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(Continued on inner 3rd cover)

TWO NEW SPECIES OF *BASIRIA* SIDDIQI, 1959 (TYLENCHIDA)
FROM HARYANA, INDIA

BY

HARISH K. BAJAJ and D. S. BHATTI

Department of Nematology, Haryana Agricultural University,
Hissar-125004, India

Three species of *Basiria*, viz., *B. hissariensis* n. sp., *B. indica* n. sp., *B. graminophila* Siddiqi, 1959 and *Psilenchus hilarulus* de Man, 1921, found associated with various crops in Haryana state, are being reported. *B. hissariensis* 0.46-0.51 mm long ; spear with minute swellings at base ; MB at 38-42% of neck length from anterior extremity ; V=67-70 ; tail 6-9 anal body-widths long ; spicules 12 μ m long. *B. indica* 0.69-0.85 mm long ; spear with basal knobs ; MB at 55-57% of neck length from anterior extremity ; V=77-78 ; tail 7-8 anal body-widths long with clavate terminus ; spicules 15-17 μ m long. Validity of *Basiroides* Thorne & Malek, 1968, *Clavilenchus* (Jairajpuri, 1965) Thorne & Malek, 1968, *Neopsilenchus* Thorne & Malek, 1968 and *Psilenchus minor* Siddiqi, 1963 has been discussed.

INFLUENCE OF PESTICIDES ON RHIZOPHERE MICROBIAL POPULATION OF MUNG AND WHEAT CROPS

BY

INDERJIT SINGH and S. K. PRASAD*

Department of Plant Pathology, Punjab Agricultural University,
Ludhiana, Punjab, India

The Pesticides DD, EDB, DBCP, aldicarb, dazomet carbofuran, thionazin, fensulfotion, thionazin + phorate, dimethoate, phorate and disulfoton were tested for their effect on rhizosphere microbial populations (total bacteria, *Azotobacter*, fungi and actinomycetes) of *mung* and wheat crops under field and pot conditions. Of these DD, DBCP, aldicarb, dazomet, carbofuran, thionazin and fensulfotion were used in more than one experiment under similar or varying dosages. The rhizosphere studies were made at 55, 65 and 80 days after treatment in case of *mung* (field and pot) and wheat experiments respectively. Dazomet was most inhibitory for rhizosphere soil microbes. DD showed least effect in preventing their build up, while DBCP, aldicarb, carbofuran and fensulfotion were moderately inhibitory. *Azotobacter* was most susceptible to the pesticidal treatments.

COMPARATIVE EFFICACY OF DIFFERENT LEVELS OF NITROGEN
AND PHOSPHORUS SUPPLEMENTED WITH ORGANIC AMENDMENTS
ON TOMATO GROWTH AND ASSOCIATED
ROTYLENCHULUS RENIFORMIS

BY

T. BADRA¹ and N. A. H. ELBARY

Nematology Research Centre, Faculty of Agriculture, Cairo University, Giza, Egypt

The effect of adding three different levels of mineral nitrogen or phosphorus in combination with two organic amendments was studied in terms of growth of tomato in soil infested with *Rotylenchulus reniformis*. Inorganic forms of N or P further encouraged abundant growth of tomato plants without any adverse effects as compared to those receiving none or an organic amendment alone. The degree of plant growth enhanced by poultry dropping alone or in combination with either element level was better than pigeon droppings. Soil and root populations of *R. reniformis* were reduced steadily with increasing doses of N incorporated with the organic amendments. Slight increases in infestation and invasion of *R. reniformis* were associated with lower and medium doses of phosphorus plus pigeon droppings, while the highest dose of this element in combination with poultry droppings highly minimized invasion. Incorporation of mineral N or P with organic amendments appeared promising for plant growth as well as nematode control.

NEMATODES FROM WEST BENGAL (INDIA) VI. SPECIES
OF CRICONEMATOIDEA (TYLENCHIDA)

BY

QAISER H. BAQRI

Zoological Survey of India, Calcutta, India

Nothocriconema degrissei n. sp. and *Gracilacus janai* n. sp. are described from West Bengal. *Hemicriconemoides cocophillus* (Loos, 1949) Chitwood & Birchfield, 1957; *Hemicriconemoides mangiferae* Siddiqi, 1961; *Macroposthonia ornata* (Raski, 1958) de Grisse & Loof, 1965; *Macroposthonia onoensis* (Luc, 1959) de Grisse & Loof, 1965; and *Paratylenchus dianthus* Jenkins & Taylor, 1956 are also being reported. Besides, *Criconemoides brevistylus* Singh & Khera, 1976 is transferred to the genus *Macroposthonia* de Man, 1880.

BIOCHEMICAL ALTERATIONS INDUCED BY *MELOIDOGYNE*
INCOGNITA IN BRINJAL

BY

INDERJIT SINGH, JATINDER SHARMA and RAJINDER SHARMA*

Department of Plant Pathology, Punjab Agricultural University,
Ludhiana, Punjab

Estimation of protein, free amino acids, proline, starch, reducing sugars and phenols in the healthy and infected roots of brinjal with *Meloidogyne incognita* was made. An increase in protein, amino acids and proline content was observed in infected roots over that of healthy roots. Proline increased to 220% after 90 days of infection. A decrease in starch and reducing sugar content was observed in the infected roots, while phenol content increased in infected roots.

SOME STUDIES ON AXONCHIIINAE (BELONDIRIDAE) FROM MANIPUR, INDIA

BY

M. SHAMIM JAIRAJPURI and CH. DHANACHAND

Section of Nematology, Department of Zoology, Aligarh Muslim University
Aligarh-202001, India.

Phallaxonchium n. gen. closely related to *Axonchium* Cobb, 1920 is proposed for a species of belondirid nematode collected from Manipur, India. It is unique in having 3.5-4.0 anal body-widths long attenuated spicules. *Phallaxonchium attenuatum* n. sp. is 1.1-1.4 mm long; lips offset; muscle sheath with straight bundles; spicules 68-72 μ m long; lateral guiding pieces trifold distally; ventromedian supplements a pair and spaced; anterior genital branch of females sac-like and 3-5 body widths long; vagina inclined posteriad, without sclerotization; tail bluntly rounded in both the sexes with thick cuticle at the terminus, and very long and filiform tail in the first stage juveniles. †Two of the subgenera under the genus *Axonchium*, viz., *Dactyluraxonchium* Coomans & Nair, 1975 and *Heynsaxonchium* Coomans & Nair, 1975 are raised to the generic status.

SOIL AND PLANT PARASITIC NEMATODES FROM MAHARASHTRA.
INDIA. VI. THREE NEW SPECIES OF *HELICOTYLENCHUS*
STEINER, 1945 (TYLENCHIDA : NEMATODA)

BY

K. S. DAREKAR* and EKRAMULLAH KHAN

Division of Nematology, Indian Agricultural Research Institute, New Delhi-110012

Survey of sugarcane crops in Maharashtra State revealed the presence of three new species of *Helicotylenchus*. *H. incisus* n. sp. (recovered at Pimpalgaon-Baswant, dist., Nasik) has conoid-truncate, smooth lip region, 24–26 μm long spear with anteriorly cupped knobs, $O=40-48$; shorter oesophageal lobes; short, subclavate tail with hemispherical terminus bearing indistinct striations, 4–5 μm thick cuticle at tail terminus; phasmids 15–19 annules anterior to anus. *H. obtusicaudatus* n. sp. (found at Central Campus, Mahatma Phule Krishi Vidyapeeth, Rahuri, dist., Ahmednagar) has conoid-truncate, smooth lip region; 23–25 μm long spear with flat and laterally indented knobs; $O=58-68$; longer oesophageal lobes; short, clavate tail with hemispherical terminus possessing indistinct striations; phasmids 10–15 annules anterior to anus. *H. paradihysteroides* n. sp. (collected at Padegaon, dist., Pune) has conoid-truncate lip region with 4–5 annules; 23–25 μm long spear with anteriorly cupped knobs, $O=45-52$; slightly offset spermathecae, dorsally convex, broadly rounded tail with a small terminal mucro; phasmids 4–5 annules anterior to anus.

SOIL AND PLANT PARASITIC NEMATODES FROM MAHARASHTRA,
INDIA. VII *INDOKOCHINEMA CONICAUDA* N. GEN., N. SP. AND
KOCHINEMATIDAE N. FAM. (DORYLAIMIDA : NEMATODA)

BY

K.S. DAREKAR* AND E. KHAN

Division of Nematology, Indian Agricultural Research Institute,
New Delhi 110012

Indokochinema n. gen. is distinctive in having stirrup shaped labial amphids with slit-like apertures, shorter spear with broad aperture ; monodelphic, opisthodelphic female gonad ; reflexed ovary and sclerotized vulva. *I. conicauda* n. sp. (collected around banana roots, *Musa paradisiaca* L. at Uruli-Kanchan, Pune) has labial, stirrup-shaped amphids ; 7-9 μ m long spear with 1.5 μ m aperture ; spear extensions rod-like, double guiding ring, cardia rounded flat, sclerotized vulva ; single, reflexed posterior ovary and convex-conoid female tail with rounded terminus. Kochinematidae n. fam. is proposed for *Kochinema* Heyns, 1963 and *Indokochinema* n. gen. has been proposed.