

Cultivar Conversion on Creeping Bentgrass Greens

With the recent introduction of the Penn A and G series cultivars of creeping bentgrass (*Agrostis stolonifera*) that can sustain high shoot densities at extraordinarily close mowing heights, a frequently asked question has been the potential to interseed into an existing cultivar stand such as Penncross with the objective of converting to the new cultivar. A number of efforts have been made in this regard over the past few years with mixed results. I have not been able to answer this question specifically in terms of a clear yes or no relative to successful experiences.

However, for the first time I can relate experiences with comparative interseeding. My observations have been in Japan in a relatively cool climatic area near the foot of Mt. Fuji, west of Tokyo. Two golf courses in this area have conducted an interseeding program for three years with the goal of converting Penncross to Penn A-2. Both golf courses employed similar interseeding practices conducted in the late-summer period of early September. The procedure involved:

- **Close mowing** of 1/8 inch (3.2 mm) for a period of several weeks prior to interseeding.
- **Vertical cutting** in two to three directions with excess organic material removed.
- **Coring** with high-density 0.3 inch (8 mm) diameter tines to a 0.8 inch (20 mm) depth on a 1.1 inch (27.5 mm) spacing. The cores were removed.
- **Seeding, topdressing and brushing**, using 2 lb per 1,000 ft² (10 g/m²) with coated seed.

An application of phosphorus also was made to the seedbed prior to seeding. Subsequently, daily to twice daily irrigation was applied as needed to avoid surface water stress to the germinating seedlings. This interseeding process was re-

peated in the second year. It should be noted that both golf courses have a double-green system, which allowed a two-week post-interseeding period where play was not allowed on the interseeded set of 18 greens.

I have made visitations to both sites for three consecutive years during the autumn period. Dramatic differences were observed in the autumn of the year 2000. One golf course has achieved a dramatic conversion to Penn A-2, which is visually evident in terms of a narrower leaf width, higher shoot density, and more erect growth habit. In contrast, the other golf course remains dominated by Penncross creeping bentgrass. **There has been one key difference between the two golf courses. On the course where the conversion was successful, they sustained a cutting height in the 1/8 to 3/32 inch (3.2 to 3.0 mm) range for the three-year period. Whereas the golf course where success has been far less dramatic and Penncross appears to remain dominant, the cutting height was maintained at a 4 mm height, except for lowering during a two-week period for several key tournaments each year.** It should be noted that in the second year on the course that was successful there was a temporary thinning of the Penncross turf cover on the greens. Whether this could have been avoided or not is unclear, but may not necessarily need to have occurred.

This comparative set of golf courses demonstrates there is at least one key cultural element that aids in successful conversion to the higher density, extraordinarily close mowing tolerant cultivars, that being a very close mowing height which stresses the Penncross. There most probably are other cultural practices that may also contribute, but to what degree and whether they have an additive effect remains to be determined.

Multiple Targeting...

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similar. As always, it is good practice not to overdo it with any one class of pesticide.

Therefore, I disagree with some authorities who broadly promote early spring preventive treatments under the auspices of multiple targeting. One publication, for example, states that if grubs are the primary target, early May is the optimal time to apply Merit® on northern golf courses because such timing also gives season-long control of secondary pests such as billbug larvae, first-generation cutworm larvae, greenbug aphids, and frit fly. In my experience, those secondary pests don't often occur at high enough levels in fairways to justify applying a grub treatment that early. The same source recommends late April through May as the optimal time to apply Merit® for grub control on northern lawns because secondary pests, such as billbug larvae, greenbug aphid, and chinch bugs, will also be suppressed. Again, in my view, those pests don't occur often enough, or at high enough levels, to

warrant treating 1–2 months earlier than the optimum window for the primary target. Should surface-feeding pests, such as sod webworms and cutworms, approach intolerable levels, they are relatively easy to control by spot-treating with a fast-acting, short residual insecticide.

When multiple-targeting BTA and annual grub species with preventive soil insecticides, use the highest labeled rate and treat shortly before egg hatch of BTA. This treatment timing, generally mid- to late-May, increases the likelihood that sufficient residue will persist into July and August. For grub management on lawns or sports fields, or on golf courses without a history of BTA, there is little justification to apply Merit® or MACH 2® any earlier than early to mid-June. Stewardship of these products warrants that we use them selectively, during optimum windows, rather than as a routine, season-long cure-all for secondary pests that only occasionally occur at damaging levels.