after fertilizing is to wash fertilizer off the grass blades so it will not burn.

Brushing the fertilizer off the grass blades with a dragmat will accomplish the same thing. If an organic fertilizer is used there is less likelihood of burning the grass.

Q—Our fairways have had no fertilizer since the course was built over 25 years ago. We want to start on a program of fairway improvement but we can't agree on procedure. What do you suggest? (Calif.)

A—The first step is to make as complete an inventory as possible, including photographs. This will be for the record and for the guidance and information of you and your officials and those who will come after you.

Get a complete soil test—ask your county agent, your experiment station or other service bureau for details.

Make a record of the types of grasses and approximate per cent coverage of each—weeds, too. Now, with soil test reports and vegetation population figures in

front of you, start calculating quantities of limestone (if it is needed) and fertilizer required.

Here you might use the help of a trained agronomist together with the advice of your fellow superintendents who have developed successful fairway improvement programs. Don't neglect to evaluate soil physical conditions, compaction and water infiltration.

Success in the use of water, lime or fertilizer will be more sure when soil is rendered porous and receptive to water infiltration.

This may be the best time to introduce by seed or sprigs the improved fairway grasses for the long-term program.

Q—We have not been very successful in controlling grubs in the soil even though we apply Chlordane (dry form) at the recommended rate. Any suggestions? (N. Y.)

A—Your trouble may be that you are not getting enough of the material down into the soil where the grubs live.

Aerify thoroughly before applying the insecticide, then water to wash the material down into the openings. If water is not available, use a dragmat to help work the chemical down into the openings.

If the soil is high in lime, chlorinated hydrocarbon type insecticides will break down and become ineffective more quickly than they otherwise would. Take this into consideration when determining how often to apply the chemicals.

Q—I am a student in high school. During the summer I work on a golf course and now I would like to study more about the subjects that will give me better training to be a superintendent. Where can I write to get information on undergraduate course work? (Mo.)

A—Several schools offer course work in Turf Management. We would suggest that you write to these institutions for full information.

Prof. H. B. Musser
Agronomy Department
Pennsylvania State University
University Park, Pa.

Dr. W. H. Daniel
Agronomy Department
Purdue University
Lafayette, Indiana

Dr. R. E. Engel
Agronomy Department
Rutgers University
New Brunswick, New Jersey

Dr. R. C. Potts
Agronomy Department
Texas A and M College
College Station, Texas

Prof. L. S. Dickinson
Agronomy Department
University of Massachusetts
Amherst, Massachusetts

Dr. G. W. Burton
Georgia Coastal Plains Experimental
Station
Tifton, Georgia (Abraham Baldwin
College, Tifton, Ga.)

We would suggest that courses in business management and personnel relations are equally important with basic technical courses in soils, chemistry, physiology, ecology and others.

"Doc" Treacy's Son Killed in Notre Dame Explosion

Dr. John W. Treacy, 30, son of the late R. W. (Doc) Treacy, for many years prominent in PGA affairs, was killed March 31, in an explosion during fuel tests in a rocket test cell at the University of Notre Dame. Dr. Treacy, an asst. professor of chemical engineering, was born when his father was pro at Danville (Ill.) CC. He graduated from Notre Dame in 1945. He took his master's degree there in 1947 and obtained a doctor's degree from the University of Wisconsin in 1949.

He was married to the former Mary Ann Owens of South Bend. They had three children. His mother now lives in Grand Rapids, Mich.



"LIGHT HORSE" STILL GOOD

Johnny Inglis (L), founder of the PGA Quarter Century trophy, presents Harry Cooper with Metz-Harper trophy for winning the club's second annual championship at Dunedin.

It was Harry's first start in the event.