Root-knot nematodes are serious pests all over the world. Over 50% Pyrethrum losses have been associated with these pests in Kenya. Chemical management of these organisms is effective but difficult to sustain for long-term benefits, and alternative control measures must be sought. The use of fungal antagonists may provide an alternative but factors affecting their efficacy are not known. Therefore, in vitro, in vivo and greenhouse tests were conducted at Kenyatta University, Nairobi, Kenya, to compare efficacy of the fungi Paecilomyces lilacinus Thom(sam), Fusarium oxysporum Schlecht isolates 1, 2 and 3, and Phoma herbarum against root-knot nematode eggs, egg masses and females, and (2) assess whether aldicarb (10% Temik), captafol (orthodifolatan 80% wp), organic matter and intercropping with the nematicidal plants Tagetes minuta L, Datura stramonium L,. and Ricinus commnis L., could stimulate , inhibit or have no effect on the biocontrol potential of P. lilacinus, tomato (Lycopersicon esculentum (Mill) shoot heights and weights, nematode population in soil, gall index and number of galls per gram root weight were assessed using standard methods. Gall index was based on a subjective scale of 0-4, where 0=no gall and 4=76 - 100% of the root system galled. To obtain the P. lilacinus isolate and other fungi for this study, 120 fungal isolates were isolated from nematode eggs extracted from soils collected from fields in Kakamega, Kiambu, Nyeri, Mombasa, Baringo, Kisumu, and Kisii districts. Isolates that parasitized 30-95% of eggs on agar were selected for further tests.

Paecilomyces lilacinus and F. oxysporum isolate 1 parasitized significantly ($P<0.05$) more M. javanica eggs and females on agar than F. oxysporum isolates 2 and 3, and P. herbarum,. P. lilacinus F. oxysporum isolates 1,2 and 3, and P. herbarum parasitized up to 91.9% eggs and 87.3% females, 82.4% eggs and 79.1% females, 25.9% eggs and 44.7% females 9.4% eggs and 19.2% females and 29.5% eggs and 60.6% females, respectively, on water agar. Levels of egg parasitism, however, were lower in sterile field soil. P. lilacinus and F. oxysporum isolate 1, the most aggressive isolates on agar, parasitized only 22.2% and 19.6% of the eggs in sterile soil, respectively. Besides egg parasitism, the five fungi influenced egg hatch differently. Up to 22.2%, 24%, 24.1%, 55.8%, and 74.4% of egg hatched on WA plates inoculated with F. oxysporum isolate 1, P. lilacinus, P. herbarum, F. oxysporum isolate 2, and F. oxysporum isolate 3, respectively.

Chicken manure, and the nematicidal plants T. minuta, D. stramonium and R. communis significantly increased egg parasitism by up to 112, 72, 54.9 and 106.3% respectively, when compared to controls. The nematicidal plants also stimulated parasitism of M. javanica eggs were parasitized in soils planted with R communis T. minuta and D. stramonium, respectively 50 days after inoculation, compared to 23.2% in controls. Levels of egg parasitism were however, lower, 17.6, 16.4 and 15.1% respectively, 98 days after inoculation compared to 10.3% in controls. In both cases, percentages of egg parasitism were higher than those obtained in non-amended soils, but lower than those obtained on water agar. R. communis, T. minuta and D. stramonium increased egg parasitism by 3.2, 28.4 and 22% respectively, 50 days after noculation.

The treatments, chicken manure, R. communis, D. stramonium and T. minuta also suppressed nematode population and gall development significantly than controls. Galling indices were decreased by up to 76.5%, 35.3, 47% where chicken manure, R. communis, D. stramonium and T. minuta were used, respectively. These treatments enhanced shoot weights by up to 159, 106, 100, and 64.7% respectively when used in combination with P. lilacinus.

Delaying the time of planting tomato in soil amended with chicken manure and infested with P. lilacinus from 0 to 8 weeks increased egg parasitism significantly (b=1.9;) and significantly reduced gall development (b=-0.5; r=-0.9). Tomatoes planted in chicken manure-amended soil 8 weeks after incorporation of chicken manure and P. lilacinus were significantly heavier than those planted 0 - 6 weeks after soil amendment. The number of juveniles increased with time of planting in soil not amended with chicken manure (b=+2.1; r=0.44) but the increase was not significant. Significant decrease in galling

index with time of planting (r=-0.95) was observed in pots treated chicken manure alone or in combination with P. lilacinus.

In general, aldicarb and chicken manure were effective in suppressing gall development and nematode population build up, whether used alone or in combination with P. lilacinus. Among the nematicidal plants, R. communis enhanced egg parasitism more significantly than T. minuta or D. stramonium. However, the maximum levels of egg parasitism achieved in all tests were less than 40%, an indication that the treatments used may not enhance egg parasitism to levels that can reduce nematode populations significantly in the field.