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# Turfgrass Questions Answered by Grau

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

COMES now the season when golf is the heaviest, temperatures are highest, humidity possibly greatest, diseases the "spreadingest" — when grasses and supts. get their most severe test. This is the period during which better grasses, adapted to severe summer weather, provide nearly care-free maintenance. Quite the opposite are weak, poorly-adapted grasses that require 24-hour days (and sleepless nights) on the part of supts. to try to "hold the turf".

**Poa Annua —  
Friend  
or  
Foe**

For the moment, let us consider *Poa annua*. *Poa* is either a blessing or a pesky weed depending upon where you are and what you have under it to take over when the *Poa* leaves. Florida threatens to banish forever anyone who sends *Poa* into the state knowingly or otherwise. In parts of Canada and some of our northern states there wouldn't be much golf if it were not for the rugged character of *Poa*. Many are in between depending upon a number of factors.

*Poa* has been receiving well-deserved attention as a cool-season companion to warm-season grasses. Evidence is growing as to the desirability of the combination when the turf is managed correctly! The answers to correct management have not been written as yet, but experience has given a lot of good leads.

First of all, we need a strong perennial summer grass (warm-season grass) under *Poa*. This may be a bentgrass or a strain of bermuda. Among the bents, Washington strain is a good hot-weather grass, yielding gracefully to *Poa* during cool seasons. In general, evaluation of bents has been given little or no prominence in research studies. In practical use this is a major consideration. Whether base grass is bent or bermuda, it is important that it be sturdy, disease-resistant and tolerant of being cov-

ered during its dormant period. Since *poa* fades and "disappears", sometimes "explosively", it is equally important that base grass thrives and be ready to assume complete charge of the situation. Some progress has been made in this direction.

"How to hold what we've got" is a real need because only a few have achieved care-free maintenance. The answer lies in doing the right things at the right times — and the book hasn't been written that will tell you what and when. It is a case of understanding principles of plant growth, water and soil, knowing why certain things happen, and living with your problems.

It seems to me that all the successful hot-weather practices — syringing, showering-off, spiking, etc.—accomplish one thing in common. They supply life-giving oxygen to suffocating root systems. As temperatures soar, water in the soil surface gets hot and then hotter. Hot water contains little oxygen. This is the time when growth rates, and thus oxygen requirements, are highest. Heavy traffic and watering seal the surfaces and reduce air movement into and out of the root zone. Spiking, a great invention, helps to achieve air circulation. Sprinkling refreshes the grass by bringing needed oxygen. Cold water contains much more dissolved oxygen than hot water. The grass actually may have an excess of water and yet be in a state of wilt (wet wilt). Additional water is not needed, but its oxygen is vitally important.

We deprecate the need for summer mid-day syringing, yet we know that it's absolutely necessary to save grass during severe spells of weather. We believe that a better day is coming as we learn how to use the better strains of grass and improved techniques of soil and water management in relation to soil physics.

**Q—We are experiencing our first real siege of *Poa Annua* in some of our greens, especially ones on which we had some brown patch last season. What can we do to check or stop this infestation? We had the good fortune last**

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year of being one of two clubs in the city to withstand the summer with almost perfect greens, but we did use about twice as much fungicide as in other years. Could this have caused our greens to be weak and subject to Poa Annua? I attribute a lot of our trouble to the cool, wet spring. Please answer at once so we can check or stop this siege of Poa Annua. (O.)

A—It is my fervent hope that research workers soon will learn how Poa Annua can be eliminated. For discussion on Poa, we refer you to this department in GOLFDOM's past issues. See also USGA Journal, July 1951 page 27. Read also Turfgrass Conference Proceedings at Purdue where Poa was thoroughly discussed. There is no one answer to Poa control but if it were my course, I would learn how to use sodium arsenite in a sprayer and I would do a lot of spraying.

Regardless of the reasons for grass being weakened, Poa invasion is a natural result where large quantities of water are used. Diseases and insects rate high for giving Poa a foothold. Compaction helps also. Weak strains of grass lack aggressiveness to keep Poa out. You did not say what kind of bent you started with.

Arsenic (lead arsenate or sodium arsenite) seems to be of great value in fighting Poa. Dr. Wm. Daniel at Purdue has done some classic work on the problem and his papers are very much worth serious study.

Cool wet weather is conducive to growth of Poa. Unless we have a desirable grass that grows better than Poa under these conditions maybe we should not expect too much. Where Poa is out of control you would do well to have a turfgrass specialist from your State University give you a hand.

Q—Poa annua is our No. 1 problem. Is there any chemical formula available for elimination of this pest in bentgrass greens? (Ky.)

A—There is no simple formula, chemical or otherwise, for eliminating Poa annua from greens. It is considered a pest in Florida, California, New England and other places, too. Keeping greens free of this pest probably is the high mark of the art and science of green-keeping. The best chemicals to keep Poa annua in check are arsenate of lead and sodium arsenite. Both may be applied as a spray solution, or dry mixed with topdressing. Lead arsenate usually is used at 5-lbs. to 1,000 sq. ft. starting in early spring and applied monthly except in hot weather. It is more effective when soil phosphorus is low.

Sodium arsenite is much more potent and requires more skill because it is essentially a contact herbicide, affecting leaves and seed stalks. It usually is applied ½-oz. to 1,000 sq. ft. as a spray in 2 or 3 gals. of water; or 1-oz. to 1,000 sq. ft. in the dry form mixed with sand or topdressing. Bentgrasses may get a slight tipburn but they quickly recover, generally after the new mowing. Repeat sodium