

EFFECT OF SOME INDIGENOUS PLANT MATERIALS AND OIL-CAKE AMENDED SOIL ON THE GROWTH OF TOMATO AND ROOT-KNOT NEMATODE POPULATION : B. K. Goswami and K. Vijaylakshmi, Division of Nematology, Indian Agricultural Research Institute New Delhi-12.

Applications for both soil organic amendments and dry products of certain indigenous plants which are known to possess nematicidal properties have received attention in the recent years for the control of plant parasitic nematodes. In the present study the efficacy of ten dried plant materials viz., *Eclipta alba*, *Cannabis sativa*, *Chenopodium amaranticolor*, *Atropa belladonna*, *Amaranthus* sp., (whole plant) *Calotropis gigantea*, *Ricinus communis*, *Datura metch*, *Mangifera indica* and *Azadirachta indica* (leaves only) and five oil cakes, *Carthamus tinctorius*, *Shorea robusta*, *Calophyllum inophyllum*, *Pongamia glabra* and *Azadirachta indica* were tested against root-knot nematode on tomato. Each of the dried plant material and cake was ground to fine power and tests conducted in 10 cm plastic pots. Three dosages were selected after the preliminary trial for each soil amendment. For every dosage, six replications were maintained out of which three were inoculated with 1000 larvae of *Meloidogyne incognita* per pot while the other three were left uninoculated as checks. Besides, adequate checks were also kept without any amendments. Observations were recorded on plant growth characters, nematode populations (both in roots and in soil) as also of the rhizosphere fungi of each treatment. Among plant materials, *Eclipta alba* was most effective followed by *Azadirachta indica*, *Datura metch* and *Amaranthus* sp. in reducing root-knot galls while *Cannabis sativa*, *Ricinus communis* and *Calotropis gigantea* also showed a high inhibition of nematode population. Length and weight of tomato plants in response to above materials also significantly increased in comparison to infested control. In case of cakes, *Shorea robusta*, *Pongamia glabra*, *Azadirachta indica* and *Carthamus tinctorius* reduced galls as well as nematodes in soil while *Calophyllum inophyllum* did not reduce the gall number but inhibited nematode population. The results thus indicated that all the plant extracts and cakes tested possess nematicidal properties.

CHEMICAL CONTROL OF PHYTONEMATODES OF GRAPEVINE (*VITIS VINIFERA*): P.P.S. Baghel and D.S. Bhatti, Department of Nematology Haryana Agricultural University, Hissar.

Four chemicals, viz. aldicarb (Temik 10-G), carbofuran (Furadan 3-G), fensulfothion (Dasanit 5-G), and phorate (Thimet 10-G) each @ 2, 4 and 6 kg