SOME LABORATORY AND FIELD OBSERVATIONS ON THE POWDERY MILDEW DISEASE OF SESAME

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The life cycle of the powdery mildew fungus (Oidium sp) on sesame (Sesamum indicum L.) was initiated with the deposition of conidia and was completed in seven days. The germinated conidia produced colonies and lesions on the host surface and finally conidiophores and chains of conidia. Conidial production was maximum on nine day old lesions but the lesions remained productive upto 12-13 days.

Temperatures around 25 C were favourable to all stages of the fungus and conidia preferred 100% r.h for germination. Presence of free moisture was injurious to germination but only long periods of leaf wetness reduced infection and sporulation. Presence of light enhanced sporulation while it had no effect on other stages in the fungal development.

All the leaves of sesame except very young and very mature ones were susceptible to infection. Both the leaf surfaces were equally affected by the powdery mildew fungus.

In the field, the distribution of conidia was slightly higher in the horizontal direction than in the vertical direction. Maximum amount of conidia deposited at three feet above ground level. High amounts of spore captures were recorded during the day with the maximum between 8.30 am and 1.30 pm.