

On the fence

IS INTERSEEDING A VIABLE TECHNIQUE OR JUST A PRACTICE DONE FOR PEACE OF MIND?

by
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Photos by Kevin J. Ross

For many years, golf course superintendents have been trying to manipulate existing stands of turfgrass, primarily greens, by interseeding. Interseeding can be defined as seeding into a live mature turfgrass stand with the goal of having the seeded cultivar become dominant within that turfgrass stand. Although this practice

has been used for many years, and is still a popular technique today, many in the golf course management industry question its effectiveness.

The limited research that has been conducted indicates the conversion of a turfgrass stand through interseeding is difficult, if not impossible. When a new turf stand is



Continual interseeding of greens can help develop a bentgrass seed bank that can compete with *Poa annua*.

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developed, new seedlings have no competition and can develop or mature rapidly. When interseeding turfgrass areas, seedlings have to overcome tremendous competition from the existing turfgrass stand. The new seedlings must wage a battle for water, nutrients and sunlight against the existing turf stand. In most researchers' minds, the existing turf usually wins the battle.

Methods for success

For interseeding to be successful, most in the industry believe the management of the turfgrass stand must be manipulated to allow the competitive advantage to sway toward the seedlings or interseeding turf. This is accomplished by stressing the existing turf, which is usually accomplished by depletion of water or drought stress. Research shows stressing the existing turf, almost to the point of permanent turf loss, can favor the interseeded seedling dramatically. However, most golf courses can't afford to allow this to happen.

For those who interseed or want to interseed, there are three primary methods: broadcast seeding, slit seeding and spiking/aerification.

Broadcast seeding is the easiest and least disruptive to the surface. However, it's the most unsuccessful of the three.

Slit seeding can be accomplished by a slit seeding machine or a another method such as verticutting and broadcasting into the verticut lines.

Aerification/spiking might be the most popular and successful method. When the aerification method is used, a small core is removed from the existing turf, then it's back-filled with sand and seeded. The removal of the small, existing core is advantageous to the seedling turf within the core-hole area, where the competition is much less than

the surrounding turf stand. The core hole not only creates a void for the newly seeded turf, but also offers a prime germination microclimate. An aerification hole, made by a solid or hollow tine, offers a cool, moist, protected area for successful germination. It also offers protection for the crown of the plant during initial mowing, which can be extremely damaging to new seedlings.

Peace of mind

Regardless of the success interseeding can bring, many golf course superintendents achieve peace of mind when interseeding.

For many years, interseeding has been a key part of an aerification program because the general consensus is putting bentgrass seed in the open aerification holes is better than no seed at all. Also, if no seed is pres-

ent, a great *Poa annua*-germinating void is the result generally.

“You have to seed bentgrass during the aerification process, even if nothing germinates,” says Jason Habeck, director of agronomy for Keystone Resorts golf courses in Colorado. “It makes you feel you have performed the correct agronomic practice. It gives you nice peace of mind.”

Habeck believes constant interseeding, no matter what the technique, produces results.

“Each time you seed, if you gain a little, then after a while it all adds up to increased bentgrass population, and that's what we all look for,” he says.

Dormant interseeding

The best results for some golf course su-



Aerification holes can offer the best mode of success for interseeding results.



Dormant interseeding results from a late fall aerification can be excellent in the spring.

perintendents might be interseeding using a dormant seeding technique because it has been proven areas seeded during late fall are ready to germinate in the spring, about four to six weeks ahead of any area seeded during the spring. The dormant seeding technique happens primarily by the seed going through a priming process during this period. This is a great tool that gives bentgrass the jump over slower *Poa annua* in the spring. This jump-start in spring germination is what gives dormant-seeded turf such an advantage when interseeding.

"There is no question dormant interseeding is the way to go and provides the best results," Habeck says. "In the spring, the *Poa*

annua is so sluggish, that dormant-seeded bentgrass areas have a big jump on being competitive against *Poa annua*."

The same thought process is echoed by Chad Wilson, golf course superintendent of the Harvester Golf Club in Marshalltown, Iowa.

"This is the only time I really feel incorporating seed is worth the money," he says. "Dormant interseeding, even just broadcasting, works very well."

When Wilson aerifies his L-93 bentgrass greens in spring and fall, he believes his timing and agronomic practices allow for such a rapid recovery that interseeding isn't worth the money.



Germination from dormant interseeding can work well.

Building a seed bank

As a management practice, many in the industry believe consistent interseeding – no matter what the method – will begin to build a bentgrass seed bank much like *Poa annua* does.

There are some who would argue consistent seeding throughout the season would be a waste of time and money. The primary argument is a seedbed needs to be created for good germination to occur. There's some credence to this, but *Poa annua* has been doing fine for more than 100 years on golf courses with no creation of any special seedbed. Others would argue the seed wouldn't remain viable in the soil long.

On the contrary, bentgrass can easily remain viable in the soil for as long as 10 to 15 years, according to Joseph Duich, Ph.D. That said, superintendents might be able to build a natural seed bank in the soil throughout time by interseeding.

Species differences

Most interseeding is used for greens, however, the same technique applies to other areas of a golf course such as fairways. Some of the same problems associated with interseeding greens also are encountered with fairways, which is the competitiveness of *Poa annua*.

However, direct competitiveness factors among desirable turf species also have been found. For example, when looking at perennial ryegrass in fairway turf, it wasn't many years ago perennial ryegrass was the grass of choice on fairways. The success rate of converting fairways was extremely high because of the ryegrass' physiological competitiveness.

So, if one looks at the success of interseeding a species such a perennial ryegrass in a fairway, it could be rated very high. The opposite can be said for Kentucky bluegrass. A research study conducted by Colorado State University showed trying to convert perennial ryegrass fairways to the newer low-mow Kentucky bluegrasses through interseeding methods was unsuccessful. The general conclusions were Kentucky bluegrass, as a plant, couldn't compete with perennial ryegrass head to head.

Regardless of whether interseeding is a truly viable seeding technique or just done for peace of mind, many superintendents will continue interseeding to try to manipulate their turfgrass stands. GCN

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