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ON THE OCCURRENCE OF *APHELENCHOIDES BESSEYI* AND SOME FREE LIVING NEMATODE SPECIES IN *STYLOSANTHES HAMATA* SEEDS

by
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Summary. *Stylosanthes hamata* seeds from CSIRO experimental Stations, Queensland, Australia, were found to harbour internal infection of *Aphelenchoides besseyi*. This seems to be the first record of *A. besseyi* on *S. hamata*.

Seeds of *Stylosanthes hamata* Taubert, an annual forage legume, received in our laboratory from CSIRO Experimental Research Station, Queensland, Australia, for quarantine clearance were found to be infected with nematodes. For extraction of the nematodes, about one hundred seeds were washed in sterilized water to remove surface contaminants and then soaked in 1% hydrogen peroxide (H_2O_2) solution for 24 hr at 27 °C. The seeds were then teased and live nematodes thus recovered were identified as *Aphelenchoides* sp. (5), *Aphelenchus* sp. (3) and *Rhabditids* (10).

The *Aphelenchoides* specimens were tentatively identified as *Aphelenchoides besseyi* Christie. To obtain more adult specimens for confirmation of specific identification, three fourth stage females and two adult males were introduced on the fungus *Alternaria alternata* (Fr.) Keissler, 1912 cultured on potato dextrose agar and incubated at 27 °C. After 15 days, the plate was washed with water and approximately 380 adults (female: male ratio 2:1) were obtained from the suspension. Based on morphological characters and measurements the nematode identification was confirmed. The measurements of this population are given below.

10 ♀♀ L = 0.63-0.87 (0.72) mm, a = 27-36 (34), b = 10-13 (11.1), b' = 3.9-4.7 (4.2), c = 16-18.6 (17.2), V = 60-76 (67), Stylet = 12.6-14 (13) μ m.

10 ♂♂ L = 0.63-0.73 (0.68) mm, a = 25-33 (31.6), b = 8.8-10 (9.1), b' = 3.6-4.8 (3.9), c = 15-17.3 (16.6), T = 35-41, Stylet = 11.5-13 (12) μ m.

There are some variations in the body measurements (particularly L, a and c) as compared to the original description. The measurements from Christie, 1942 are: ♀♀ L =

0.66-0.75 mm, a = 32-42, b = 10.2-11.4, c = 17-21, V = 68-70. ♂♂ L = 0.54-0.62 mm, a = 36-39, b = 8.6-8.8, c = 15-17. These variations could be due to different host and locality.

Based on the available literature, the authors believe this to be the first host record of *A. besseyi* on *S. hamata*. *Glycine hispida* is the only other legume host recorded for this nematode (Barat *et al.*, 1966).

The finding reported above as well as previously reported host range encompassing about 19 plant families (Fortuner and Orton Williams, 1975; Lal and Mathur, 1988; Gokte *et al.*, 1989) points towards wide adaptability of this nematode and emphasises the fact that all types of planting material under exchange must be subjected to compulsory seed testing for nematodes irrespective of the host status of the planting material.

Literature cited

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