A LOVE-HATE RELATIONSHIP WITH POA ANNUA

An extract from a talk given at the New Hampshire Turf Conference at Bedfore, N.H., on January 15, 1981.

For too many years the thrust of work with Poa Annua has been in the area of chemical or cultural control in an effort to decrease the Poa population and encourage other grasses. This could be termed a hate relationship. Almost without exception this has proved to be a failure, and in many cases an expensive failure - in terms of money, time and personal reputations.

Judging from the current printed matter and personal observations I feel that the attitude is now undergoing a complete about face. Slowly but surely the emphasis is being directed toward finding out more about the Poa Plant and how to grow it. This could be termed a love relationship but at this stage of development is more of a, "If you can't beat 'em - join 'em" solution.

There is no doubt in my mind that if I had good healthy "Desirable" turfgrass with a small percentage of Poa Annua that I would discourage the annual bluegrass by any means at my disposal, chemical or cultural. Unfortunately, turf of this description is the exception and not the rule.

With the previous in mind I offer the following thoughts on how to cope with Poa Annua.

I don't think that many Turf Managers will argue with the premise that proper watering is the key to summer survival of Poa - and in fact all turfgrasses in the Northeast. Just **what** is proper is the subject of much off-hand discussion. It never ceases to amaze me that such an important phase of turfgrass culture has had so little research that there is almost no written data to refer to. Phrases such as "Apply one inch a week, water infrequently and deeply, don't water in the Spring 'till the turf shows signs of stress, and syringe lightly once or twice a day" are often seen in turfgrass literature when in fact they are impractical; if not actually misleading.

Needless to say your water system should be as good as labor, love, and your available money can make it. Don't waste time dreaming of the perfect water system - there is not such animal. Face up to another fact - no one really cares about your irrigation system except you. Not your golfers, the people who use your park, your Green Chairman or your Park Director. It is up to the turf manager to add some lines, change a head, develop a better water source and in total to make the water system the best possible tool he can. Desire and interest are far more important here than a lot of money.

Early morning watering, from dawn to mid or late morning seems to be the most desirable time to water turf that is in use during the day. Even an automatic system should be activated in the dawn or pre-dawn hours to give a cooling effect to the turf as close to the peak heat hours as possible.

This will in most cases carry the turf through the stress periods with little or no additional water or syringing. This would be especially true in the early and mid-season but would need use of judgement later in the year as the deeper roots tend to be reduced due to summer dormancy. At any rate, if syringing is a normal operation the watering practice should be reviewed to allow it to be a controlled operation and not a panic situation. It is much easier to obtain water personnel for the dawn to noon time frame than it is to hire for night operation. Running water in the dark is counter productive in that it is difficult to see, is dangerous, and is impossible to personally supervise. All this is a poor trade for the one advantage - not interfering with the use of the turf - and early watering **can** stay ahead of the player most of the time.

Watering in the Spring should begin at the **first** sign of need, droughty signs on light or poor soil areas. If this is very early consider it a test of the system and watermow a "Dry run" before the real life and death test. Put your brightest and most dependable greensman on this and impress on him that his is the single most important job on the course. Tell him this every day and listen to his ideas and thoughts. If it rains for two days give him three days off - with pay. Within reason let him develop his watering method within the broad outline you have laid out. Above all make him feel it is **his** job and you are holding him 100% responsible for the moisture profile in the turf. He should have no other duties that are not somehow connected with his basic job.

The amount of water applied should be directed toward getting the turf at field capacity; or put another way it should be just short of being able to press free water out of the turf with your foot. The minute the water application stops natural functions (air/water movement, drainage and temperature) will attempt to bring about conditions as they were before you started to water. Your water program should attempt to keep a uniformly moist soil at all times. Due to the limitations imposed by your water systems, turf use, climate conditions and cost, this goal is seldom attained for any length of time - nevertheless it should be your target. Detractors will say that it will lead to overwatering - and I agree. It is a fact of life that seems to be overlooked or ignored that almost all turf in the northeast with a half-way decent water system **is** overwatered by August. To keep fine turf (that should be semi-dormant if grown in its natural environment) in the condition its use dictates it is far better, in fact necessary, to err on the side of too much water, rather than too little. Too much water may make for unhealthy growing conditions at least on a temporary basis. Too little water may result in death on a permanent basis. Do we have a choice?

Making allowance for natural rainfall there is nothing wrong with applying water every day during the 100 day period from June first to Sept. eight. It certainly makes more sense to me to apply water in the early morning light than to run around between golfers in the heat of the afternoon.

This "Hot One Hundred" also coincides with the school vacation and the peak golf period. A bright college or high school lad is the usual answer to keeping the turf in shape for the short but hectic season.

There is more agreement on fertilizer useage than on water management. Poa Annua responds well to three to four pounds of nitrogen per season. More than this would be a waste of money and time - except in unusually starved and neglected turf. There is also general agreement that two pounds in November and one in September will give all fine turf good but not excessive growth. An additional pound in late May and early June might be applied on well drained areas where the leaching would warrant this action. On greens this might provide too much growth for good putting qualities. At any rate the old axiom to keep the greens somewhat on the lean side is good advice.

To avoid a salt build-up and possible fertilizer application stress use as low as salt index fertilizer as is possible in your program. Natural organics and some of the synthetics give the turfman a slight edge in this area.

Iron sulfate is so inexpensive and easy to use, it is hard to understand why it is not standard operating procedure on all fine turf areas. One ounce per thousand square feet in the spray tank is standard for combating yellow insipid looking turf. Up to four

ounces can be used and at the higher rate can produce a startling growth and turn turf a very dark (almost black in some cases) green. For fairway use, as little as one pound per acre seems to promote good growth but no visual color change. For small nozzle application it is necessary to make a slurry and strain the result through a fine mesh sive or nylon stockings before adding to the spray mix. This fine chemical tool can be used to offset yellow induced by over-watering from natural (rainfall) or artifical (sprinkling) sources. No ads will be seen extolling the virtues of iron sulfate, it is too cheap and easy to come by to be worth the expense. (Note: See Iron Application in this issue)

A good fungicide program is a must for all good turf, Poa or otherwise. All fungicides work as indicated on their label. Choice will be dictated by past use and cost factors. Do not expect a fungicide to perform on a disease it is not labeled for and change your material from time to time to avoid creating a resistant strain of fungi.

While bent is much more prone to thatch problems than Poa, Poa can also have a stemmy buildup especially if fostered by high cut, infrequent cut and high nitrogen. Studies show that the single biggest aid to thatch reduction is topdressing. An all out reduction program would be aerification, shatter the cores with a verticut (an effective topdressing) use of brush and comb on greens mowers and correcting the maintenance methods that encourage thatch. Aerification is best done early in the Fall while brushing, combing and topdressing can be done in any of the cooler months.

Wetting agents have been around since 1954 but are still not widely accepted by turf managers and have almost no advocates among the academic turf people. Only recently has the United States Golf Association Greens Section suggested that wetting agents "might" be of value in some cases and are worth a trial. Many chemicals and materials have come and gone since World War II. One soil admentment that was in every turf program in the 1960's is scarcely mentioned in print today; and if it is found in the maintenance building today is more likely to be used for soaking up oil and grease than in greens application.

It is ironic that part of the reason for the lack of wide spread acceptance of surfactants (wetting agents) is that they work so well that a statement of what they will do (by someone who has had practical experience with them over a period of time) is greeted by almost universal disbelief by non users; so much so they would feel foolish even making trial use of the material.

Wetting agents **do** work. The fact that they are still around after over twenty years attests to that. My own use of over 140 gallons per season of this rather expensive material out of a very tight budget also makes a statement - as does my use since 1954.

Put very simple, surfactants break down water structure and help it penetrate tight knit turf, crowned areas and compact soil with poor air space structure - it aids in moving the excess water down and through the overwatered areas. This helps give us the uniform moisture profile needed to keep the roots healthy and growing. The thatch breaks down more readily due to the constant moisture. This moisture and the better root growth can often make the difference between survival or injury on a hot summer afternoon; and I can state it does a lot for a turfman's peace of mind on those long July and August week-ends.

Poa can be maintained during the Northeastern summers. It is almost never easy. It takes time, hard work and at least some money - but most of all it takes the desire and interest to work with what you have to produce a quality stand of turf.

On the plus side is the fairly short period of stressfull activity - one hundred days, give or take a few days. Within a few years I am sure we will know much more about Poa and it is within reason that this most populus of turf grasses will find acceptance and even love from its former detractors.

Bill Smart - Editor, Foreground

Dear Ray,

Summer's here and so are some of the same old problems. Sound familiar?

"SUMMER DILEMMA"

When mycelium greets you, in the morning dew,
Your greens are fluffing, collars turning blue.
Play is heavy and cut worms start to chew,
Floods had reached to just below your chin.
You find your patience wearing mighty thin,
Like the man says, "What will you do?"
"What...will...you...do?"
Yes! I know! tell him to his face.
You know for sure, you're still in the race.

Superintendently,

Kenneth R. Zanzig
Green Garden C.C.