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Dept. of Mycology and Plant Pathology,
M.A.C.S. Post-Graduate Res. Inst.,
Poona-4, *December* 28, 1970.

B. A. Ullasa.

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OCCURRENCE OF *FUSARIUM* WILT ON MUSKMELON

Fusarium wilt disease of muskmelon (*Cucumis melo* L.) was observed in *Delta Gold* and *Bangalore* varieties in the varietal collection plots at the Annamalai University Experimental Orchard during September-November 1969 and 1970. The leaves of the affected plants turned yellow and later they lost turgidity resulting in drooping and wilting. The vascular bundles of the roots and stem were black. Deep fissures were formed in the stem at ground level and in the above two internodes (Fig. 1).

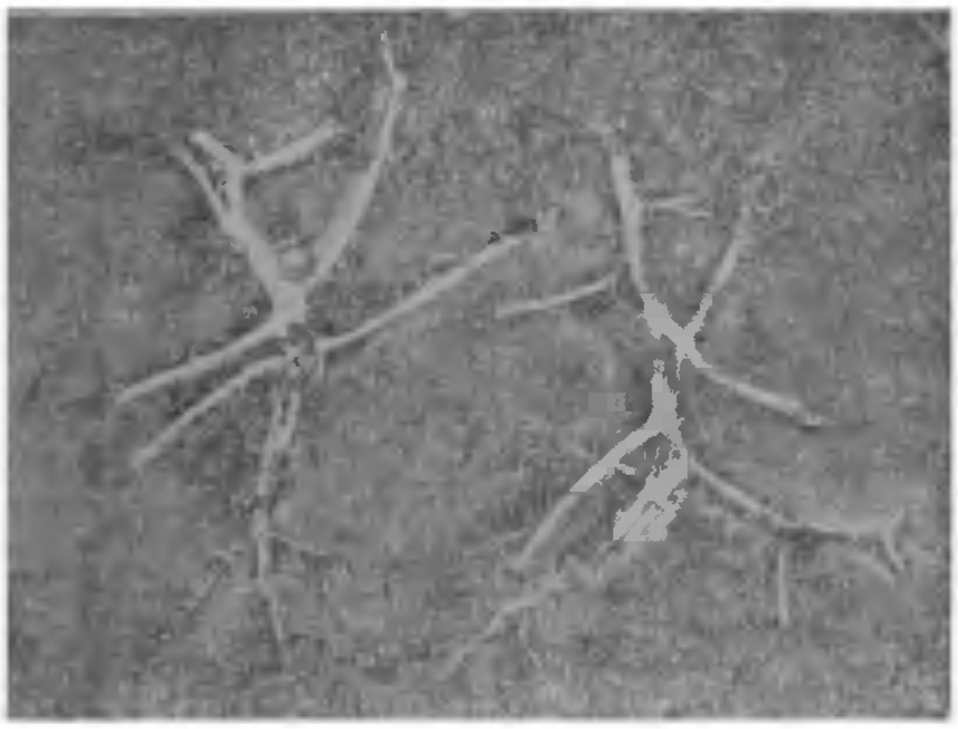

FIG. 1. Stems of the wilted plants showing black streaks and fissures.

The causal organism was isolated on potato dextrose agar (PDA) and the pathogenicity was established on its original host. The fungus produced abundant white aerial mycelium with a flocculent appearance. In PDA, the colour of the submerged mycelium was light cream and in Czapek's agar, yellowish- to brownish-red. The fungus readily produced microconidia in the early stages of growth while macroconidia were observed only in aged cultures exposed to light. Chlamydospores and sclerotia were observed when the fungus was grown in soil extract agar.

Microconidia 1 to 3-celled, 3·8–15 × 1·9–3·7 μ; macroconidia 3 to 5-septate, sickle-shaped, 26·1–39·2 × 2·9–4·2 μ; chlamydospores 1 to 2-celled, terminal or intercalary, 5·7–11·3 × 5·7–8·4 μ; sclerotia dark brown, spherical, 18·0–22·5 μ in diameter (Fig. 2).

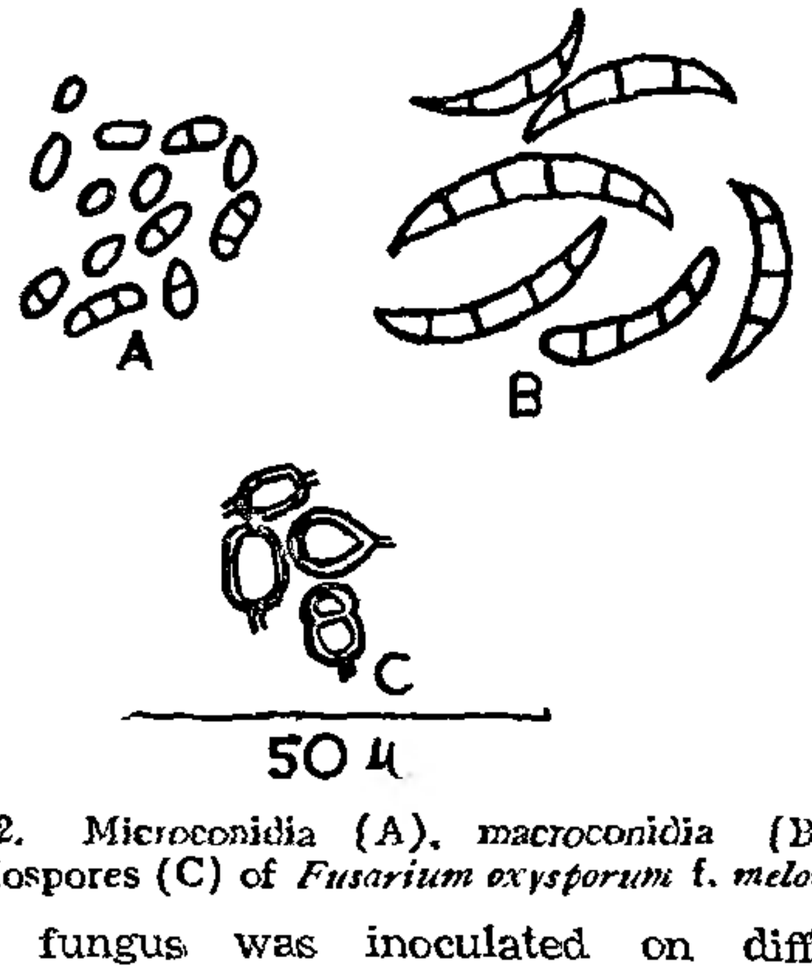

FIG. 2. Microconidia (A), macroconidia (B) and chlamydospores (C) of *Fusarium oxysporum* f. *melonis*.

The fungus was inoculated on different muskmelon varieties, *viz.*, *Meloncella*, *Kiku*, *Nambukin*, *Gin*, *Schoon's Hard Shell*, *Long John*, *Maine Rock*, *Perlita*, *Delicious 51*, *Eiju*, *Iroquois*, *Harvest Queen*, *O'gon No. 9*, *Dosakaya* and a wild melon [*Cucumis callosus* (Rottl.) Cogn.], following the method of Wensley and McKeen.[1] All the varieties were found to be susceptible except the wild melon.

On comparison, the characteristics of the fungus agreed with *Fusarium oxysporum* f. *melonis*[2-4] and hence the fungus is identified as *Fusarium oxysporum* f. *melonis* (Leach and Currence) Snyder and Hansen.

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