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SUSCEPTIBILITY OF PLANTS TO PIGEON-PEA CYST NEMATODE,
HETERODERA CAJANI

BY

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One hundred and five plant species, representing 58 genera in 21 families were tested for their suitability as hosts of *Heterodera cajani*. Nineteen of them were recorded as hosts. Except *Sesamum indicum* all hosts belonged to the family Leguminosae.

PRISMATOLAIMUS INDICUS SP. N. AND *ONCHULUS LONGICAUDA*
(DADAY, 1899) ANDRÁSSY, 1964 (NEMATODA : ONCHULIDAE)
FROM MARATHWADA, INDIA*

BY

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Prismatolaimus indicus sp. n., collected from soil around the roots of rose, has monoprodelfic reflexed gonad and a small claw-like process at the tail terminus. The base of the stoma is armed with two dorsal teeth, placed one behind the other, and a pair of subventral teeth. *Onchulus longicauda*, collected from soil around the roots of jasmine, is reported for the first time from India. These specimens possess four short posterior cervical bristles in addition to the four cervical bristles described by earlier workers.

STUDIES ON THE 'MOLYA' DISEASE OF WHEAT AND BARLEY

BY

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Survey carried out in Mohindergarh district (Haryana) revealed that wheat and barley fields in Narnaul tehsil were heavily infested with *Heterodera avenae*. Pot experiments with varying levels of initial population indicated that 10 cysts or more per kg of soil caused appreciable loss in grain yield. In a pot trial on barley, Telone and D-D proved to be the best nematicides with reference to nematode control as well as crop yield. Dasanit and MOCAP were similar and better than DBCP. In a field trial on wheat, preplanting application of D-D at 400 l/ha gave best results. Pot experiments with soil amendments and fertilizers indicated that mustard cake decreased nematode population and improved wheat and barley yields while fertilizers like N and P, though improving yield, promoted nematode numbers also. Potash inhibited nematodes but could not improve crop yield significantly. There were indications that wheat varieties Kalyan Sona and PV 18, and barley variety JB 226 were tolerant to the nematode and could be raised on infested soil.

THE STATUS OF *AXONCHIUM CAUDATUM* WILLIAMS, 1958 WITH
SOME OBSERVATIONS ON THE JUVENILES OF *AXONCHIUM*
AMPLICOLLE COBB, 1920

BY

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The second-stage juveniles of *Axonchium ampicolle* Cobb, 1920 have convex-conoid to elongate tails and are similar morphologically to *Axonchium caudatum* Williams, 1958. Since the description of *A. caudatum* is based on juveniles (second-stage) it is regarded as *species inquirenda*. Observations on the second-, third- and fourth-stage juveniles and the adult females of *A. ampicolle* are also recorded in the present study.

PATHOGENICITY OF *HETERODERA LESPEDEZAE* ON KOBE LESPEDEZA*

BY

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In greenhouse pathogenicity tests, 16 days-old kobe lespedeza seedlings inoculated with 700 *Heterodera lespedezae* cysts/pot and 30 days-old seedlings inoculated with 500 cysts/pot gave stunting and somewhat stimulatory effects, respectively. Seedlings of different ages, when inoculated with 600 cysts/pot, revealed that the younger the seedlings the greater was the adverse effect on plant growth.

**STUDIES ON THE EFFECT OF DIFFERENT LEVELS OF CERTAIN
ELEMENTS ON THE DEVELOPMENT OF ROOT KNOT-I. EFFECT
OF N P K LEVELS ON GROWTH OF OKRA AND ROOT KNOT
DEVELOPMENT**

BY

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The optimal growth of uninoculated okra plants and those inoculated with *Meloidogyne incognita*, was obtained at double strength of nitrogen (2N) whereas in phosphorus and potassium at full strength (1P and 1K respectively). Roots of infested plants contained more N P K than roots of uninfested plants. On the contrary there was less N P K in aerial parts of infested plants as compared to uninfested plants.

**THE EFFECT OF DIFFERENT SOIL TYPES ON THE DENSITY OF
NEMATODE POPULATIONS***

BY

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Inoculation experiments with monospecific nematode populations on to a suitable host plant in artificially composed sand/clay mixtures and in natural soils, and of naturally occurring mixed populations from different sources on selected host plants in natural soils indicate that the textural composition as well as other unidentified soil factors have a determinant influence on the fate of the inoculated nematodes.

**A REDESCRIPTION OF *TYLENCHORHYNCHUS PHASEOLI* SETHI
AND SWARUP, 1968**

BY

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The description of *Tylenchorhynchus phaseoli* Sethi & Swarup 1968, was inadequate, hence a redescription of this species based on a large number of specimens collected from different localities in India is provided. In having a distinct notch at the distal end of bursa, the species is unique among the *Tylenchorhynchus* species which normally have the bursa covering the entire tail tip without notch.

FOUR NEW SPECIES OF CRICONEMATOIDEA (NEMATODA)
FROM INDIA

BY

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Nothocriconema cardamomi sp. n., *N. coorgi* sp. n., and *Hemicycliophora argiensis* sp. n., collected from soil around the roots of cardamom at Coorg, Mysore, and *Hemicycliophora musae* sp. n., isolated from soil around roots of banana at Delhi are described and diagnosed.

CHRONOGASTER CITRI SP. N. (NEMATODA : PLECTIDAE) AND
ADDITIONAL INFORMATION ON *C. TYPICA* (DE MAN, 1921)
FROM INDIA

BY

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Chronogaster citri sp. n., collected from soil around roots of *Citrus* sp. is characterised by the absence of longitudinal striae on the lip region and the presence of one mucro and two spines on the tail. *C. typica* (de Man, 1921) from paddy soils in Jammu is also reported.

INFLUENCE OF INOCULUM DENSITY ON THE FINAL POPULATION
OF ROOT-KNOT NEMATODE (*MELOIDOGYNE GRAMINICOLA*)
IN RICE

BY

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The influence of initial inoculum of *Meloidogyne graminicola* on the final population in rice has been investigated. When 12 days-old plants were inoculated with 1 to 4 egg masses per seedling, the rate of increase in the final population at the end of 30 days was much higher as compared to that obtained with an initial inoculum level of 8 to 32 egg masses per seedling. Factors affecting this differential rate of multiplication following different levels of inocula are discussed.