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Short Scientific Reports

Trophotylenchulus floridensis Raski, a new Endoparasite of *Piper nigrum* L. from Kerala*

Meloidogyne incognita and *Radopholus similis* are the two important endoparasitic nematodes feeding and damaging the roots of black pepper (*Piper nigrum* L.) in Kerala (Sundararaju, Koshy and Sosamma, 1979). While examining the root samples of black pepper collected from Calicut district, Kerala, the authors came across eggs, larvae and swollen adult females of another endoparasitic nematode which comes close to *Tylenchulus semipenetrans*, the citrus nematode causing slow decline of citrus in U.S.A. Adult females and larvae were examined and identified as *Trophotylenchulus floridensis* Raski, (Raski, 1957) based on the dimensions and morphological characteristics. The dimensions of the female are:

L = 310 μm; a = 6.9; b = 3.4; c = ?
V = 75; stylet = 11 μm.

Body swollen, spiral and tapering posterior to vulva. Circumoral elevation of lip region present. Median bulb massive and terminal bulb pyriform with a long isthmus. Excretory pore opposite or just posterior to the terminal bulb. Ovary reflexed twice, posterior uterine branch absent. Spermatheca with sperms inside. Anal opening indistinct marked by slight elevation of cuticle. Tail terminus bluntly rounded. The measurements of the larvae are:

L = 322 μm; a = 35; b = 3.1; c = ?
stylet = 12.5 μm.

Almost straight when fixed. Stylet well developed with knobs projecting posterior. Circumoral elevation of the lip region distinct. Excretory pore opposite or just posterior to the terminal bulb.

Out of 187 samples collected from 21 pepper gardens, 28 samples from nine gardens had this nematode (15%).

The validity of the genus *Trophotylenchulus* was questioned by Allen (1960), Maggenti (1962) and more recently by Samsoen and Ali (1978). However the genus differs markedly from *Tylenchulus* in the position of excretory pore which is anterior and hence considered as a valid genus.

Trophotylenchulus genus and species are recorded for the first time in India. Black pepper is also reported to be its host for the first time.

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Control of Germination and Tube Elongation in *Theobroma cacao* L. Pollen*

The role of various growth regulators in pollen germination and tube growth has been studied in recent years (Sondheimer and Linskens, 1974; Balasimha and Tewari, 1977). The germination and tube extension are accompanied by initiation of protein synthesis and rapid formation of polysomes (Linskens, Schrauwen and Konings, 1970; Mascarenhas and Bell, 1969). The basic requirements for the *in vitro* germination of cacao pollen has been standardised (Ravindran, 1977). The role of growth regulators in pollen germination and tube growth in cacao is described in this paper.

Freshly opened flowers of *Theobroma cacao* L. var Amazon Forastero were collected at 08.00 hr. The pollen grains were dusted on 1.5 cm^2 cellophane papers and floated on liquid medium of Brewbaker and Kwack (1963) containing 15% sucrose with or without test chemicals. The cellophane paper was removed after 1, 2 or 3 hr incubation, killed and stained with phenolaniline blue. Germination and

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