


RESEARCH SUMMARY

Options for Potential Enhancement of Zoysiagrass Establishment

Zoysiagrass (*Zoysia* species) is well known for its very slow establishment from either sprigs or seed. Even the best of the cultivars, which is El Toro, does not establish at a desirable rate. Researchers at the University of Maryland have investigated various methods that might have potential for enhancing the rate of vegetative establishment of Meyer Japanese zoysiagrass (*Zoysia japonica*). The treatments included (a) urea nitrogen fertilization, (b) a biostimulator combination of auxin, cytokinin and iron, and (c) three preemergent herbicides, including oxadiazon and dithiopyr.

The results of the investigation revealed that monthly applications of nitrogen at 1 lb per 1,000 ft² (0.5 kg/100 m²) during the growing season had no influence on the sprig establishment rate of zoysiagrass. **Treatments with a biostimulator containing an auxin, cytokinin, and iron combination applied either by soaking the sprigs prior to planting or by weekly sprays after broadcast sprigging had no effect on zoysiagrass establishment or on rooting.** In contrast, use of a postemergence herbicide generally enhanced zoysiagrass establishment under conditions of significant competition from smooth crabgrass (*Digitaria ischaemum*). **Both oxidiazon and dithiopyr provided similar levels of crabgrass control and enhanced the rate of zoysiagrass coverage.** However, the dithiopyr did reduce midsummer root growth of Meyer Japanese zoysiagrass.

Editor Comments. Gibberellin and certain other growth regulators are used for enhancing the vegetative establishment of woody ornamental cuttings. However, similar effectiveness of growth regulators for enhancing the vegetative sprig propagation of zoysiagrass has not yet been documented through research, including the previously described research. Other than maintaining adequate available soil moisture, the key practice that this editor has found effective in the enhancement of zoysiagrass establishment is frequent mowing at a cutting height of less than 25 mm (1 inch). **Source: Zoysiagrass establishment from sprigs following application of herbicides, nitrogen, and biostimulator. 1996. by M.J. Carroll, P.H. Dernoeden, and M.J. Krouse. HortScience. 31(6):972-975.** 

JB COMMENTS

High- and Low-Density Cultivar Trade-Offs

Introduction of the new high density bentgrass (*Agrostis stolonifera*) and bermudagrass (hybrid *Cynodon*) cultivars for closely mowed putting greens is evolving similar to previous innovations involving key plant morphological changes. For example, in the 1960s a number of golf course superintendents presented talks at turf conferences and articles in publications stating that the new cultivar was a failure, while others expounded on its success. The main difference between these two views was that the former **failed to adjust to the cultural needs of the new cultivar morphology**, but rather chose to maintain it as it had traditionally been done. In contrast, the latter learned how to adjust the cultural program to meet the morphological needs of the new

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