

LIVING WITH POA ANNUA

by Bob Williams

My philosophy on poa annua as a golf turfgrass for fairways simply stated, is that until the research people can give me a practical, efficient and safe method of eliminating poa from bentgrass turf, I will continue to make every effort to live with poa annua. However, I would prefer 100% bent as a fairway turf. Going back a few years, I well recall the use of sodium arsenite to scorch fairways followed by bent overseeding. Within two to three years the poa was back again and the golfers were pretty upset.

I have witnessed the lead arsenate programs which have given varying degrees of success. However, this material is no longer available.

We have all observed the era of the calcium arsenate programs with results running the gamut from successful control to complete disaster. Many of the superintendents involved lost their jobs as the golfers became unhappy with the unpredictable results.

Currently, we have several new chemicals being advertised as specific controls for poa. Frankly, I have not heard anyone report as yet that these products are doing the job on bent-poa fairways. When a breakthrough to control poa in this situation does come to light, I am sure we will all be delighted. Most golfers could care less as to what specie of fairway turfgrass they are playing on. But they are concerned with both the playability and the aesthetics of that turf.

Having made the judgement to attempt to live with poa annua there are several adjustments in our maintenance program which allow us to maintain satisfactory playing turf throughout the season. Let's talk about fairways first. The main weakness with poa annua as a fairway turf is its characteristic shallow rooting system. Sometimes rooting only in the biomass of thatch rather than in the soil. It is disease prone and has poor resistance to golf cart and foot traffic. At the same time I am mindful that poa does make a good playing surface and it certainly is persistent due to its heavy seeding capability.

Generally speaking, if the poa plant in a fairway is supplied with adequate moisture for transpiration on a hot or arid day, the plant will survive. This means that the required moisture must be available in that shallow root zone at the time of stress. I try to live with poa by using light frequent applications of irrigation water. Automatic irrigation is ideally suited for this purpose. My normal fairway irrigation program calls for approximately 10 to 15 minutes on an almost every night basis. I'm really trying to keep the soil and thatch moisture content at a constant level, only replacing daily that moisture we have lost through evapotranspiration. Additionally, we try to apply irrigation between the hours of 3 to 5 in the early morning for the longest lasting effect during the day. The early morning application also removes any accumulation of guttation water on the grass plant leaves, which may have some effect towards disease prevention.

Our irrigation program dictates that we must keep the soil surface open for water penetration and uniformity. To do this, we rely on frequent aerification with spoons, knives and discs depending on the time of the season. During July and August I prefer the triangular knives and aerifying right after a good rain.

When we do the fall aerifying, usually in early September, we also do some spot overseeding with a

combination of bentgrass and perennial ryegrass. Several clubs in our area have had excellent response with this program.

Next to watering, perhaps the most significant feature towards holding the poa in the fairways, is the height of cut. In our procedure, the mechanic places the mower unit on a 4 foot square steel plate and then accurately gauges the setting with a ruler. I have found that poa-bent fairways mowed within the range of 7/8ths to 1 & 1/8th inches will survive much better than the 5/8th 3/4 inch range. But, now comes the argument, will the golfer stand for fairways mowed 7/8ths to 1 & 1/8th??? My answer from experience is definitely yes, providing the turf has the density to support the ball and allow for a clean hit. In fact, every year when the touring professionals are in the area we have a number of them who play our course. I have made a point of asking them what they think of the lies they are getting and how the ball is responding. They invariably reply, "Super, just like setting on a tee." And this is when we are at the 1 inch height. I believe in the concept that the turf must be dense enough to fully support the ball.

I am afraid that all too often many of us have had to go along with the low handicap golfers who insist on 1/2 inch fairways just because that's what the professionals want. Now I have proven to myself that the golf professionals do not necessarily want a 1/2 inch lie. What they really mean, is a clean lie where grass blades will not stand up between clubface and ball. Surely you have noticed that golf professionals use a wood tee on the par three holes instead of hitting from the close cropped tee turf. It is time we placed more emphasis on density and playability rather than height of cut.

In contrast to the professional, the average golfer is a fifteen handicapper who has usually had a great round if he has managed to get the majority of his fairway shots airborne. In order to get his shots up most golfers require a cushion of turfgrass under the ball but not behind it.

We start mowing fairways in the spring at 7/8ths inch, move up to 1 inch about the middle of June and if it looks like a difficult season for turfgrass, we'll go up to 1 & 1/8th inch by the middle of July. Frequency of mowing is 3 to 4 times per week. We then move back down in two steps starting around the middle of August. Another safeguard we employ is to skip mowing fairways altogether when the temperatures get into the 90's. Sometimes this might mean several days or even a week. We try to accomplish all of our fairway mowing in the early morning or evening hours. Afternoon mowing during the summer is out completely.

My theory on height of cut for poa-bent fairways is that there must be a compromise between what is best for the golfer and what is best for the turfgrass. Both must give a little to keep everyone happy. But how does the golfer react to this compromise? Over the years I have made a constant effort to communicate to the golfers that if they will accept a slightly higher cut on fairways, they could then expect minimal if any loss of the poa-annua. We seldom ever hear any discussion on the subject anymore. I really believe that most of us who have bent-poa fairways have been our own worst enemy in yielding to the pressures of the 1/2 inch cut.

Fertility, of course, has to play a significant role in providing a dense turf. My practice has been to use approximately 2 pounds of actual nitrogen, 1 pound of phosphorus and 2 pounds of potash per year, per

thousand square feet. We have been using about 800 pounds of milorganite per acre in the dormant winter season and then applying urea, superphosphate and sulphate of potash as supplements. This program has been effective, efficient and most economical. In fact, my fairway fertilizer expense this past year was \$3600 for approximately 35 acres or roughly \$100 per acre. Perhaps modern day disease control ranks equally as high as all other factors in learning to live with poa annua. We have been on a strong preventive disease control program on our fairways for a number of years. In 1977 we used a total of 14 fungicide applications rotating three different prescriptions.

- 1st -- Daconil at 1 gallon per acre
- 2nd -- Combination of PMAS at 1 qt. per acre with/Thiram at 5 lbs. per acre
- 3rd -- Acti-Dione TGF at 2 pkgs. per acre

The rotation of the three formulations was determined on the basis of what was the most appropriate at any time in relation to the weather, phytotoxicity and type of disease organism that might be expected. When it comes to poa-annua on putting greens, I have a different attitude and a different approach. I detest having to tolerate poa in our greens and yet I am at a loss as to a painless method of eradication. Poa is particularly bad for golf on putting greens when it is seeding. We have greens with as much as 20 or 30% poa which is hardly noticed when it is not seeding. My long range program for fighting against the poa-annua in our greens is to resod the greens with poa free bent that we will grow in our nursery. We are presently evaluating both Evansville and Penn State's PBCB strains.

Allow me to conclude this report with a couple of observations which I believe are pertinent when considering the pros and cons of poa-annua. First, I have noted that some of our courses with the poorest irrigation systems have the highest percentage of bentgrass in their fairways, providing they have been overseeding with bent. I've also noticed that with the single row irrigation systems, you will find a higher percentage of bent along the outer edges of fairway and into the rough where less water is applied as compared to the center of the fairway. Both of these observations seem to tell us that we should use as little water as we can get away with on fairways without causing the poa to make a quick departure. Our golfers in the Chicago area pretty much judge our greenkeeping ability on the basis on how well the greens putt and whether or not we are able to hold the fairway turf throughout the season. Golfers are pretty intolerant with even moderate loss of grass on fairways. So, I believe most superintendents are doing whatever we can to live with poa in our fairways until the research people and industry can find a method or material for selective eradication of poa-annua.

Presented at U. of I.
December, 1977

NATIONAL CHEMSEARCH CORP.

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Because of the benefits derived from attending Turf Conferences, my club officials insist that I go to San Antonio. I sincerely hope that other clubs are doing the same for their grounds superintendent.



The M.A.G.C.S. Secretary has informed me there are several members that have not paid their 1978 dues. If you are one of these, please take care of it as soon as possible, along with your correct address. Many letters are being returned. Should it become necessary to remove your name from the membership, it will also become necessary to remove your name from the **Bull Sheet** mailing list.

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