Single-Site Root Inoculations on Eggplant with Microsclerotia of *Verticillium dahliae*

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For many soilborne plant pathogens, disease results from multiple root infections. Studying the infection dynamics of single or multiple propagules of these pathogens applied at one site of the root system may be the basis for understanding the development of disease caused by multiple root infections. The effect of single-site inoculations of roots of eggplant seedlings with microsclerotia of the wilt-causing fungus *Verticillium dahliae*, was studied. Experiments were conducted using specially designed pots which enabled the incorporation and removal of inoculum in the soil. Inoculations were carried out by placing microsclerotia, firmly embedded in small sections of polypropylene screen filter, directly below the growing tip of the main root of young eggplant seedlings. Three to 4 days after inoculation, the root had grown over the screen filter, and the filter was removed. Root platings showed high infection levels at the inoculation site, but also several (discrete) root infections were noted some distance above and below the site of inoculation. Exposure of the root to the lowest number of microsclerotia (26/inoculation site) was sufficient to lead to up to 65% root infections. Number of plants with root infections declined over time, ranging from a maximum of 65-100% 2–4 wk after inoculation, to 10–29% at 6–7 wk after inoculation. Apparently, *V. dahliae* died in nonsystemic infections after some time.

KEY WORDS: Inoculum potential; root infection; *Solanum melongena* L.; eggplant; *Verticillium dahliae*.

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