NEMATICIDE AND NEMATOSTATIC POTENTIAL OF MULCH EXTRACTS ON *MELOIDOGYNE INCOGNITA* JUVENILES

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Abstract

While the nematicide abilities of mulching against root-knot nematodes (*Meloidogyne* spp.) is calculated with in organic crop protection, underlying mechanisms are not yet fully explored. Experiments were set up to determine whether mulch-derived substances cause mortality directly, or deter *Meloidogyne* juveniles from crop rhizosphere. Mortality and area choice tests were conducted with mulch-derived extracts; supported by the measurements on tannic acid content and the pH values of extracts as supplementary examinations. In our study, leaf litter and straw extracts were generally found lethal to the juveniles, which is in line with their area preference. However, compost extract had no negative effect on *M. incognita* juveniles. Tannic acid content showed positive correlation with mortality only in such cases. Tannic acid and pH slightly correlated with repellent effect of used extracts. Our results have inspired further experiments to explore nematicidal components of leaf litters, together with and the development of a new approach in crop protection based on the nematostatic effect of these materials.

Keywords: leaf litter mulch, pH, tannic acid. area choice, mortality