Overseeding Bentgrass Greens, Is It Worth It?

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"I tried that a couple of years ago and didn't see any results".

All too often, that's the response to the suggestion for annual overseeding of putting greens. However, a closer look at the potential for improvement inherent in this practice as a regular component of ones' maintenance program could beg a different response to this suggestion.

There are a number of characteristics considered important on putting greens. Color, putting speed, resiliency, recuperative potential, smoothness and the like are among these. A good case, though, could be made for saying that these characteristics pale in comparison to uniformity and consistency.

Whether greens are fast or slow, it's important to achieve and maintain uniformity and consistency from green to green throughout a course. While some might argue that the golfer should be able to determine the speed of each and every green for himself and that making surface texture and speed of greens consistent and uniform diminishes the challenge confronting the golfer, even the most skilled of eyes find it difficult to determine differences from green to green merely through visual inspection. And as we all observe, the Rules of Golf, killjoys that they are, prevent the player from testing the speed of each and every green.

Once the golfer determines green speed and adjusts his stroke accordingly, he should be able to expect uniform and consistent conditions, relatively speaking, from green to green. Even with such uniformity and consistency, the golf architect, in developing surface contour variety from green to green, will help keep the game sufficiently challenging on the putting surfaces.

That it is difficult to gain this desired degree of uniformity and consistency on greens that are a patchwork quilt of different bentgrasses and annual bluegrass is obvious. This lack of uniformity poses problems for the superintendent as well as the golfer. The various species and varieties can respond quite differently to basic maintenance practices including fertilization, topdressing, vertical mowing, and pesticide applications. Variable responses to environmental conditions, most notably temperature extremes, are also obvious. The annual overseeding program would encourage the development of a greater uniformity of species and variety predominating the putting surfaces and permit the golfer and superintendent to better predict the results of their respective efforts.

Additionally, we often ask the impossible of greens originally planted to bentgrass. In many instances these greens receive no additional desirable seed following initial establishment. This is so in spite of the fact that Annual bluegrass is consistently producing vast quantities of new seed on a yearly basis. Need we be reminded just how much seed? Research has shown that a single Annual bluegrass plant can produce over 400 seeds during the flush of inflorescence in the late spring and early summer.

Expecting the desirable bentgrasses to compete with Annual bluegrass solely on a vegetative basis is clearly a case of expecting far too much. A vigorous bentgrass overseeding program would play an integral role in a maintenance scheme designed to favor the growth and development of creeping bentgrass at the expense of Annual bluegrass encroachment.

Many appreciate these points and the advantages associated with regular overseeding. However, they are nonetheless hesitant to introduce another variety of grass into their putting greens. This is especially true on greens originally planted to velvet bentgrass. A close examination of such greens find they often contain as much creeping bentgrass and Annual bluegrass as they do velvet bent. The situation is similar on greens propogated to South German bent or a combination of vegetative bents such as Arlington and Cohansey. Many of these greens suffer a painful degree of separation and take on the patchwork quilt appearance mentioned earlier.

An overseeding program would develop a greater degree of uniformity and this improved uniformity would flatter the efforts of both the golfer and the superintendent. More consistent and predictable results could be gained by both.

By now, you're doubtlessly ready to cast aside this issue of *The Collaborator*, call to order your seed and jump on the bandwagon proudly waving your banner for annual overseeding. Right? Well, even if this supposition is not entirely correct, let's look into the practice of overseeding a bit further.

One of the keys to the success of any overseeding operation is good seed-to-soil contact. The development of proper seed-to-soil contact on a new golf course or a project entailing complete renovation is relatively easy. However, when overseeding is carried out on an area of actively growing turf, proper soil-to-seed contact is more difficult to attain.

There are a number of methods by which an appropriate degree of seed-to-soil contact can be achieved on actively growing turf. Remember, the less the surface is disturbed, the less the chance for success of your overseeding due to poor soil-to-seed contact. Any combination of the following would serve to maximize the essential seed-to-soil contact.

One technique involves the use of small, power-driven slicer seeder that places the seed just below the surface of the green. Special thin coulters are available that barely disturb the putting surface. With any of the overseeding techniques, minimal thatch levels that permit the seed to germinate in the soil rather than in the thatch will greatly favor seedling survival.

Soil cultivation in the form of aerification is another frequently used practice to gain soil-to-seed contact. Soil cores should be removed prior to seeding and a topdressing follows the application of seed. The topdressing should then be slowly dragged or matted into the open aerification holes.

A combination of soil cultivation practices can truly maximize the chances of germination and survival. A moderately deep vertical mowing carried out immediately after the removal of aerification cores will greatly increase the amount of soil open for contact with seed. The vertical mowing should be carried out to a depth sufficient to bring a small amount of previously applied topdressing or soil to the surface of the green. After removal of the thatch debris brought to the surface, seeding takes place on a green where aerification holes and vertical mowing grooves offer an infinite number of sites for seed-to-soil contact.

Spiking or slicing greens with mechanical disk spikes can also be used during seedbed preparation prior to overseeding, three of four passes over the putting green — more if possible — will be required prior to seeding taking place.

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Many are the tons of seed that have never been given a fighting chance during overseeding due to improper seedbed preparation. Actively growing turf certainly permits less than optimum conditions for the germination and growth and development of seedlings. Merely going through the motions of seedbed preparation with the thought of minimizing golfer disturbance will serve no purpose. An intensive soil cultivation program, combining aerification, vertical mowing and spiking will result in more open soil and reduce the level of competition imposed by existing turf. The topdressing that follows seeding will permit you to develop acceptable putting conditions. Once seeding has taken place, irrigation schedules have to be adjusted in order to keep the seed consistently moist but not overwet. For two to three weeks following overseeding, repeated light syringing throughout the day will stimulate germination and assure seedling survival.

As to the seed itself, one of the improved creeping bentgrass varieties such as Penncross or Penneagle represents a good choice. These grasses exhibit an aggressive growth rate that permits them to germinate and develop under the less than ideal seedbed conditions associated with overseeding. Once established, this aggressive nature further allows these grasses an increased ability to compete against the ever-present Annual bluegrass.

In the past, much has been made of the tendency for such aggressively growing grasses to thatch and become puffy under putting green conditions. However, experience has shown this to be more an indictment related to improper cultural practices rather than an inherent problem of the respective grasses. Contemporary cultural practices on greens, including light and frequent topdressing, light vertical mowing and judicious use of nitrogen will keep thatch levels in check while maintaining the aggressive growth habit so desirable for recuperative potential and competitive ability against annual weed encroachment.

Under such conditions, it is obvious that seedling mortality will be high. While the chances of overseeding success increase with the intensity of the seedbed preparation, relatively high seeding rates should be used. Minimum seeding rates of two pounds per 1000 sq. ft. are suggested and this can be divided into two applications per season. On a golf course with average size greens, this seeding rate requires an expenditure for seed in excess of $1000. Just for a minute, though, consider the expense involved in maintaining greens comprised mainly of Annual bluegrass through summer stress periods. Certainly the additional syringing and fungicide treatment costs add up quickly. Better yet, imagine the cost in dollars and golfer inconvenience associated with a set of greens that come through a winter in poor shape after Annual bluegrass has exhibited its all too infamous susceptability to a variety of winter injuries.

The timing of overseeding is critically important. While spring and fall are the times often considered the best for seeding, they are definitely not the best times for overseeding existing turf. Cool soil temperatures in the spring and fall, coupled with extreme competition on the part of existing grasses, render these periods wholly inappropriate for overseeding. Carried out in the summertime, however, prior to the prime germination period of Annual bluegrass, overseeding will give the bentgrass seedlings an increased level of competitive ability. Soil temperatures at this time will permit excellent germination, while proper ir-

rigation and fungicide treatments will improve seedling survival.

It is somewhat difficult to argue convincingly against a well founded overseeding program. Conditions of surface uniformity and consistency on greens can be improved. Greater competition on the part of desirable grasses can be gained against the encroachment of Annual bluegrass. Obviously, such results will not be realized by a one-shot effort, or by half-hearted annual efforts.

To be effective, a sound overseeding program must be carried out on a continuing and annual basis. The frequently asked question is, "For how many years should I continue the overseeding program?" I would suggest an overseeding program be initiated and continued for as long as the Annual bluegrass component of your putting greens continues to seed profusely each and every season. In other words, the time limit on overseeding should be open ended. Expecting the bentgrasses to compete merely on a vegetative basis against a plant that is such an accomplished seed producer is expecting far too much.

The results to be gained from overseeding will not be immediate. Three to four years may be required before you even see a hint of progress. The vigor with which you go after the program will greatly influence its success. Just think for a minute about how much Annual bluegrass seed is collected in the soil of a green 10, 20, 30, or more years old. Even at 8,000,000 seeds per pound, it will take a tremendous amount of creeping bentgrass seed merely to affect an equilibrium with the Annual bluegrass in the soil.

This shouldn't dissuade you. Without annual overseeding, your present putting surfaces will, at the very best, remain static. The desirable grasses will be competing merely on a vegetative basis and experience has generally shown this to be a losing proposition.

In many cases, the initiation of an annual overseeding program will seek to affect a distorted equilibrium that has developed over the years and favors annual bluegrass encroachment. It will take time to shift this equilibrium, but a shift will result from a dedicated and vigorous annual overseeding program.

Credit: Our Collaborator, N.Y.

Job Opening

Assistant Golf Course Superintendent

Send resumes to Ed Fischer, Supt., c/o Old Elm Club, P. O. Box 51, Fort Sheridan, IL 60037. Resumes due by February 15, 1985.

For Sale

1 Jari Monarch Sicklemower - like new — $700
1 Royer Compost Shredder, Motel NCC-4 — $300
2 Bolen Walk Behind Tractor — $150 each
Call: Ed Fischer at Old Elm Club, (312) 432-6276.

For Sale

1 used snow plow, 8 feet, has 6 trip springs, bottom blade like new. Best offer: contact John Berarducci, Skokie C.C., (312) 835-4296.

Tree Planter

He planted trees before he died—
This northern last-line gent—
Ten-thousand pines above the tide,
On slopes where forebears bent
To clear the clay for oats and hay
Before to rest they went.

Green, upward-pushing conifers,
His trees came on a-pace;
'Gainst claw and thaw and juniper,
These toughies won the race,
Until one day they'd choked the ferns
And left there not a trace

Of hardhack, alder, nuisance wood,
Or any thorny thing.
The master's wood, it grew and stood
And took in birds to sing;
The sloe-eyed deer came stepping here,
Where first appeared in spring

The south slope's dainty dancing cups—
Hepaticas at play.
Our last-line man, in the end, gave up—
Signed all his goods away;
His last request: "In my pines I'd rest,
Where they slope off to the bay."

—Edwin D. Merry