Pathogenic Races and Inoculum Density of *Fusarium oxysporum* f.sp. *niveum* in Commercial Watermelon Fields in Southern Turkey

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Systematic surveys for *Fusarium oxysporum* f.sp. *niveum* (*Fon)* were conducted in a total of 141 fields in the watermelon-growing areas of the Mediterranean and southeastern Anatolia regions of Turkey in 2004 and 2005. The mean incidence and prevalence of the disease were higher in the southeastern Anatolia region than in the Mediterranean region. Maximum disease incidence during the 2-year survey was 46.3%. However, mean disease prevalence ranged from 27.3% to 63.6% in southern Turkey. Of the 33 isolates of *Fon* recovered, 19 were recovered from Adana, two from Mersin, one from Gaziantep, four from Sanlıurfa, five from Adıyaman, one from Batman, one from Diyarbakır. The physiological race of each isolate was determined by the disease reaction in five differential watermelon cultivars (*Citrullus lanatus* (Thunb.) Matsum. & Nakai). Of the isolates recovered from the Mediterranean region, 47.6% were identified as race 0, 38.1% as race 1, and 14.3% as race 2. Among the 12 isolates recovered from the southeastern Anatolia region, four isolates were identified as race 0, and eight isolates as race 1. Race 2 was not detected in this region. This is the first report of *Fon* races 0 and 1 in southeastern Anatolia. The population density of *Fon* in both the Mediterranean and southeastern Anatolia regions ranged from 116.1 to 4444.7 CFU g^{-1} of soil. The mean inoculum density was much higher in watermelon-growing areas in the southeastern Anatolia region in comparison with the Mediterranean region, with a mean inoculum density of 1547.2 CFU g^{-1}. Race 0 and race 1 were the most prevalent races in the fields with the mean highest and lowest inoculum density, respectively.

KEY WORDS: *Citrullus lanatus;* Fusarium wilt; inoculum level; Mediterranean region; race; southeastern Anatolia region.

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