

Nematodes, as parasite, contributes to a high losses in crops. Brassica species produce natural biocides called glucosinolates which are nematocidal. Chalmis™ (Calcium hypochlorite) is a chemical biofumigant. The study was carried out in three seasons. The aim of this study was to evaluate the use of Brassica tissue and Chalmis™ in the management of root knot nematodes. The effect on plant parasitic nematode (PPN) populations was determined in the 24 plots upon soil sampling. Data was then taken and analyzed for various parameters. The results showed that nematode loads reduced significantly using Chalmis™ 303.75 g and Brassica extract 5292 g compared to the control. The findings revealed that the population of plant parasitic nematode varied significantly ($P < 0.05$) throughout the three seasons among the treatments with CM911.25 having the highest population, while CM303.75 was found to have the least. Various phytonematodes like *Helicotylenchus*, *Pratylenchus*, *Meloidogyne* (root knot nematodes), *Tylenchus* and *Heterodera* were present in all seasons with *Meloidogyne*, *Tylenchus* and *Heterodera* populations varying significantly in seasons two and three. A significant correlation relationship was established ($r = 0.415$, $P < 0.05$) between the PPN and the soil pH although the relationship was not significant ($P > 0.05$) in RKN, *Filenchus* and *Tylenchulus* species. Brassica tissue improved moisture content and reduced PPN population at higher rates of application.

Keywords: Brassica, Biofumigation, *Helicotylenchus*, *Pratylenchus*, *Meloidogyne*, *Tylenchus* and *Heterodera*, *Tylenchus*, *Heterodera*