
Grau's Answers to Turf Questions



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.

Don't Drown the Grass

TIME was when I made very positive statements to the effect that "most of our turf troubles are caused by too much water." Bob Hagan of California took issue with me and wrote that the statement would be more nearly accurate if it said, "Most of our turf troubles are caused by too little water too often". I am sure that there are cases where both statements are correct. At any rate, the misuse of water is a serious offense and is one that demands much attention.

Recently I visited a course where soil cores indicated perfect soil moisture. At least, it looked perfect to me. The grass was starving for nitrogen but I considered that the green would not need water for three or four days. We proceeded around the course and upon our return saw that every green was being flooded so that excess water ran off in streams and filled every depression on every green and approach. Upon analyzing the situation I realized the greensmen believed that the yellow color of the grass was due to lack of water — actually it was due to nitrogen starvation.

The symptoms often are confused and are quite similar. In this case nitrogen would be cheap compared to the high cost of frequent watering and the subsequent damage to the turf. The grass had no

roots below the first half-inch of surface soil. The grass had no resistance to diseases or insects and no ability to take wear and tear. Recovery from injuries was extremely slow.

Watering such as I have described creates weed problems (poa annua, chickweed, pearlwort, goosegrass). When poa invades there is general consternation and the belief is prevalent that "poa is crowding out good grasses." Actually, the good grasses were to the point where they had no ability to resist poa or anything else. "But," I hear, "if I stop watering my poa I'll lose it and I can't afford to do that. I've got to keep it looking good."

One of the unseen results of water mismanagement is the effect on the bacteria. Constant saturation forces air out of the spaces in the soil. Without air the good bacteria drown—they simply can't operate. The fungi (disease-producing) have a "field day." That means spray for disease, boys. Without air the grass roots can absorb neither water nor plant nutrients—so the grass wilts and starves. Encouraging bacteria is of the utmost importance now with so much fertilizer being used that demands good aeration for steady controlled release.

One of the common excuses for using lots of water (or too little too often) is that "the greens are hard." Water used as a "soil softener" can easily result in even harder surfaces which demand more water to "soften" them which makes them still harder and — whoa!! Let's stop this vicious cycle right now.

Greens can be encouraged to hold a shot even when the soil is dry by (1) more adequate feeding so that there is a constant uniform supply of nutrients from controlled-release materials. Well-fed grass tends to build a desirable cushion which will hold a shot. (2) Better aeration by occasional use of machines and by the improvement of the physical condition of the soil through the use of sand. (3) Teaching players how to hit a shot to a firm green.

Firm turf plays much better than soft sloppy turf. Greater accuracy and control are possible and the results achieved give greater satisfaction.

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Hard and Soft Greens

Q. I have read with considerable interest your bulletins on the subject of growing grass. We are having considerable trouble here with our Highland bent greens and I would like your advice on one point. I have noted your theory about not watering grass too often. I have al-



(Left to right): James M. Latham, Jr., M. K. Jeffords, George H. King, Andrew Bertoni, Dr. Glenn Burton, George P. Donaldson, B. P. Robinson.

Burton Gets GCSA Award for Work with Bermudas

During the recent Southeastern Turf-grass conference at Tifton, Ga., Dr. Glenn Burton was presented a plaque by the GCSA for his extensive and valuable work in the propagation of hybrid Bermudas.

Making the presentation on behalf of GCSA was Director Andrew Bertoni, Supt. at Meadowbrook CC, Northville, Mich.,

who also appeared as a speaker on the conference program. When presenting the award Bertoni said: "The GCSA has found it a privilege to present you with this plaque in recognition of your promotion of turfgrass. The cross-breeding and propagation of refined grasses has earned the gratitude of golfers, turfmen and lawn lovers throughout the world. Supts. admire, honor and gratefully appreciate your many splendid achievements."

ways thought that theory sound as applied to most common lawn grasses such as bluegrass and fescue but I have been led to believe that bent should be watered thoroughly 5 or 6 times a week. Most of the good grass greens that I have played on seem to stay wet pretty constantly. Our supt. follows your theory and waters the greens only twice a week and not too thoroughly then. I would certainly appreciate your remarks on this subject. (Va.)

A. Most bent greens that are thoroughly watered five to six times a week usually are badly overwatered. Bent can't use this much water but it struggles to adapt itself to this practice which is used to keep greens soft. A dry green is a healthy green. Diseases need lots of moisture to grow and spread. Supts. who try to keep greens on the dry side to keep them healthy are very likely to be criticized for the greens being too hard. A hard green is difficult for most players, amateurs especially, because no one ever taught them how to play to a firm green. Rather than invite excessive disease with excess water designed to keep the green soft, it would be better to thoroughly aerate greens at intervals and to incorporate sand. This, in effect changes soil composition, creates better drainage, deeper roots and greater resilience.

Greens can be kept drier and healthier and capable of holding a well-played shot even when they are dry! A good watering twice a week, plus spot touchups as needed, should maintain greens in good shape if the grass is adapted, and has deep roots in a well-drained soil.

Filling In Bare Spots

Q. Our municipal course is built around a hill with an average slope of 6 ft. per 100. We have bentgrass greens and bluegrass tees. The fairways are mostly blue grama with some crested wheat. The blue grama is growing as it does on the pasture in this country, in bunches with bare spots between. We are trying to mow, water and fertilize to get the grass to spread.

Our question is, would it hurt or help the fairway situation to use a 20-ton roller to bring the grass clumps down level with the surfaces or would it be better to aerate and keep filling in? (N. Mex.)

A. My better judgment tells me to advise you not to use the 20-ton roller to smooth the surface of the fairways. I am afraid that this might create such compaction that you would not be able to get water to enter the soil nor would the grass survive this treatment for long. I would advise you to continue to water and fertilize so as to give the grass a chance to spread and fill in the voids. Unfortunately, blue grama will not do this by itself. I would advise introducing some Buffalo grass and some Ugandagrass for more rapid coverage in your climate. By filling the spaces between the grama clumps with these spreading grasses, your water and fertilizer will be able to do some good and you will be able to mow and develop a fairly smooth, dense fairway sod. I am not sure that I would continue to do much aerating if you are able to obtain satisfactory penetration of irrigation water. This might be accomplished later on when the turf is solid.

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Tufted Bent

Q. Last year, for the first time, on several of our greens the bent immediately around the aerified holes became tufted and there was some scalping when it was mowed. This was most noticeable after the latter part of July. Why should this be the case on only several of our greens and what causes it? (S. D.)

A. Several things could cause tufting around the holes. One is depth of penetration of the tines or spoons. The deeper they go, the more likely they are to raise the turf immediately around the hole. Another reason might be that if your greens have poa annua in them they might tuft up worse than Washington bent. Another reason could be difference in quality and texture of the grass.

I would look first, however, to the depth of penetration of the points that enter the soil. The operator has a great deal to do with proper use of aerating machines. Where this tufting or lifting is severe and it is noticed before the greens are mowed, a light rolling will help to smooth the surface so that mowing can be done without undue scalping.

Sawdust for Greens

Q. We've been using inorganic fertilizer for many years on our seaside creeping bent greens without adding humus. Our green beds are mostly fine sand on top of a light sandy soil foundation. In the spring greens come along fine but in July and August they get hard and the grass gets thin and lifeless regardless of how much water we use. We have just purchased a used greens aerator.

Our funds are very limited. We cannot afford to topdress our greens with peat after we aerify them, but we have an unlimited supply of old sawdust near at hand to use if it would be beneficial. We also expect to use Ureaform this spring. How much Urea-form should we use and should we use the old sawdust? We also are going to cut the roots from the nearby trees which have run into our greens. Is it possible to stop the roots from future spreading under our greens? (Wisc.)

A. Continued use of inorganic fertilizer has a tendency to make soils hard. When water does not enter the soil easily we try to correct the condition by pouring on more and more water. This makes a bad situation worse. You are on the right track in aerating the soil to help roots grow.

I would encourage the use of sawdust to add organic material to the sandy soil. Remember that the sawdust will float out if it is applied on the surface. It will be best to blend the sawdust with soil and compost it for a year. The sawdust that is worked down into the holes made by the aerating machine will be of benefit.

You have made a wise decision to fertilize with a Urea-form fertilizer. This will feed the bacteria which will work on the sawdust and will help to create better physical conditions in the soil. I would guess that you will be all right with two applications of Urea-form; one in very early spring and one in early June, each at



Francis Ouimet (left) talks over Triangle Round Robin tournament with Sponsor John E. McAuliffe, pres. of Triangle Conduit & Cable Co. The \$12,000 event for women pros will be played June 12-15 at Tedesco CC, Marblehead, Mass., and will benefit the Ouimet Caddie Scholarship Fund and a Salem hospital.

10 to 11 lbs. of Urea-form (38% N.) to 1,000 sq. ft., preferably at the time of aerating greens. Try to use only enough water and let the grass roots work for you in providing resilience.

U-3 from Seed

Q. We have been growing improved strains of bermudagrass for the past several years, starting out with U-3 and offering Transvaal, Tifton 127, Sunturf and Tifton 328. Last season we were somewhat surprised to see U-3 bermuda offered from seed and under the Interstate Certification Program of the crop improvement Assn. carrying a blue tag. It is a little difficult to reconcile this offering of U-3 from seed with the aims and purposes of the various crop improvement assns. We are wondering if you had any knowledge of this or if you would care to express an opinion. (Okla.)

A. Yes, we have known of the offering of seed, supposedly from U-3 bermudagrass. I, too, am disturbed about the so-called U-3 bermuda seed being offered under the blue tag of the Interstate Certification program. It is a well-known fact, substantiated at a number of experiment stations that this seed, sold as U-3, does not produce turf comparable to that produced from sprigs of true U-3 bermuda. The seed on the market labeled U-3, so far as I know, does not have the approval of any of the experiment station workers. To the best of our knowledge this seed produces a turf that is comparable in every respect to that produced from common bermudagrass seed, Arizona grown. We know of no data that could support certification of this item.

It is our opinion that prospective purchasers of this seed labelled U-3 should be told that it will not produce turf comparable to that produced from sprigs of true U-3 bermuda.

Pennsylvania Turfgrass Council recently elected Joseph Gackenbach, Allentown, pres., for the coming year. Other officers are A. A. Schultz, vp; Paul Leix, supt., Allegheny CC, Pittsburgh, vp; and Tom Mascaro, West Point Products, secy-treas.