



**Monday, November 13, 2006 - 9:00 AM**

**69-5**

### **Weediness and Persistence of Transgenic Bentgrass Hybrids.**

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Field studies were conducted from 2002 to 2005 in New Jersey to evaluate the persistence and weediness potential of transgenic and non-transgenic bentgrass species in managed and unmanaged ecosystems. Managed ecosystem consisted of Kentucky bluegrass maintained as a home lawn. Unmanaged ecosystem consisted of mixed fine and tall fescue maintained as a New Jersey roadside. Plant material evaluated included glufosinate resistant creeping bentgrass (GRCB), hybrids of GRCB with non-transgenic creeping bentgrass, colonial bentgrass (*Agrostis capillaris* L), dryland bentgrass (*Agrostis castellana* Boiss and Reut.), redtop (*Agrostis gigantea* Roth), and velvet bentgrass (*Agrostis canina* L.). Plant diameters were measured at transplanting and in the spring, summer and fall of the following two years. The majority of bentgrasses were able to persist, grow and be highly competitive in both ecosystems. Bentgrasses were more competitive in the unmanaged ecosystem relative to the managed ecosystem. Hybrids between transgenic creeping bentgrass and non-transgenic creeping, colonial, velvet and especially dryland bentgrass were less or equally persistent and competitive relative to their non-transgenic counterparts.

Hybrids of transgenic creeping bentgrass and redtop were more persistent and competitive than non-transgenic redtop in both ecosystems. Transgenic hybrids adopted the more prostrate growth habit of creeping bentgrass which was more tolerant to mowing rather than the more upright growth habit of redtop.

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