
Grau's Answers to Turfgrass Question

If you've got a question you want Dr. Fred V. Grau to answer, please address it to Grau Q&A, Golfdom, 407 S. Dearborn, Chicago 5, Ill.



LAST month we talked about training men and about the new Turfgrass Short Course at Penn State which is to be activated this fall. It seems important now to examine another phase of teaching in the turfgrass field — that of extension service. In effect, it is the university extended to the field. It is wholly tax supported, operating statewide in county units with administrative heads located at the university. The system exists for the purpose of assisting taxpayers to do a better job of farming, manufacturing or home making. Originally it was for the benefit of the farmers. Today the base has been broadened to include many other essential activities.

**Get Acquainted
with Your
County Agent**

The county agent is the county-based representative of the university or the college. He may or may not have an assistant but usually he has a home demonstration agent (a woman) working in the same office. It is the policy of extension people to work with groups, insofar as possible, and to help people help themselves.

County agents have available to them a staff of extension specialists who come into the county by appointment to assist with group meetings, inspections and recommendations on problem areas, radio and television programs and many other types of educational activities. At no time is there a charge of any kind to the taxpayers. Salaries, travel and living expenses and cost of reports — all are paid out of the budget of the state extension service. Some of the county office expenses may be borne by the county committee out of county funds.

Here is a service that is unique. It is given without thought of reward or recompense. The satisfaction comes from seeing improvements made as the result of recommendations.

County agents used to be known only for their work with farmers. Today many of them are intimately associated with "Urbiculture" or gardening in the suburbs where once grew corn, wheat and hay. Where there once were fields of hay there are now parks and lawns. Some agents report that over 60 per cent of their requests for assistance come from folks with lawns. Some states have an extension specialist who works mainly with turf with and through the county agent. It is quite true that many agents know very little about turf. There are also many who do. All of them have specialists in various fields to call upon when the need arises.

County Agents Available

Most important is the fact that the county agent stands ready to help those who ask for advice and assistance. He does not offer his services — he is simply available. He often helps groups organize so that he can most effectively bring information to them as a group.

When I started as extension specialist at Penn State in 1935, Charles Hallowell was county agent in Philadelphia County. Henry Eby was located in Allegheny County. These two men called on me frequently to speak at meetings of course supts., garden clubs, service clubs, gardeners, landscapers and many others. Gradually all 66 county agents developed an interest in turf, some more than others, naturally. These agents were the main factors in organizing turfgrass Assns. The first such

group was the Pocono Turfgrass Assn.; others followed.

In a future issue of GOLFDOM we shall discuss the role of extension specialists in different fields and how they fit into the turfgrass picture. For the present, it has been my aim to tell, very briefly, how a county agent can be of great assistance to turfgrass groups if he is asked and is given a chance. He really does not have to know anything about turf — that he can learn. What he has is an office, a thorough knowledge of people and the ability to help people help themselves.

If you don't know your county agent take time to find out who he is, then go see him and invite him to come to the next meeting. He is a "good guy" to know.

Topdressing for Greens

Q. I'd like information about topdressing for greens. At our club we have a problem in that any topdressing we get contains the seeds of various types of weeds. Our club is not big enough to treat the soil before it is applied because of the expense involved. Is it possible to purchase soil which has been treated? (Me.)

A. It is my opinion that by the time you locate and purchase soil that has been treated for weed seeds, you will have spent more money than you would if you had treated your own soil in the first place.

There are two ways in which you can treat your soil at rather low expense. First, to each cu. yd. of moist topdressing add 13 lbs. of granular calcium cyanamid and mix them thoroughly. Let them stand for two or three months and you will find that practically all of the weed seeds have been destroyed.

Another way is to fit up a bin and treat the soil in the bin with Dowfume MC-2. Complete directions can be obtained from your local course supply house. By treating your own soil you will have the kind of topdressing you want. You will be sure it has no weed seeds and the expense actually will be less than if you purchased soil already treated.

Would Better Himself

Q. I am employed as Greenkeeper's helper at the X X X Club in N. H. I have worked here three years. I worked for two years at the X X X Club in N. H. I want to go further in this work, but I am at a disadvantage because I do not have either a high school or college education. Are there Correspondence Courses I can study at home to get a high school diploma? Do you consider this a feasible plan?

If so, what subjects should I take for entrance at a college that offers training for a turf manager? I realize that to qualify for a full four years of college I should have the required four years of high school. My idea is that if I can study at home I may be eli-

gible to enter the university to take some courses in turf management. The two courses where I have worked have given me the necessary experience to continue in this work. (N. H.)

A. With your experience and desire and excellent command of the English language, as shown in your letter, I believe that there may be a possibility that a high school diploma could be waived if you are able to pass a college entrance exam.

There are two possibilities open to you and one is nearby at the University of Massachusetts, Amherst. I suggest that you write to Dr. Eliot Roberts and get his advice.

The other possibility is Pennsylvania State University, where, starting this fall, there will be offered four eight-week terms of instruction in Turfgrass Management. The prospectus states that high school graduates 16 years of age or over are eligible for enrollment. Here again, I would make application for the course, stating experience and asking for permission to take a college entrance examination so that you might possibly take the course even without a high school diploma. This is somewhat irregular but I believe it would pay you to make application. It is possible that you could take some summer courses at some school near you that would enable you to get a high school diploma or the equivalent.

You Pronounce It

Q. What place, if any, does Mondo grass, (*Ophiopogon japonicus*) have for course use in southern Wisconsin? (Wis.)

A. None that I can think of.

Asks Soil Check

Q. Please analyze this dirt for me. Is it good topsoil? I have been using it on my greens and it is very expensive. Would appreciate answer. (Ohio)

A. I see no need for running an analysis on the soil because I do not believe it is the right soil for you to use on your greens. It is very high in silt (the fine, smooth, flour-like grey particles) which tends to pack tightly. It has low sand content.

I suggest that you locate a good grade of clay subsoil (subsoil has fewer weed seeds) from some of your Cincinnati hills. Find a good grade of coarse concrete sand and some peat and make a mixture such as this:

- 75 per cent sand (7½ parts by volume)
- 15 per cent clay soil (1½ parts by volume)
- 10 per cent peat (1 part by volume)

When you have this mixture made up put a cupful in a strong plastic bag (polyethylene), pack in a strong pasteboard box and mail it to me at PO Box 177, College Park, Md., for an examination.

Clover in the Bent

Q. We are having trouble with clover in our bent greens. Would you be so kind as to write us a letter or send some information on this matter? (Tenn.)

(Continued on page 93)

Grau's Answers

(Continued from page 65)

A. Clover in bent greens may be due to several causes. First, the bent that you have may not be well adapted to your soils or climate. If you have Seaside Bent I would expect clover as one of the natural consequences because Seaside Bent has a number of weak strains in it that permit clover to invade. Also, some of the strains in Seaside are very susceptible to disease and it is, first, the disease that weakens the grass and allows clover to invade.

The trouble may be in your soil conditions. If the soil is tight and dense and drains with difficulty it is possible that excess water that must be applied to keep the greens playable favors the clover rather than the bent. Clover is notoriously shallow rooted and can survive in a very shallow layer of soil if adequately supplied with nutrients and moisture. Getting rid of the clover can be done with chemicals but I wouldn't advise it until the causes for clover invading have been discovered and corrected.

One of the best ways to discourage clover is to "just grow grass." This is done by observing all basic principles of bentgrass management from the ground up and that begins with good drainage, good aeration, the adapted strain of bentgrass suited to the area, excellent management practices and adequate fertilization. Clover makes its own nitrogen and it can be discouraged by repeated applications of nitrogen fertilizers. In fact, this is one of the best ways to get rid of clover if all the other factors are favorable.

If you have a weak strain of bent it would be inadvisable to use chemicals for the control of clover because they could also discourage the bent.

Before I go further in making suggestions, I think it would be most helpful if you would sit down at your earliest convenience and give me an outline of everything we have discussed here in relation to what you are doing on your course — the kind of grass, management, type of soil, topdressing practices, watering, and everything else that you can think of. Then I think we can develop a good, sound clover control program for your conditions.

Disappointing Mixture

Q. I am the supt. at a club in Pennsylvania, at an 18-hole public course. I am very much disappointed with the bent mixture I have been using: $\frac{1}{3}$ Seaside Creeping Bent, $\frac{1}{3}$ Astoria and $\frac{1}{3}$ Colonial Bent. Would you please inform me what kind of grass to use on a 6,000 sq. ft. putting green, which has a base of crushed sand rock, 3 ins. of topsoil and 10 ins. prepared soil of 1-sand, 1-humus and 1-topsoil. (Pa.)

A. The bentgrass mixture which you have been using is not designed to give the highest quality putting greens. I strongly urge, if you

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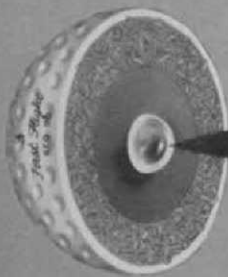
PLANTONIC contains gibberellic acid 300 p.p.m. and is formulated for plants. It is especially useful in eliminating shock accompanying transplanting. It often advances flowering. Plantonic, as a rule, will quickly stimulate non-woody plants. Woody plants, by their complex structure, require considerably longer treatment. Plantonic can be used on grass effectively, but Turf-Tonic is recommended as a more balanced formula for grass.

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intend to continue using seed, to get Penn-cross Creeping Bent seed and sow this at the rate of one pound to 1,000 sq. ft. This is plenty of seed and, even though the price is high, \$10-\$12 per lb., you will find it economical in the long run.

If you decide to go to stolons, I suggest Pennlu creeping bent which is available from several nurseries not far from you. This is a vigorous creeping bent that produces an excellent putting surface. But being vigorous it tends to become matted and will require more frequent and vigorous brushing, raking and combing to keep the putting surface free of fluffiness.

I am not quite sure, from your description, where the 3-ins. of topsoil fits into the picture. The 3-ins. of topsoil ought to be incorporated into your entire depth of prepared soil which, as you say is a 1-1-1 mixture. The trend today in the building of greens is to increase coarse sand content to provide more perfect internal drainage and to develop a deeper root system. I suggest that you increase the proportion of coarse sand to at least 2 parts so that you will have a 2 part sand, 1 part humus and 1 part topsoil.

Naturally, one of the most important factors in the development of a putting green where you are using a good bentgrass like Penn-cross or Pennlu stolons is fertilization. By amply fertilizing the seed bed before planting you will develop a putting surface much more rapidly and one that will beat out the weeds before they have a chance to get started. I particularly suggest the use of a complete fertilizer containing Urea-form. It will give you a more long-lasting effect and bring the grass to maturity without need for additional surface applications of fertilizer on young, tender developing turf.

Where Was The Mistake

Q. Our soil mixture for the putting green is two parts peat, 2 parts black dirt and one part fine sand. This mixture is 8 ins. thick

over a gravel base. Drainage is good. On Apr. 26, 1956 we used 12-12-12 fertilizer at 50 lbs. per 1,000. Watered thoroughly. On Apr. 29 we planted C-19 stolons at 10 bu. per 1,000. Rolled stolons and spread topdressing about 1/8 in. to 3/16 in. deep. Topdressing was 1 part peat, 1 part black dirt, 2 parts fine sand. Watered green often the first two weeks, after which we watered every night about sundown.

A natural organic was used every two to three weeks at 20 lbs per 1,000 and topdressing applied after each application of fertilizer. Grass grew well until the first of July, then slowed up. By early Aug. the green was very poor. Aug. 13 the green was sprayed with fungicide and a repeat spray seven days later. We also started removing the dew early in the morning. The green soon showed signs of improvement and by mid-Sept. was doing satisfactorily. As we intend to plant nine greens soon, the question arises: what mistakes did we make? Was the green diseased — if so, what caused it? With the slow seepage of water through the fine sand, did we water too much? We would appreciate your expert advice as to what caused our trouble. (Minn.)

A. In the planting of your new greens, I make these suggestions for changes. First the soil mixture 8-10 ins. deep over a gravel base would be better if it were composed of 3 parts coarse sand, 1 part black dirt and 1 part peat. This will give you much improved drainage through the soil into the gravel base. It will give better aeration and actually the green will not have to be watered any more often. In fact, it may not have to be watered nearly as often.

I find no fault with the 12-12-12 in the seedbed — the rate is all right, and the stolons you used are all right. I sometimes feel that 10 bu. to 1,000 is a little too heavy, but I won't quarrel about that. Your topdressing should be precisely the same as the soil in the green. There should be no change here.

I believe your major difficulty was caused —

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(1) by the slow percolation of water through the fine sandy material; (2) the disease was caused by overwatering and (3) the influence of perhaps too much of the natural organic fertilizer that was applied a little too frequently during the hot part of the season. By all means make one application of a natural organic and then follow it in three weeks with an application of Urea-form fertilizer at 10 lbs. to 1,000 sq. ft. This should carry you quite well through the heat of the summer. If the growth should happen to slow down, another application of natural organic could give it a boost and then, in early Sept. another application of Urea-form fertilizer at 10 lbs. per 1,000 sq. ft. This should pretty well cover you for the entire growing season.

The treatment with fungicides is definitely recommended whenever disease appears on the green. The excess peat in the soil holding the moisture could have a lot to do with encouraging disease. I greatly prefer a soil that is more on the sandy side, using coarse sand instead of fine, so that the water drains through freely, thereby developing a deep root system and a more healthy turf.

If you would care to send me a small sample of ingredients you plan to use in making up your new mixture, I will be glad to examine the materials and give you a reply. A cupful of each, packed in polyethylene, packaged and mailed to Box 177, College Park, Md., will reach me without delay. You might send it parcel post, special handling.

Metropolitan Golf Association Publishes Caddie Manual

Metropolitan Golf Assn., 40 E. 38th st., New York 16, N. Y., which published a caddie manual for club committees in 1956, has come up with a sequel, "A

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Manual of Caddie Instruction." The booklet can be obtained from Metropolitan at a cost of \$3.00 for 10 copies.

Advantages Cited

In the foreword, MGA points out some of the advantages of caddying. The booklet advises the youngsters of types of caddies to avoid and discusses the game's etiquette. Another chapter brings the boys up-to-date on playing rules with which they should be familiar and a glossary of golfing terms also is included. There is a section describing the use of various clubs and another telling of the care and handling of players. Other chapters instruct the caddies in first aid, tell them how to go about carrying for players who use golf cars and give some tips on what to do during an electrical storm.

Tom Paprocki, Associated Press artist, illustrated the Metropolitan booklet.