NEMATICIDAL EFFECTS OF BRASSICA FORMULATIONS AGAINST ROOT KNOT NEMATODES (Meloidogyne javanica) IN TOMATOES (Solanum lycopersicum L.).

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Abstract

Biofumigation, the practice of growing plants with high levels of glucosinolates, can be used in controlling soilborne pests including nematodes. However, the best formulation amongst the brassicas that can be used for biofumigation is not documented. A glasshouse trial aimed at determining the efficacy of different glucosinolate sources (rape, radish, mustard and cabbage) and brassica formulations (cake, extract and unmacerated) in suppressing Meloidogyne javanica population on tomatoes, was carried out. The trial was laid out as a 4×3 factorial experiment in a completely randomised design (CRD). The results showed that mustard was the most effective brassica in controlling nematodes (50.89), while cabbage, radish and rape significantly reduced M. javanica population when compared to the untreated control. The mustard-cake was the best biofumigant formulation in reducing nematode population (36), and this was as effective as fenamiphos (34.44). The study recommends the use of a mustard cake formulation for root knot nematode control in tomato production.