

BENTGRASS CONVERSION - IT CAN WORK!

By Dr. Leah Brilman — Seed Research of Oregon

Bentgrass conversion can refer to changing from one bentgrass cultivar to another, or converting from *Poa annua* or perennial ryegrass to bentgrass. All of these can be done on greens, tees and fairways but the success rate depends on many factors. These factors include the climate zone of the course, the acceptable amount of disruption of the playing surface, timing of conversion and amount of perseverance.

KEY CONCEPTS

- ▶ Bentgrass seedlings are very small and initially weak. Some varieties such as **SR 1119** and **Brighton** have greater seedling vigor and can greatly increase your chances of success.
- ▶ In competition for critical resources including light, water and nutrients the established plant always has an advantage over the seedlings.
- ▶ Timing the inter-/overseeding to correspond with favorable growing conditions is extremely important. In some regions this may be a fall application, whereas in other regions it may be in the late spring or early summer.
- ▶ The existing plants must be weakened to give the seedlings a chance to compete.
- ▶ Conversion is more difficult in milder climates where existing turf has a longer period of active growth (and minimal seasonal dormancy).
- ▶ The new seedlings must be kept moist, which can make the existing playing surface softer and slower.
- ▶ The microclimate within the canopy may be favorable to *Pythium spp.* outbreaks.

BENTGRASS TO BENTGRASS OR *POA ANNUA* TO BENTGRASS

Success in any conversion depends on the relative competitiveness of the new bentgrass seedlings, the climatic and regional adaptation of *Poa annua*, the health of the stand before conversion, the timing of the seeding and the level of acceptable disruption.

1. Apply a growth regulator such as **Primo[®]**, **Cutless[®]**, **Turf Enhancer[®]**, **Progress[®]**, **Embark[®]** or **Proxy[®]** - growth regulators that damage turf quality are often more effective but less aesthetically acceptable. **Do not apply a preemergent before seeding.** (Always follow labeled rates and recommendations)
2. Reduce height of cut on existing turf (scalp - 1mm - or lower).
3. Verticut heavily to reduce any thatch and further weaken existing turf (this can also be done after core aerifying).
4. Core aerify with largest acceptable tines to create holes in canopy. Solid tines may also be used. The aim is to allow seedlings time to establish before competition returns and to assure seed-soil contact.
5. Topdress or drag in cores to fill holes.
6. Best times for conversion are late spring, through the summer until late summer. *Pythium* control is very important - **Allegiance[®]** treatment of the seed will give you 14-17 days of *Pythium* control. Go as late in the spring as you can and still maintain acceptable playing conditions. Dr. Watschke at Penn State reports that at soil temperatures above 23C° bentgrass germination is favored over *Poa annua*.
7. Seed with **SR 1119, Providence, SR 1020, Brighton, Dominant, Dominant Plus or Dominant X-treme** at 5-7grms/m² and topdress or drag seed into surface. Seed-soil contact is vital.
8. Keep surface moist - Stay on the dry side if converting from *Poa annua*.
9. Fertilize lightly after seedlings germinate with quickly available nitrogen source.
10. Keep height of cut low to enable more light to seedlings and reduce growth of existing stand (2mm).
11. Dimension may be applied 14-21 days after seedling emergence to limit *Poa annua* competition (Reicher, 2003)
12. Repeat Spring and Fall for at least two years. Significant results are generally observable in the third year.

REFERENCES

- Bigelow, C.A. and D.R. Chalmers. <http://sudan.cses.vt.edu/html/Turf/bigelow.htm>
 Kopek, D.M. <http://ag.arizona.edu/turf/glf0399b.html>
 Murphy, J.M. et. al. 1999. 1999 Rutgers Turfgrass Proceedings. pg. 227-238.
 Ralston-Hooper, K. and Z. Reicher. 2002. www.agry.purdue.edu/turf/report/2002/page80.pdf
 Reicher, Z. and Hardebeck, G. 1997. Conversion of golf course fairways without using nonselective herbicides. Annual Purdue Turfgrass Research Report (1997).
 Watschke, T.L. 1997. Convert your fairway to bentgrass. Grounds Maintenance. July.