

Managing *Poa supina*

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Supina bluegrass (*Poa supina* Schrad.) has a vigorous stoloniferous growth habit enabling it to recuperate rapidly from damaged conditions. Primarily used for athletic fields in North America, Supina bluegrass has a demonstrated ability to tolerate a wide range of mowing heights making it a suitable turfgrass for home lawns, golf courses and athletic fields. However, limited knowledge is available for the management practices for Supina bluegrass at any mowing height. Several studies have been underway at Michigan State University to help determine optimal management practices for Supina bluegrass. Three studies to be discussed today include a mowing study, fertility study, and seeding ratio study.

Mowing Height Study

Established during summer 1995, the primary objective of this experiment was to determine the appropriate mowing height(s) for Supina bluegrass. A secondary objective was to determine the effects of simulated sports traffic at the different mowing heights. The three mowing heights, 9/16", 1", and 2" are mowed three times per week, and simulated football traffic (Brinkman Traffic Simulator) is applied twice per week during the fall. A total of 30 simulated football games were trafficked on the experiment each fall. Fertility is provided throughout the season applying a total of 5 lbs. N/1000 sq.ft./yr. The plots are also irrigated as needed to prevent moisture stress. Color, density and quality ratings are collected along with surface characteristics (shear resistance and surface hardness).

Results have determined that the 1" mowing height has the best overall turf quality to date with all mowing heights being acceptable. Color is lower on the 9/16" mowing height throughout the season, and density is lower in the fall on the trafficked areas. All plots showed wear from the trafficked conditions, which is to be expected from any turfgrass species. However, all mowing heights recovered to 100% density after traffic applications stopped and adequate growing conditions were provided. This is an ongoing study, multi-year study.

Fertility Study

Established during summer 1995, the primary objective of this experiment was to determine the appropriate fertility regimes for Supina bluegrass on sandy loam soil, and how fertilization affects tolerance to traffic. Data collection is collected the same as the mowing study. All plots are mown at 1" height and irrigated as needed. Traffic applications using the Brinkman Traffic Simulator is applied same as the mowing study.

Traffic treatments resulted in decreased turf color, density, and quality, but were not influenced by the fertility program. Trafficked conditions also reduced turf shear resistance, either by reducing overall density and/or rooting.