

**RECOVERY OF THE FUSARIUM WILT PATHOGEN FROM  
PLANTS NOT DISPLAYING FOLIAR SYMPTOMS**

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**Abstract**

Fusarium wilt is a serious disease of cotton that is readily diagnosed by wilting, chlorosis and/or necrosis of the foliage. Plants often do not display foliar symptoms so diagnosis is usually based on the observance of stem discoloration. Because foliar symptoms often fail to develop, the incidence of disease in a field may be greater than reported. The objective of this research was to estimate the incidence of Fusarium wilt in a field based on the percentage of plants with foliar symptoms, with stem discoloration, and from which *Fusarium oxysporum* was recovered. The percentage of plants with foliar symptoms and stem discoloration was determined on 64 plants each in July and August. At the same time, sections of stems from all plants were plated on acidified potato-carrot agar to determine the percentage of stems colonized by *F. oxysporum*. The cultures of *F. oxysporum* that were recovered from the stems were then tested for pathogenicity on cotton seedlings. None of plants displayed foliar symptoms, but 42 and 66% of plants had discolored stems in July and August, respectively. *Fusarium oxysporum* was isolated from 33 and 50% of all stems, and 78 and 76% of the discolored stems in July and August, respectively. *Fusarium oxysporum* was rarely isolated from stems without stem discoloration. Nearly 100% of the *F. oxysporum* cultures recovered caused wilt symptoms on cotton seedlings. These results indicate that without destructive sampling to observe stem discoloration, disease incidences and disease losses might be underestimated.