

ABSTRACT

Chilli (*Capsicum annum* L.) is a sub-tropical crop grown for its pungent tasting fruits and sour leaves. Kenya is among the largest exporters of chilli. Chilli yields are largely reduced by sedentary nematodes (*Meloidogyne spp*). Chillis are prone to root knot nematodes which reduce the quality and yields. This study focused on the use of *Trichoderma viride* as a potential biocontrol agent against root knot nematodes. Investigation was done on the effect of *Trichoderma viride* at different concentrations on the plant height, leaf number, stem diameter, number of galls, nitrogen and phosphorous levels in chilli infected with root knot nematodes. Four dilutions of *Trichoderma viride* were obtained through serial dilution (100%, 50%, 25% and 12.5%). Bio-control efficacy of *Trichoderma viride* against the root knot nematodes was tested under glasshouse and field conditions. Evaluation after treatment of plants with *T. viride* isolates showed that there was no significant effect on plant heights, number of galls, stem diameter or leaf number in chilli. There was significant difference in the nitrogen and phosphorous levels when different treatments of *Trichoderma viride* were applied on chilli with root knot nematodes.