NEMATICIDAL ACTIVITY OF SOME ESSENTIAL OILS OF PLANTS OF FAMILIES APIACEAE AND LAMIACEAE ON MELOIDOGYNE INCOGNITA AND ROTYLENCHULUS RENIFORMIS INFECTING COWPEA

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Abstract

Essential oils of nine aromatic plants of families Apiaceae and Lamiaceae were evaluated for nematicidal potential in controlling Meloidogyne incognita, root-knot nematode and Rotylenchulus reniformisreniform nematode on cowpea plants. The essential oils inhibited (p<0.05) the total number of galls, number of females and egg-laying females, as well as the total number of nematodes in cowpea roots. Melissa officinalis greatly reduced the mature incognita and Rotylenchulus of Meloidogyne reniformis (98.1 females and 94 %. respectively). Mentha viridis (91.1 %), Ocimum basilicum (90.7 %), Cumin cyminum (89.3 %), and Rosmarinus officinalis (80.4 %) gave more than 80 % female reduction on Meloidogyne incognita. Melissa officinalis gave the greatest reduction of Rotylenchulus reniformis females and egg-laying females followed by Carum carvi (88.6%). The other essential oils, were less effective (p<0.05) on Rotylenchulus reniformispopulation. Meloidogyne incognita was more affected by treatments of essential oils than Rotylenchulus reniformis. There was a positive reaction, in most cases, between essential oils treatment and plant growth parameters.