

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.



WHAT HAPPENED?

This is the time of the year when temperatures soar almost out of sight, when periods of drought are interrupted by torrential downpours and suffocating humidity and when grass diseases run riot. Truly, these are times that try men's souls. Grasses are weakened to the point where almost any shock "knocks them to their knees" and from which they are very slow to recover. There will be some grass lost and patching will be necessary. Some greens will be affected — others will stay beautiful. Some courses will suffer more than others. Golfers who play at different courses start making comparisons. In some cases the talk gets out of control and someone gets hurt — usually the person who least deserves it.

What is behind these summer troubles? Why are there such great differences between greens and among courses? What can be done about it?

First, the least trouble occurs on greens that are properly built to begin with — good drainage in the base, porous soil for rapid internal drainage, surface contouring to promote rapid removal of excess water from the surface (no pockets) and a good grass. Trouble can occur even on well-built greens but it will be of short duration and healing will be more rapid than on poorly-built ones.

Examine the Background

Here, for example, is "the worst green on the course." Never does it look quite

right. The turf is thin and algae is prevalent. It is surrounded by trees. A slight error in application of a caustic material results in large blotches of brown grass. Injuries are slow to heal. Repair plugs of sod begin to die. Disease is rampant. The situation looks hopeless. Someone asks, "What have you been using?" Frequently the last material applied or the last machine used gets the blame for the whole sickly mess. This, obviously, is very unfair.

Let's examine the background. The green was pushed together with a bulldozer using local soil, mostly clay. No drain tile was installed. A few yards of sand was spread and tilled into the surface. There was just enough sand to create a fair grade of concrete out of the clay. The green, in settling, developed pockets. On a hot afternoon, a sudden shower leaves scalding water standing on the grass with no place to go but up. Soon the traffic starts and the soft, parboiled grass has little resistance to the scuff of spikes — so, it dies! It dies first in the narrow channel where all of the surface water is concentrated and emptied on the approach.

That Basic Construction!

Other greens on the course, which were built properly the first time, suffer not at all under precisely the same treatment given to all greens. The obvious conclusion is that the basic difficulty lies mainly in the original construction which, for one reason or another, never was correct-

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ed. Players, knowing nothing of green construction, are quick to judge and to compare. "Look at the greens at my course — nothing wrong with them and it's been hot there too!" they exclaim.

Now, if ever, is the time to develop patience and understanding. It isn't the first time a green has been lost — nor will it be the last! Again, it is nature's way of telling us how poorly we prepared for growing one of the most exacting crops known. She provided an opportunity for us to rebuild and correct the original errors.

This Vacation Hurt

We have pointed to poor construction as a major basic reason for weak turf. Now let us examine other factors. Weak grasses that have been coddled and spoon fed for years just can't take it when the going gets rough. We recall a course that had been babied by one man for 25 years with no understudy. When he finally took a vacation, the greens wouldn't respond to new management and most "went out."

"Uniform application" is tremendously important. Too often we see damage done in streaks or patterns which correspond exactly with the movement of the man or the machine which applied a material. This is the fault of neither the material, the grass, nor the construction. It is the



Grau photo

Dr. Felix Juska (center) discusses preparation of Bermuda plots with two assistants in preparation for the U.S. Dept. of Agriculture field day, Aug. 4, held in Beltsville, Md.

human element that is at fault.

Then we must recognize that some mighty powerful new chemicals are being recommended and used, some of which have terrific potential for destruction in only slight overdoses or misapplications. All we can do here is to sound a note of caution and stress moderation. Try it first on the nursery, or on the practice green, then move to the playing turf only after the material has been proved safe and trustworthy under *your* conditions and under the handling of your work staff.



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Everyone does the best he knows how. No one likes to lose turf. So far as we know, no system is foolproof nor can it completely prevent loss of turf when the going is really rough. The point to remember is, let us learn all we can about the causes and profit from any mistakes that may have been made.

South's Worst Pest

Q. Is there anything new on silver crab or crowfoot grass? This still is our worst pest in the South. (Louisiana)

A. The important thing about goosegrass (crowfoot) is to avoid planting the seed (which you do when you use unsterilized soil for topdressing). The next step is to create strong, dense, sturdy turf by adequate fertilization. Goosegrass can be choked out of bermuda turf by fertilizing sufficiently.

There are several forms of di sodium methyl arsonate which are very effective in reducing or destroying this weed. Consult your Experiment Station for detailed advice.

Is it possible that diseases have thinned your turf to let the crowfoot invade? Perhaps a change to a better strain of grass would help.

Sterilized Topdressing

Q. We recently completed topdressing our greens with the following preparation: manure,

sawdust, sand and activated sewage sludge. This mixture was run through a hammer mill for mixing and to pulverize it. Now we have several kinds of weeds and toadstools growing. What would be the best procedure to sterilize this mixture before topdressing? (Wyoming)

A. Until you have sterilized your topdressing mixture, it would be far better to use no topdressing at all. When you do sterilize it, most of the nutrients in the manure and the sludge will be released so that they will be quickly available. Much of the nitrogen may be lost into the atmosphere.

Two materials used for sterilizing soil are Dowfume and Vapam. Your golf course supplier can give you details on the two materials and the methods of using them.

Poa Annua Invasion

Q. During the past two years our greens have shown an increasing infestation of poa annua. What treatment do you recommend to prevent further encroachment of the bentgrass? (Nebraska)

A. It would be wonderful if it were possible to wave a magic wand and say, "Poa annua, begone!" but that seems like a remote possibility. The invasion of poa annua is so largely tied up with management that it seems necessary to review the methods by which it is encouraged. Then, by reversing our thinking, we may come a little closer to how to prevent its spread.

Poa does best when soils are saturated con-

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tinually. It suffers and may disappear when moisture levels drop and poa wilts.

Poa invades best when competition is weak. You may have weak grasses to begin with, or the grasses you have may have been weakened by disease or by malnutrition. Damage to turf during the period when poa is germinating will provide ready means for invasion.

With frequent light watering, poa will thrive at the expense of sturdier grasses which can survive with infrequent deep soakings. When drainage is poor, it may be necessary to water lightly and often to maintain any growth. Under these conditions we may expect to live with poa.

Maximum balanced nutrition will strengthen perennial grasses, helping them to resist poa. Periodic hunger cycles are an aid to poa.

Chemicals will kill poa. Sometimes they kill bents, too. Lead arsenate is a relatively mild chemical that will discourage poa if the phosphorus content of the soil is low. With high soil P, lead does not work well. Some of the newer materials kill poa easily at very low concentrations. The results are not always happy. We greatly prefer the management approach.

Briefly summarizing, poa can be discouraged by less watering; by letting the turf show moisture stress occasionally; by feeding the bents at maximum levels; by controlling diseases so that they do not weaken turf and invite poa invasion; by twice-a-year use of arsenate of lead; by allowing phosphorus levels to drop; by using the strongest bents; by improving drainage.

Men's Amateur

The USGA Amateur Championship will be played at Broadmoor GC, Colorado Springs, Colo., Sept. 14-19. Entries are open to male amateurs with handicaps not over four strokes and must be received by the USGA by Aug. 12. Sectional qualifying rounds will be played at 34 sites throughout U. S. on Aug. 31 and Sept. 1. The championship proper will be played at match in eight rounds. Charley Coe of Oklahoma City is defending champion.

Women's Amateur

USGA Women's Amateur Championship will be played Aug. 24-29 at Congressional CC, Washington, D. C. Entries must be received by the USGA by Aug. 6. There are no qualifying rounds and the championship will be played at match in seven rounds. Entries are open to women amateurs with handicaps not over six strokes and will be accepted from the 128 applicants with lowest handicaps. Last year's vacancies will be offered to alternates in order of handicaps. The field is being limited for the first time. Anne Quast, Marysville, Wash., a June graduate of Stanford University is defending titleholder.