

## Establishing Kentucky Bluegrass into Perennial Ryegrass or Changing Genetics

by Dr. Leah A. Brilman, Director of Product Management and Technical Services

Sports fields and fairways that were initially Kentucky bluegrass over many years of heavy play, repairs and overseeding become primarily perennial ryegrass or annual bluegrass (*Poa annua*). Strategies to reestablish Kentucky bluegrass vary depending on whether herbicides can be used before or after seeding.

The factors that lead to difficulties in seedling establishment are:

1. Perennial ryegrass or any mature plant outcompetes the seedling for moisture and nutrients
2. Above-ground canopy can shade new seedlings reducing germination and growth
3. How rapid conversion is achieved depends on how many of below recommendations are followed

Conversion without Herbicides (partially based on Keeley et al, 2006. Feb. GCM):

1. Scalp the turf as low as possible with your equipment (they cut ryegrass at .25 inches or 0.6 cm).
2. Core aerate with 1/2 inch tines.
3. Verticutting in two directions at .25 inch depth with blades on .75 inch spacing.
4. Remove debris and seed Kentucky bluegrass at:  
2–3 lbs/1000 sq. ft (100–150 kg/ha) twice per year or  
4–6 lbs/1000 sq. ft (200–300 kg/ha) once per year.
5. Rake and/or roll for good seed to soil contact.
6. Irrigate lightly to keep seedbed moist.
7. Low mow (.25 inches or lowest your equipment will go) twice a week for four weeks. This reduces competition and allows seedlings to establish.
8. Fertilize with 0.5–1 lb of N/1000 sq. ft. every 15 days until 100% cover.



Conversion with Glyphosate and/ or selective herbicides (based on Minner, Reicher):

1. Seed Kentucky bluegrass using a seeder or after vertical mowing at 4 lbs/1000 sq. ft. Aeration can be performed before seeding to decrease competition.
2. Spray existing stand of grass with glyphosate on same day or within three days after seeding.
3. Bluegrass establishes while old turf and weeds are dying.
4. Use Mesotrione (Tenacity) for annual bluegrass and crabgrass control.
  - a. Use 3 to 5 applications of Tenacity to maximum of 16/oz/acre/year.
  - b. Tenacity works best in summer months but can be used in fall.
  - c. Apply from every three days to every two weeks.