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## OBSERVATIONS OF *HELICOTYLENCHUS ABUNAAMAI* IN HOST TISSUE

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*Helicotylenchus abunaamai* Siddiqi is prevalent at Bhubaneswar, particularly in the upland areas of the university farm. Host-range studies indicated that little millet, rice and cotton were the most favourable hosts for this nematode (Padhi and Das, 1982). The present investigation was concerned with observations on the feeding habits of *H. abunaamai* on the three hosts.

Surface sterilized seeds of cotton (cv. Krishna), rice (cv. Annapurna) and little millet (cv. Koraput local) were sown singly in clay pots (8 cm diam) containing 500g/pot autoclaved soil. Twenty days after germination, each plant was inoculated with 1000 nematodes and inoculated plants were grown for one month. Uninoculated plants served as controls. Plants were removed from the pots and the entire root system washed in running tap water and stained for one min in boiling acid fuchsin - lactophenol, destained for 10 hours in clear lactophenol and then examined under a microscope to determine the mode of *H. abunaamai* infection.

Juveniles and adults of *H. abunaamai* were found with their heads attached at different locations on the roots of the hosts tested. Nematodes were found on the tap root and secondary roots of cotton. They were observed feeding ectoparasitically on epidermal cells of all the hosts and also endoparasitically when they had entered inside the roots of rice and little millet. Adults were observed in semiendoparasitic coiled feeding position mostly on cotton roots and occasionally in this position on rice and little millet roots. All life stages

were found embedded in rice and little millet roots either below the epidermis or inside the cortex, some lying in close proximity to the vascular system. Infection sites in rice and little millet roots were swollen with numerous root hairs. Minute brown lesions were observed at feeding sites and points of entry.

The nematode had no preference for a particular region of the host as specimens were seen at different locations on roots of cotton, rice and little millet. All stages of the nematode, including eggs, were seen in the cortical tissues.

#### L I T E R A T U R E C I T E D

PADHI N. N. and DAS S. N., 1982 - Host-range of the spiral nematode, *Helicotylenchus abunaamai*, *Indian J. Nematol.*, 12: 53-59.

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