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INTEGRATION OF BIO-PRODUCTS AND PASTEURIA PENETRANS FOR THE MANAGEMENT OF ROOT-KNOT NEMATODE OVER THREE CROP CYCLES OF TOMATO

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Abstract

In a pot experiment, abamectin, emamectin (0.1 % v/w) and *Pasteuria penetrans* were incorporated in the soil, both singly and in combination. *P. penetrans* endospores were mixed in the soil and maintained at 104 spores per g soil. The initial levels of *Meloidogyne incognita* were added at 400, 4000 and 8000 J2s per 1 kg pot. Three-week-old tomato seedlings of a nematode susceptible variety "Money Maker" were transplanted into these pots. The treatments were added before raising the first crop and replicated four times over three consecutive crop cycles. For each crop cycle, the experiment was harvested after nine weeks and evaluated for root galling, number of egg-masses and number of infected females per plant. At the end of the third crop cycle, root galling was in most cases, statistically lower in the *P. penetrans* and abamectin combined, and in the single *P. penetrans* treatments while egg-masses were significantly lower where abamectin + *P. penetrans* and emamectin + *P. penetrans* combinations were used. At the end of the experiment the largest number of infective root-knot nematode females was found in the *P. penetrans* applied pots. .