

SEEDBORNE *ALTERNARIA MACROSPORA*: TRANSMISSION AND PENETRATION INTO  
*GOSSYPIUM BARBADENSE* (CV. PIMA) COTTON SEEDS

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The fungus *Alternaria macrospora* Zimm., which causes leaf and boll spot in cotton, was detected for the first time in 1981 in locally grown commercial seed lots of *Gossypium barbadense* (cv. 'Pima'). The fungus was not found, however, in seed lots of *G. hirsutum* (cv. 'Acala').

The pathogenicity of the isolated fungus was determined by inoculation tests on the cotyledons of the cotton seedlings. The fungus seed – plant transmission was demonstrated in growing-on tests, under controlled conditions. The location of the fungus in the seed and its way of penetration into the seed tissues were studied. It was found that most of the bolls spotted by *A. macrospora* also carried infected seeds. The infection rate of fuzzy, mechanically delinted seeds ranged between 14% and 70% in different boll samples. In the major part of these seeds the fungus was located on the seed surface only; chemical delinting decreased the infection rate considerably. In the delinted seeds the fungus was observed mainly in the chalazal end of the seed. The location of the fungus in the different parts of the seed was determined by planting the different components. The fungus was isolated from the seed coat, chalazal cup and embryo tissue.

In conclusion, it seems that the fungus penetrates from the infected boll to the seed surface. Under certain conditions, in the chalazal end of the seed, the fungus succeeds in reaching the embryo tissue *via* the seed coat and chalazal cup. Our findings indicate that infected seeds can become a source for spreading *A. macrospora* in cotton fields. (L)