

**DIMINUTIVE BRACT:
A NEW TRAIT ASSOCIATED WITH
CLEANER COTTON FIBER**

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Abstract

Bract dust and endotoxins produced by bacteria colonizing bracts have been implicated as major causal factors in the human respiratory syndrome, byssinosis. Several plants were found among advanced generation progeny of Pima-Upland crosses which exhibited diminutive bracts. The diminutive bract trait observed here would appear to be an example of transgressive segregation for this character, as diminutive bract plants had smaller bracts than the Deltapine Acala 90(Upland)parent, which itself had markedly smaller bracts than the Pima S-6 parent. Hand harvested, machine ginned fiber samples from these plants produced visually cleaner lint than did representative control plants harvested and handled identically. As well as being smaller, diminutive bracts tended to have fewer dentations, a greater mass per unit area, and were not closely oppressed to the open boll; characteristics which contributed to a greater likelihood of falling away from the boll during harvest. Crosses between the diminutive bract plants will be harvested and analyzed for dust and trash in Fall, 1995. The hope is that diminutive bract plants will be found to produce competitive lint yields and decrease causal factors of byssinosis.