

**Title:** Evaluation of Turfgrass Establishment Systems for Pesticide Reduction

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As a result of the highly managed nature of turfgrass systems, the most successful implementation of Integrated Pest Management (IPM) programs will begin during stand establishment. However, there is misconception among turfgrass managers that aesthetic or functional quality will be compromised using IPM. Still, very little information exists on the role of IPM during the establishment phase where pesticide and nutrient inputs can be substantial.

Golf course managers spend approximately \$4 billion annually for turfgrass maintenance. The increased demand for new golf courses will direct a significant portion of this and *additional* funding to establishing new turfgrass areas. The potential economic impact of the golf course will increase expectations to accelerate establishment to generate income from play. As a result, increased seed rates and the concomitant pesticide and fertilizer programs are implemented to meet expectations. Biological aspects of plant and microbial ecology, inherent in an IPM program have not been investigated under these accelerated systems. This information is vital if we are to develop improved establishment techniques that result in a healthy stand less reliant on pesticides.

### **Goals and Objectives**

The long term goal of the proposed work is to determine optimum turfgrass establishment programs that lead to a more stress tolerant, disease resistant stand of turf less reliant on pesticides. The objectives of this project are to; determine optimum creeping bentgrass seed rate; evaluate microbial seed treatment on seedling survival and suppression of seedling disease; assess the impact of seed rates and treatments on the incidence of foliar and root diseases in the mature turfgrass stand.

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