

## Abstract

This study was conducted with the aim of determining whether plant parasitic nematodes were contributing to the decline in productivity of coffee. A survey was undertaken using a questionnaire which was administered to 200 farms households and aimed at capturing; management practices in coffee, cultivars and soil characteristics at each sampling point. About 200 composite root and soil rhizosphere samples were collected from coffee farms, (where the questionnaires had been administered) selected at random in 11 districts located in the three coffee zones namely; Tea-coffee (UM1), main coffee (UM2) and the marginal coffee (UM3) zone including the regional research stations. Nematodes were extracted using modified centrifugal floatation technique, identified to genus level and enumerated. Plant parasitic nematodes belonging to 20 genera were recovered from the coffee rhizosphere. The dominant nematodes detected were of the genera; *Tylenchulus spp.*, *Meloidogyne spp.*, *Tylenchorhynchus*, *Pratylenchus spp.*, *Tylenchus spp.*, *Rotylenchus spp.*, *Hemicyclophora spp.* with an abundance of 167, 161.,160, 158.0, 156., 148, 139 juveniles/200 cm<sup>3</sup> soil, respectively. Other plant nematodes found in the coffee fields included: *Helicotylenchus and Scutellonema spp.* *Hoplolaimus*, *Hemicroconema*, *Criconema*, *Aphelenchoides*, *Trichodorus*, *Bunonema*, *Radopholus*, *Paratrichodorus*, *Longidorus*, *Scutellonema and Xiphinema*. In addition, free-living nematodes (bacteriovores and fungivores as well as predaceous) belonging to 10 different genera were also identified. A multivariate analysis showed that the population densities of plant parasitic nematodes and composition nematode community varied significantly (P=0.01) among coffee growing zones partly caused by the differences in farm management practices which impacted on soil chemical properties such as pH, Na, P, K and Mn.