



Tropentag, September 14-16, 2022, hybrid conference

“Can agroecological farming feed the world?
Farmers’ and academia’s views”

Phytonematodes are a real concern for horticultural productivity in Ethiopia

BEIRA HAILU MERESSA, ABEBE WS ASSEFA

Jimma University, College of Agriculture, Dept. of Horticulture and Vet. Med, Ethiopia

Abstract

Food security remains the national priority in the Ethiopian agricultural development. Despite the diverse and conducive agro-ecological conditions for potential production of horticultural crops, the quantity and quality of yield remains low ascribed to several reasons of which pest damage being of particular issue. However, nematodes as a pest are commonly either overlooked or misdiagnosed. Equally important is that expertise in the area is most lacking in that much effort is needed to attract young professionals to join the field of nematology. Otherwise, the existing gap in the awareness of crop damage due to nematodes will remain animated. Accordingly, strong capacity building in human resource was essential to addressing this challenge in the long term, which is now imitated. Started in 2016, a nematological survey has been ongoing in the southwest part of the country in which the damage of plant-parasitic nematodes to most open field grown crops is severe. Tomato, potato, pepper, carrot, roses, hypericum, enset, lavandula, beetroot, coffee, green beans, and landscape ornamentals have been found infected with one or more of the economically important nematodes. In this, the current state of crop damage by plant parasitic nematodes to various horticultural crops has been mapped and a measure undertaken in nematology capacity building in Ethiopia is also shown. Moreover, following the detection of diverse nematode groups considered as a deadly pest to major horticultural crops, some were isolated, purified, identified and multiplied for subsequent greenhouse trials. Subsequently, our modelling results indicated that the current distribution and density of particularly *Meloidogyne incognita*, *M. javanica*, *M. arenaria* in the field together with the global climate change may turn out in a total crop ravage unless sustainable management options are duly taken.

Keywords: Capacity building, damage modelling, horticulture, nematode management