

Tissue Culture Selection for Heat Tolerance in Creeping Bentgrass
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The research using tissue culture techniques resulted in the isolation and recovery of 80+ heat and salt tolerant variants of creeping bentgrass. Some of these variants were planted in the field in the fall of 1982 with the majority of these planted in the fall of 1983. As of today, approximately 70 variants are surviving with 15-20 showing exceptional vigor after this summer. Because of these signs of excellent field survival, Dr. Krans will now be looking at the heritability of these tolerant variants. Progeny will be tested using procedures described in prior reports. A plant breeder, Dr. Howard Potts, at Mississippi State University will be assisting in the continuation of this research. The combined efforts will be focused on evaluation of seed production and viability, cytogenetic features and re-evaluation of these most promising variants in larger field plots. Based on the findings of this past summer, there is optimism about the future.

In addition, plans have been made to continue tissue culture efforts in creeping bentgrass in order to isolate selected disease resistant variants. Toxins associated with the fungus diseases phythium, *Phythium aphanidermatum* ([Edson] Fitzpatrick) and dollar spot, *Sclerotina homoeocarpa* (F.T. Bennett) will be used as selection pressures to isolate genotypes with resistance to these pathogen. Later sexual incorporation of these genotypes into present germplasm will be made to broaden the current germplasm base.