Production of Transgenic Creeping Bentgrass for Fungal Disease Resistance. (C05-wang083424-Poster)

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Abstract:

Appropriate constructs of a chitinase and a glucanase gene were co-transformed into embryogenic callus of creeping bentgrasses by particle bombardment using the bar gene as a selectable marker. Plants were regenerated from phosphinothricin (PPT)-resistant calli. PCR and Southern blot hybridization analysis both confirmed the stable integration of the chitinase, glucanase and bar gene constructs into the grass genome. Northern blot hybridization analysis indicated expression of the bar and chitinase genes, but not the glucanase gene. All transgenic plants recovered were resistant to 0.5-4.0% herbicide Finale (active ingredient = PPT). Preliminary trials for fungal disease resistance (Rhizoctonia solani and Sclerotinia homoeocarpa) of the transgenic plants are underway. Final results of this study will be presented at the conference.

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