Occurrence of plant-parasitic nematodes in cut-flowers of Ethiopia

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In Ethiopia, the floriculture sector is booming that makes it the 2nd and 6th largest rose exporter in Africa and in the world, respectively, due to its favorable diverse agroclimate. Similar to other crops, cut flower production also faces problems that reduces both qualitative and quantitative yield. Usually pests are common problems of which nematodes are among the prevalent pests attacking floricultural crops. They infect most living plant parts including flowers, buds, leaves, stems and roots. However, information on the occurrence, biodiversity and damage potential of plant-parasitic nematodes on cut flowers are almost non-existent, although damage caused by nematodes is repeatedly mentioned by the growers. Therefore this survey was initiated to monitor the occurrence, distribution, and abundance of plant-parasitic nematodes associated with cut-flowers in Ethiopia. Accordingly, the survey was carried out from July to September 2011 covering 14 flower farms representing different regions, agroclimate and cut flower species. Per farm, 10 to 14 soil samples composed of 40 soil cores from the top 20 cm were collected randomly for rose, freesia, carnation, gypsophila, and statice making a total of 152 samples. Then aliquots of 200 ml soil were used to extract nematodes using the modified Baermann technique and heat killed and fixed in TAF before they were brought to JKI for morphological analysis. The preliminary observation indicates that cut flowers are a host to one or more nematode genera. At least the following nematode genera are identified as being detected: *Helicotylenchus*, *Criconemella*, *Aphel-encoide, Meloidogyne*, *Pratylenchus* and *Xyphinema*. Indeed, the detection level appears variable among sampling sites that might be as a result of the pesticide and fungicides applied. Nevertheless, this survey shows the presence of potential plant-parasitic nematodes in the cut flower farms of Ethiopia which is a start for future nematode management strategies.