

Poa to bentgrass

## A successful fairway conversion program

by Richard Bator

This will be the first of two articles dealing with the conversion of fairways from poa to bentgrass at the Merion Golf Club in Ardmore, Pennsylvania, during the 1990 golf season while I was golf course superintendent.

This article and its accompanying sidebar will deal with my opening comments, the selling of the program to my greens chairman, the grounds committee, the board and finally membership. It will also deal with the extreme importance of researching the subject, the necessity to plan and organize every detail on paper and lastly, key areas of concern to incorporate into the program.

The second article will deal with the 16-step procedure, a list of equipment, and the corresponding staff job assignments. I will also list the observation on what I would do differently to improve the procedure. I will also outline what procedures are needed to be substituted, if one is to successfully convert from Bermuda-Ryegrass to Bentgrass in the transition zone. Finally, I will briefly give my views on the fumigation of greens prior to the conversion from Poa to Bentgrass.

### Nothing new under the sun

My procedures are not new, different or necessarily better than another superintendent's, but for me they were successful. Any program can be improved upon and it is my hope that anyone who reads about my experience and who undertakes such a program should strive to seek a better way to fit his needs and course.

Another point to be stressed is that 100% poa control will not be attained. But, with a good initial conversion program and a fine-tuned bent management program, there is no reason why an 80% to 95% bent population cannot be achieved in the long term.

### Two key factors: communication & research

I cannot stress enough the two basic factors that will lead to success. First, sell the greens chairman, committee and membership. This can only be achieved through exhaustive research on the subject after which time the information and choice is presented in person, first to the greens chairman and his committee and secondly to the board and membership in a membership meeting, as well as through a newsletter sent to the entire membership.

The key word is "informed". This should be carried out in such a manner that all information to the membership leaves no doubt in their minds that the program will succeed. A strong-willed greens chairman and committee is a must in order to sell the program to the membership. Sell the greens chairman and his committee and the

membership will probably follow. The fact that the greens chairman at Merion was far sighted and strong in leadership made selling the program to the membership that much easier.

Before you begin

## Course preparation

by Richard Bator

It would be wise to correct all surface and subsurface drainage problems prior to the undertaking of such a conversion program. With the use of the herbicide, Pro-Grass, this is imperative, as Pro-Grass tends to give an extremely quick kill of poa and native bents in extremely wet soils. Correcting drainage problems would also be necessary while employing any other type of conversion methods or chemicals.

At Merion, due to a lack of time, we made some drainage improvements prior to the program, with the majority being completed one to three years after its inception. Again, course preparation is much more beneficial to the overall success of the program than trying to fix things later.

For the same reasons, light diffusion and air drainage problems through tree removal, limb pruning, the cutting in of light windows and root pruning should also be completed prior to the start of the program.

At Merion these problems were corrected by initiating a three-year tree improvement program.

Water and air drainage and light diffusion are extremely critical to the success of the program, and if they are not undertaken and completed, one might not as well attempt such a conversion program, as only partial success will be achieved.

I liken this to rebuilding a green that exists in a heavily wooded and poorly drained area. If the underlying problems causing the poor condition of the green are not corrected, rebuilding the green would be a waste of time and money.

That was the first part. Communicating the program to the members who were not at any face-to-face meeting was made possible with a newsletter. The following newsletter was sent to the membership before I started the program:



To: Membership of the Merion Golf Club  
From: Richard M. Bator, Course Superintendent  
Date: July 23, 1990

Subject: East Course Fairway Bent Conversion Program, Scheduled August 6, 1990

In the following newsletter, I will attempt to outline, in every detail, the long awaited Fairway Conversion Program from Poa to Penncross Bentgrass. If no major turf loss occurs between this newsletter and August 6, it can be assumed that this project is what I've been stressing in all

### Well-running irrigation systems important

Make sure the automatic fairway irrigation system is more than functional for consistent coverage. You should also have a fairway quick coupling system for the hand watering of high spots or fairway perimeters that may not get adequate coverage from the automatic system under windy conditions.

Also be sure the irrigation pumps and motors have been rebuilt, if needed, before the program is begun. It would be a good idea to have the irrigation mechanic check the pumps and motors and make any necessary repairs or tune ups one to two weeks before the renovation process is initiated.

Light and frequent watering of the seedlings during the first two weeks after seeding will be another critical procedure contributing to the overall success.

### Aerifying and dethatching is crucial

In order that an optimum seed bed be attained prior to the start of the program, I would recommend the following aerification and dethatching program:

- At least one year, but preferably two years, prior to the program, aerify between four and eight times, depending upon the severity of the thatch layer. Use any of the improved aerifiers, or the model that removes the most plugs and penetrates the deepest.

- Each time the turf is aerified, slice or dethatch at a depth deep enough to penetrate the thatch and reach the soil. Use a self-contained five gang unit, as these will not only dethatch and reach the soil, but will also pulverize the plugs, thus putting back the maximum amount of soil for optimum thatch decomposition.

The entire goal here is to create the best growing medium for the new seed. This process is also paramount to the success of the program.

*-continued on page 12*

previous newsletters. It will get worse before it gets better. But, I would much rather lose turf to a planned and positive endeavor than through weather conditions or negligence on my part.

After nearly six months of research with like programs of other superintendents, university research, my years of experience in renovation, and lastly, working with Dr. Jack Hall, the extension agronomist from Virginia Tech University, we have made our decision.

There were three choices. One, using the non-selective herbicide RoundUp to totally eliminate all existing turf and start from "square one", secondly, using PGR's in conjunction with a twice per season overseeding with bentgrass, (this would take between three and six years to successfully convert), thirdly, and the one that I chose, using the more gradual method (6 to 12 months) of Poa elimination while employing the herbicide Pro-Grass. I am extremely confident that this is the correct choice for the Merion East fairways, as well as for the Merion membership. This decision has been well thought out and planned, with every likelihood for success taken into consideration.

Briefly, my decision is based on the following considerations:

1. The bent populations, although predominately Colonial in nature, with some Penncross and Ryegrass evident, range from 35% to 65%. With this high a percentage, it would be a shame to kill that high a bent population using the herbicide Round-Up. Of course, the higher the bent populations from the start, the quicker it will take in achieving the desired 90% bent population, and vice versa, if Poa population are extremely high.

2. Due to the fact that we mow our fairways with triplex greens-mowers at 3/8" and remove clippings, along with an increased mowing frequency of five times per week, I have noticed an increase of bent in the short eight months that I have been at Merion. This occurrence is what really had me leaning towards a gradual elimination. It certainly has encouraged my decision.

3. Having the services of Dr. Jack Hall from Virginia Tech has also helped greatly in my decision. He has been working with this particular herbicide since 1981 and knows its pluses and minuses as well as, or better than, anyone in the country.

4. Also, while at Pine Valley, we worked with Dr. Hall with this herbicide on an experimental basis, with the results being impressive.

5. This particular chemical has been used for years in the South for the control of Poa in Bermuda grass, and in the winter overseeding of Ryegrass. Their success rates have also been impressive.

6. Lastly, I feel that the majority of superintendents in the northeast have not been successful with this method because it has not been used frequently enough, and when used, the program was not correctly planned or carried out in order that total success was achieved.

I suppose, for me, in regards to this last statement, the challenge element comes to my mind and nature.

During this week of renovation, we apologize for the temporary interruption of play, but when completed, our fairway turf should be one of the finest in the country.



It has always been my belief that the majority of failures in life occur because of the fear of failure. Opportunities in this profession, or chances when presented, should be acted upon.

In closing, please remember, no matter how well one plans, minor distractions and failure occur. In carrying out this program, however, I have taken as much as is humanly possible into consideration for its success, and the Lord willing, we will believe this to occur.

Respectfully, Richard M. Bator Golf Course Superintendent

That important communication — in newsletter form to the entire club membership — proved successful. Equally important was the emphasis on planning and organizing. One cannot over-plan or over-organize when undertaking such an important program. You must write out every detail, procedure, rates, equipment used, job description and employee assignments and a contingency plan for rain dates, possible mistakes and possible manpower no-shows.

Once all of the planning and organizing is finished it is time to present the details to the green committee chairman, the committee itself, board and membership. This is all part of the line of communications that has been set up in the selling of the program.

### Pre-implementation considerations

Check with fellow turf managers who have undertaken such a program, and try to enlist a top university researcher or professor who is well grounded, both technically and practically, in such a procedure.

I would implement the plan between the last week of July and the first two weeks of August, but no later. Be sure to include a rain date week in the event of prolonged rains.

Make sure the plan has assignments and equipment match ups, in writing. Present these to your assistants and mechanics, and posting them for the entire staff to read. Naturally, give copies to the greens committee chairman, members of the committee, the board and, if you desire, to the membership.

During the execution of the program have one or two staff meetings to explain the procedures and each employee's assignment. Take as many meetings as would be needed just to make sure all employees are know to what their job assignments are and how they should do these jobs. Impress upon them that this procedure will take from four to five days to complete — long days, if necessary.

An excellent way to practice would be to have a dry run on a par three or short par four course the week before the start of the program. This worked well at Merion. One could liken the dry run as a war game prior to the major battle.

Well in advance, be sure purchase, rent, borrow or beg all necessary equipment. Rebuild any equipment in need of major repairs, replace all tines and slicing blades and tune up all motors. Keep on hand enough spare tines and slicing

blades for four complete changes, as well as key parts that would normally have a tendency to break under such stress. Service all equipment each night after the day's procedures are completed.

### Keeping the course closed afterwards

The longer you can keep the course closed for play after the program is completed, obviously, the better for the new turf. Between two and four weeks is a good length of time.

### Check for residual chemicals

If you have recently taken over the course or have been there for several seasons and have a history of using long-term soil residual pre-emergence crabgrass or goosegrass herbicides, have all fairways, collars and intermediate roughs checked for residual chemical levels. Even if you are reasonably sure that no such chemicals have been used for two or more seasons, check to make sure they have not. Leave nothing for chance.

If, after testing, these levels exceed the acceptable thresholds, hold off on the initiation of the program until these levels are lowered. Remember, this type of herbicide does not leach from the soil, but degrades through microbial action and in sunlight. There are two known procedures that will speed the degrading process. These are aerifying and dethatching. Applying activated charcoal after each aerification helps, too. Then retest the soils every one to two months. Once lower levels have been achieved, undertake the conversion program.

### Stock and use fungicides

Before starting the program, (especially if the dates are in July and August) stock enough fungicides for at least two to three applications for the control of pythium blight, and to control brown patch and dollar spot.

Applications should be made within two to seven days of germination, but no later. The initial applications will obviously depend upon the severity of the disease pressure.

If you use RoundUp, definitely attempt to close for three to four weeks. If carts are permitted on fairways during the regular season, keep them off the new turf for six weeks.

Amazingly, though, we opened the course one day after the entire program was completed. We didn't allow carts and I felt foot damage would be minimal. This proved correct. We filled divot holes daily, and with this we gained new bent overall.

Within three to seven days after the completion of the last fairways and after germination was complete, color and

-continued on page 13



## A change of season

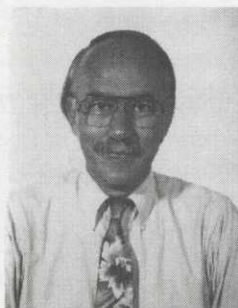
by Juergen Haber

Summer will arrive officially this month. But in some parts of the country we've already had our taste of summer; here in Washington, DC, air conditioners are humming everywhere as the humidity exaggerates the temperature.

These are ideal conditions for *Rhizoctonia* diseases as our Field Editor Chris Sann reminds us. Speaking of this disease, Chris' second story this month: "Brown patch — a different perspective," serves to introduce the work of Dr. Gary Yuen of the University of Nebraska.

On that note I'd also like to introduce our newest contributor, Richard Bator. Until now *Turf Grass Trends* has focused on turf diseases and pests and government regulation. Dick launches us into a new world of practical problems.

In this issue he begins the first of a two-part series of his experience of converting a golf course from poa to bentgrass. Now, some readers who are not golf course superintendents might say, "How does this help me?" Dick's golf course conversion program has applicability not only to golf



courses but any turf grass stand. Dick's perspective, though, is that of a golf course turf manager. And he's got pretty impressive credentials, too.

Before he became an independent golf course turf grass advisor, he was the superintendent at the world-ranked Merion Golf Club in Ardmore, Pennsylvania. He also held similar positions at the Oak Hill Country Club in Rochester, New York, and Pine Valley Golf Club in Clementon, New Jersey. He prepared Oak Hill for the 1980 P.G.A. Championship and Pine Valley for the 1985 Walker Cup. He then returned to Rochester to design and build the championship Blue Heron Hills Country Club as well as the Gypsum Mills Golf Club, a nine-hole executive course.

In 1992, he left the Merion Golf Club to start his new endeavor, that of an independent golf course turfgrass advisor.

Dick's second article in the series, complete with manpower and equipment tables, will appear in the July issue.

Speaking of contributors, we've got another change this month. Science Advisor Eric Nelson has, sadly, announced he will resign his post. In his resignation letter, Eric cites the workload at Cornell University as his reason for not being able to continue. But all is not lost. He will continue to be a contributor. We value Eric's contributions highly and we'll be looking forward eagerly for his manuscripts here at *Turf Grass Trends*. ■

---

### *Conversion continued from page 12*

density of the turf was nearly 75% of what it was just prior to the start of the procedure. By the 14th day, it was barely evident that such an extensive renovation program had been undertaken and was completed.

### Choice of bentgrass

If one starts such a program in July or August, one can expect germination in three and one-half to four days. With the new pre-germinated seed on the market now, this can be cut down to two days.

As far as the choice of bentgrass, it will be up to the superintendent, especially considering that, during the last three to five years new and vastly improved varieties have appeared.

To properly evaluate the choice, I would recommend a visit to the turf plots at the turfgrass universities in the area and adjoining areas. Talk to the researchers in detail about their results. Secondly, I would contact any superintendent in the country who has been experimenting in his nursery with new varieties. Two outstanding superintendents that have an excellent and abundant field experiment with these new varieties are Doug Peterson of the Baltimore Country Club in Baltimore, Maryland, and David Stone of the Honors Club in Tennessee.

Seed producers and their distributors can also be of help, but remember their evaluations and observations may be biased.

### How to treat roughs and collar areas

Because the six- to twelve-foot intermediate roughs of the course will normally be infested with poa and bents, it would be advisable to treat these at the same time as the fairways. I prefer to apply RoundUp to intermediate roughs, scalp mow them and seed them with a mixture of improved ryegrasses.

If there is a need to re-contour the fairways, this would be the ideal time frame to accomplish this most important aesthetic improvement. It would also be wise to treat the collars in the same manner as the fairways, as poa and thatch are normally a serious problem in these difficult-to-maintain areas.

### Don't forget Murphy's law

Remember though, no matter how well you have researched the program, planned, organized, educated the staff and even completed one fairway, intermediate rough and collar, something will usually go wrong. But, if you have planned well, these problems should be minor in nature and easy to overcome. ■