


Golf Course Construction—Beware


In the past year there have been a number of highly publicized incidences where severe soil erosion has occurred at golf course construction sites that resulted in soil movement into trout streams and/or lakes. These incidences are unfortunate and every effort must be made to avoid similar occurrences in the future. If appropriate preventive measures are not taken, the whole golf industry may suffer.

This environmental issue resulted in a key law being passed in Japan some years ago. Specifically, **it requires that only three holes on a golf course can be constructed at one time, and no additional soil disturbance is allowed until the three holes under construction are fully stabilized with turf.** As a result many golf course fairways, tees, and roughs are sodded, especially since zoysiagrass (*Zoysia* spp.) commonly is used and has a very slow establishment rate. Consequently, the cost for construction of golf courses in Japan has increased greatly, which in turn has substantially increased the cost to those playing golf and resulted in greater exclusivity. Under this law, the construction and normal grow-in by vegetatively sprigged zoysiagrass would take up to 12 years for an 18-hole golf course, whereas by sodding with zoysiagrass an 18-hole golf course can be completed in 4 to 6 years.

Comments: It behooves golf course owners, architects, and contractors in North America to do everything possible to protect against serious off-site soil erosion, particularly soil movement into streams and rivers, as a result of intense rainfall events. The cost of such preventive measures should not be an issue! Otherwise the whole golf industry is adversely affected. 

RESEARCH SUMMARY

The Response of Annual Bluegrass and Creeping Bentgrass to Five Levels of Iron

The color and growth response of 3 Penncross creeping bentgrass (*Agrostis stolonifera*) parents and 6 genotypes of flowering and nonflowering annual bluegrass (*Poa annua*) to 5 iron treatments were evaluated in a greenhouse study involving 4 replications. The nitrogen treatments in the first experiment consisted of 0, 2, 4, and 6 mg per liter of iron and in the second experiment 0, 2, 4, 6, and 8 mg per liter of iron. **The results revealed that creeping bentgrass and annual bluegrass responded differently to the rates of iron applied.** Both shoot growth and color of the creeping bentgrasses increased linearly with increased iron levels. The shoot growth response of the annual bluegrasses to increasing iron applications was small, while the color changes were more apparent. In other words, **annual bluegrass exhibited a greater color response, while creeping bentgrass exhibited a greater shoot growth response.** Actually the shoot growth of annual bluegrass was reduced at the highest iron rate evaluated. The root growth responses to increasing iron levels were similar for both species, with both increasing linearly. Also the vegetative and flowering types of annual bluegrass responded similarly to the iron treatments. **The iron contents of the leaf tissue were similar for both creeping bentgrass and annual bluegrass.** Thus, these data suggest that using differential iron applications rates to enhance the competitiveness of annual bluegrass relative to the creeping bentgrass may not prove successful. **Source: Annual bluegrass and creeping bentgrass response to varying levels of iron. 1998. By X. Xu and C.F. Mancino. Annual Research Report, The Pennsylvania State University Center for Turfgrass Research, pp. 50-53.** 

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