

**Research Topic: Optimum Fertility Regimes During Late Spring Creeping Bentgrass Putting Green Establishment (2007). J. Sorachan, Univeristy of Tennessee**

Creeping bentgrass (*Agrostis stoloniferous*) planting requires adequate fertility to maximize grow-in time and speed to establish a mature turfgrass sward. Cool-season turfgrasses also have different fertility requirements during establishment. **The objective of this experiment was to evaluate the use of granular, foliar, a combination of granular and foliar fertilizers, or urea for creeping bentgrass establishment on a sand-based green built to USGA specifications.** All plots received 0.5 lb P/M of a 25-13-12 started fertilizer prior to planting. The six (6) fertilizer treatments consisted of:

- Green Spec (0.5 lb N/M) 7-7-7 applied every 14 days after germination
- Milorganite (0.5 lb N/M) 6-2-0 applied every 14 days after germination
- NuBlade (12 oz/M) applied at germination then Gary's Green (4 oz/M) + PK Plus (6 oz/M) applied every 7 days
- NuBlade (12 oz/M) applied at germination then Gary's Green (6 oz/M) + PK Plus (6 oz/M) every 14 days
- Urea (0.013 lb N/M) applied at germination then urea (0.14 lb N/M) applied every 14 days
- NuBlade (12 oz/M) applied at germination 7 days (6 oz/M) then Green Spec 7-7-7 (0.05 lb N/M) after 14 days then Gary's Green (6 oz/M) + PK Plus (6 oz/M)

Plots were arranged in a randomized complete block design and replicated 3 times and 'A4' creeping bentgrass was seeded on 3 April. Visual ratings and analysis of percent (%) turf cover were taken weekly starting on 7 May. Consistent temperatures above 90 F occurred from mid May through 18 June resulting in persistent Pythium blight pressure during July and August. In general, creeping bentgrass treated with Green Spec 7-7-7 resulted in faster establishment and the greatest overall turf cover after 8 weeks on 31 May (Figure 1). Initially and until 22 May, the NuBlade (12 oz/m) applied at germination followed by Gary's Green (4 oz/M) + PK Plus (6 oz/M) applied every 7 days provided a high level of percent turf cover. In fact, the foliar program applied at lower rates and on a 7 day interval performed consistently better than the foliar program using higher rates (6 oz/M) and on a 14 day interval (Figure 1). All Grigg Brothers foliar programs resulted in higher percent creeping bentgrass cover during establishment than an equivalent nitrogen (N) rate of urea (Figure 1).

**'A4' creeping bentgrass establishment from seed during the late spring should be avoided in the transition zone. However, if you are going to establish a sand based creeping bentgrass putting green from seed in the transition zone during late spring and early summer fertility, treatments with Green Spec 7-7-7 will provide the best success versus common Milorganite and urea fertility establishment programs. Green Spec 7-7-7 combined with foliar treatments did not perform significantly better than Green Spec 7-7-7 applied alone. Lower dose (4 oz/M) and more frequent (7 day interval) foliar fertilizer treatments were more effective than higher dose (6 oz/M) and less frequent (14 day interval) application, however, all foliar treatments were more effective than urea treatments applied at an equivalent N rate.**

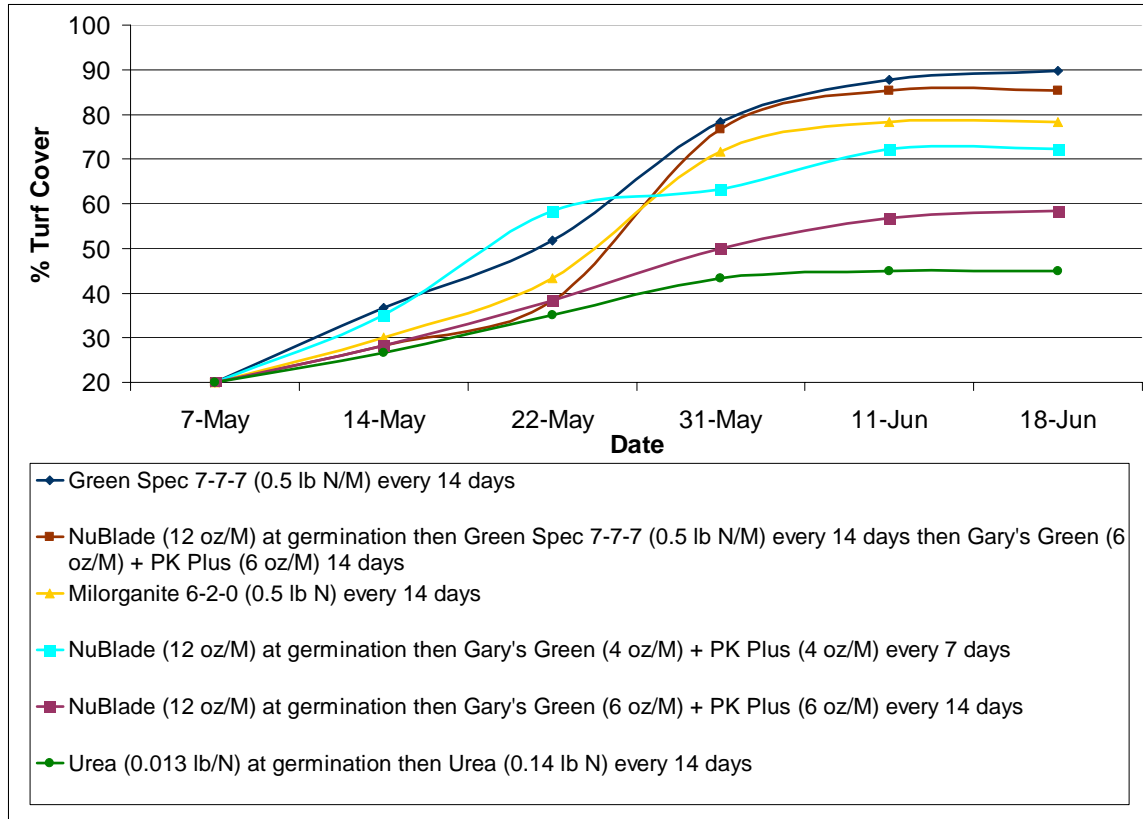


Figure 1. Percent (%) turf cover after treatment with various granular and foliar fertilizers during creeping bentgrass establishment.

\*All plots received 0.5 lb P/M of a 13-25-12 starter fertilizer prior to planting.