Finally, we incorporated Trimmit growth regulator and Velocity herbicide into the trial. The hope was that we could reduce the competition from the existing turf with the use of these products. Velocity applications started the first week of June and were applied at two ounces per acre every 14 days for a total of four applications. A fifth and final application of Velocity was made October 1. Trimmit applications also started June 4 and were applied at 6 ounces per acre every 14 days for a total of eight applications.

The interseeding trial was conducted at a local golf course on their practice putting green and on a research green at the Iowa State University Horticulture Research Station. Regular maintenance practices were only slightly altered as the goal was to preserve conditions that would allow play.

Mowing was performed daily to a height of 0.125 inches and overhead irrigation was applied as necessary. Fertilizer (7N-7P-7K) was applied at a rate of 0.25 pounds N per 1,000 square feet each month of the growing season and diseases and insects were controlled as necessary.

Does it work?

The 4.5 and 13.5 pounds per 1,000 square feet seeding regimes resulted in a 19% and 39% conversion to Penn A-4, respectively, on the golf course putting green the fall after interseeding (Figure 1).

Penn A-4 populations were reduced to 1% and 8% the next spring (Figure 2).

These data indicate a transient shift to Penn A-4 occurred but was not able to persist.

Furthermore, applications of Trimmit or Velocity did not hasten conversion to Penn A-4 (Figures 1 and 2). The percentage of annual bluegrass was reduced from approximately 60% to 20% in plots treated with Velocity during the first year of the study. However, significant loss of density was observed during the second year of the study from Velocity applications.

Conversion was more persistent on the research putting green. The 13.5 pounds per 1,000 square feet seeding regime resulted in a 42% establishment of Penn A-4 the fall following interseeding. Evaluation of the plots the following spring revealed 45% Penn A-4 still present. Although interseeding was more successful in the research setting, the overall quality of the turf would not be acceptable for most putting greens.

These results suggest that the level of maintenance and overall quality of the putting surface influence the success of conversion. Conversion through interseeding in this study was unsuccessful when the plots were maintained under golf course conditions. Interseeding was only successful when conditions were allowed to deteriorate below acceptable levels. The overall conditioning of the putting surface in order to permit interseeding needs to be weighed against the cost of a traditional conversion when deciding on a renovation program.

Marcus A. Jones is a graduate research assistant and Nick E. Christians is a professor of turfgrass at Iowa State University. Reach Jones at marcusajones@gmail.com.

FIGURE 1: CONVERSION

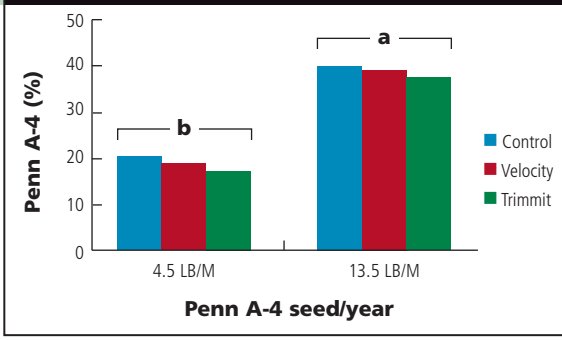
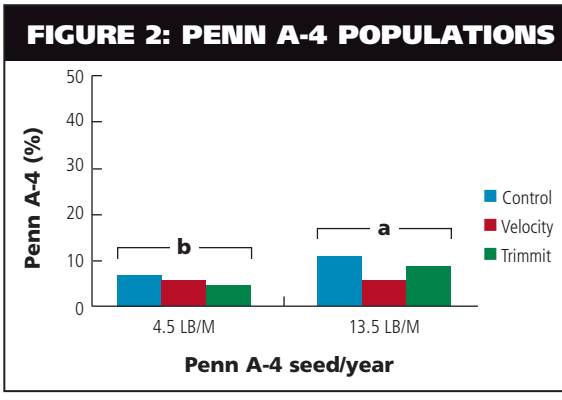


FIGURE 2: PENN A-4 POPULATIONS



REFERENCES

Christians, N.E. 2007. Fundamentals of turfgrass management. 3rd ed. John Wiley & Sons, Hoboken, NJ.

Garrison, M.A. and J.C. Stier. 2010. Cool-season turfgrass colony and seed survival in a restored prairie. Crop Sci. 50:345-356.

Henry, G.M., S.E. Hart, and J.A. Murphy. 2005. Overseeding bentgrass species into existing stands of annual bluegrass. HortSci. 40:468-470.

Minner, D.D., and F.J. Valverde, R.M. Pirtle. 2008. Seeding rates that maximize turf cover when sown during traffic. p. 57-62. In J.C. Stier et al. (ed.) Proceedings of the Second International Conference on Turfgrass Science and Management for Sports Fields. Proc. 2nd Int. Conf. on Turfgrass, Beijing, China. 24-29 June. 2007.

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