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EFFECT OF DIFFERENT MANAGEMENT PRACTICES ON *MELOIDOGYNE INCOGNITA* ROOT-KNOT NEMATODE INFECTING COWPEA

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Abstract

Two methods of treatments, viz., seed soaking or soil drench treatments with a resistance inducer (aqueous solution of acetyl salicylic acid), organic (aqueous extract of pigeon droppings) and green (aqueous extract of prickly pear stem) manures, aqueous solution of a biocide, nemaless (containing antagonistic strains of Serratia marcescens) and aqueous solution of an inorganic fertilizers (Ammonium sulphate 20.5 N %) were tested for the control of *M. incognita* on cowpea cv. Baladi compard to the nematicide, carbofuran 10 % G and untreated check. Generally, all the tested materials reduced *M. incognita* reproduction and development as indicated by the percentages reduction of the nematode galls, egg-masses and mature females on roots of cowpea. By seed soaking treatment, extracts of green manure and an inorganic fertilizer, on the basis of female reduction, achieved the highest percentage female reduction (82.1 %), followed by solution of acetyl salicylic acid (75 %), the nematicide (67.8 %) and extract of organic manure (35.7 %). A biocide was the least effective (25 %). Using a soil drench treatment, the nematicide was the most promising in reducing the nematode females (80 %) followed by extract of pigeon droppings and solution of inorganic fertilizers (76 %), extract of prickly pear stem (72 %), followed by the biocide (36 %). Acetyl salicylic acid had no effect on nematode females in roots. As for cowpea plant growth, the tested material significantly increased or decreased the studied plant growth parameters regardless of the nematode reduction.