

Agri. Res. J. Kerala, 1972, 10 (2)

THE MODE OF ENTRY OF *CERCOSPORA PERSONATA* (BERK.  
AND CURT.) ELL. & EV. IN THE LEAF OF GROUNDNUT  
PLANT (*ARACHIS HYPOGAEA* L.)

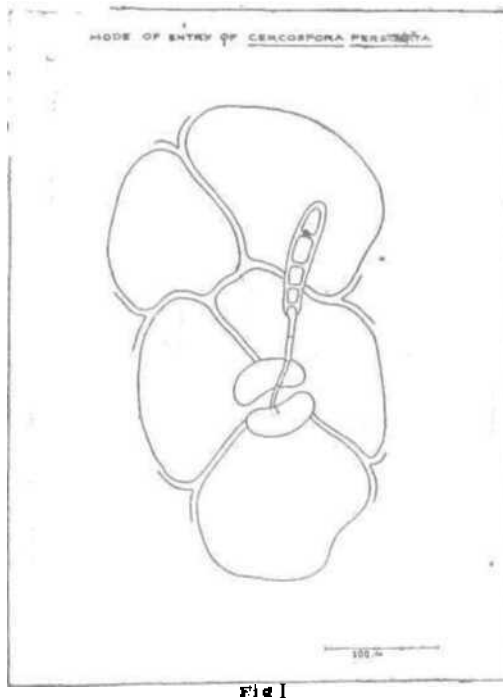
While studying certain aspects of *Cercospora* leaf spots, an attempt was made to examine the mode of entry of the pathogen in the host tissue. *Cercospora personata* (Berk. and Curt.) Ell. & Ev. which causes the 'tikka' disease in groundnut was chosen for the study. A highly susceptible variety of groundnut, namely, TMV-2 was used as the host.

Leaves of groundnut at different stages of growth were collected, washed in sterile water and placed in sterile petridish moist chambers, Gonidial suspension of *Cercospora personata* was sprayed on both surfaces of the leaflets. The conidia were secured from naturally infected leaves. After 12, 24 and 48 hours of incubation at room temperature, the inoculated leaflets were cut into small bits and processed by the following method as described by Warren & Brown (1961).

Alcoholic lacto-phenol cotton blue solution containing phenol-10g., lactic acid-10 ml., glycerine-10 ml., aniline blue-0.028 g., and distilled water 10 ml. was prepared and the leaf bits were placed in a mixture containing one part of the above solution and two parts of absolute alcohol, boiled for one minute and then allowed to settle down. The quantity of mixture used was at the rate of 5 ml. for every leaf bit. The solution was again boiled for two minutes and kept aside for 48 hours. The leaf bits were then taken out, washed gently in distilled water, placed in a saturated solution of chloral hydrate for 23 hours for clearing. They were then mounted in glycerine jelly and examined under the microscope.

The germinating spores as well as the entry of the germ tubes into leaf cells were visible under the high power objective of the microscope. The germ tubes were found to enter through the stomata (Fig. 1).

The germ tubes were septate and they were found to emerge from the end cells of spores. Appressoria were absent. Entry occurred 12 to 24 hours after inoculation. No instance of direct penetration was noticed. Similar entry of the germ tubes through stomata was reported by earlier workers like Hemingway (1957) and Abdou (1967). The former author, however, noted direct penetration also through the epidermis.



## REFERENCES

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