

Effects of Trinexapac-ethyl and Soil Surfactant on establishment rate of *Poa pratensis* in sand-based root zones

J. J. Henderson, J. R. Crum and J. N. Rogers, III
Department of Crop and Soil Sciences

The constant challenge for the sports turf manager is to sustain a dense turf stand throughout the competitive season. However, often times, regardless of proper management practices, areas of the field or entire fields can be worn very thin or even bare due to their intense use. Consequently, the perennial focus of athletic field management is the establishment of a new turf stand, often as quickly as possible. The objectives of these studies are to evaluate the effects and interactions of both Trinexapac-ethyl (Primo) and soil surfactant (Primer) applied during the establishment process. Trinexapac-ethyl applied to established turf has been shown to enhance the lateral growth. This study is designed to evaluate various Trinexapac-ethyl rates applied at different times during the establishment process to determine effects on the establishment rate of *Poa pratensis*. If density can be increased early during the establishment process, then wear tolerance could be increased (or the establishment process shortened) from this perennial activity.

Today's top athletic fields have an additional characteristic other than intense use that can make the establishment of turf difficult: high sand content root zones. High sand content root zone mixes are desirable because they drain very well and resist compaction, but these mixes can present some problems, particularly during establishment. Sand particles tend to have high surface tension causing them to repel water, making moisture retention for seed germination difficult. One way to reduce the surface tension of the sand particles and to increase the moisture retention of the sand is through the application of a soil surfactant. This increased moisture retention could enhance the germination process.

Treatments:

Trinexapac-ethyl¹

- 1) 0.5 X the recommended rate 28 days after seeding
- 2) 1.0 X the recommended rate 28 days after seeding
- 3) 0.5 X the recommended rate applied after the first mowing
- 4) 1.0 X the recommended rate applied after the first mowing
- 5) Control

¹ Supplemental PGR applied 30 and 60 days after each initial application, applied at the indicated rates.

Soil Surfactant

- 1) 1.0 X the recommended rate applied every 10-14 days.
- 2) Control