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SURVEY OF PLANT PARASITIC NEMATODES GENERA ASSOCIATED WITH SUGAR BEET PLANTATIONS IN DAKAHLIA GOVERNORATE.

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ABSTRACT

A survey of plant parasitic nematodes genera associated with the rhizosphere of seven sugarbeet cvs. Kawemira, Monte-bionco, Deprez-poly N, Sultan, Nejama, Athos-poly and Farida grown at five counties of Dakhlia governorate (Egypt) was carried out during the sugar beet growing season 2007/2008/2009. Nine nematode genera were recorded in the surveyed sugar beet fields. Based on their frequency of occurrence , these genera can be arranged in ascending order as follows : *Meloidogyne* (J2) (22.6%) , *Trichodorus* (19.8%), *Hirschmanniella* (13.4%), *Helicotylenchus* (10.4%), *Tylenchus* (6.5%), *Pratylenchus* (4.7%), *Dorylaimus* (3.4%), *Rotylenchulus* (1.7%), and *Tylenchorhynchus* (1.3%). Among the seven true nematode genera recorded, *Meloidogyne* and *Trichodorus* seemed to be the major pest of sugar beet plantations in this work. Meanwhile , clay soil with 413 out of 700 soil samples examined encountered the highest number of nematode genera (7) followed by loamy (5) and clay loam (4) .

Keywords: Survey nematodes genera, sugar beet cultivars, *Meloidogyne* spp.Lqamy.

INTRODUCTION

Sugar beet (*Beta vulgaris* L.) is an important arable crop, traditionally used for sugar extraction all over the world . Plant parasitic nematodes are considered as one of the most important plant pathogens, since these organisms play a detectable role in limiting the productivity of such economic agriculture crops i.e. sugarbeet. Its total cultivated area reached 131.2 thousands feddans with an average 20.49 tons /Feddan* of sugarbeet tubers in the season of 2003 in Egypt, where it is grown in all type of soils especially , in newly reclaimed sand areas such as El- Hamoal Barrary , West Nubaruia , and Al- Bostan regions . Sugarbeet plants are subjected to be attacked by several plant parasitic nematodes in many countries . In Egypt , several researches carried out a survey work in sugarbeet prouducting areas and recorded the presence of nine nematode namely *Criconemoides* , *Ditylenchus myceliophagus* ,*Helicotylenchus dihystera, Heterodera* sp. , *Hoplolaimus* sp. , *Meloidogyne incognita and M. javanica* , *Paratylenchus* sp., *Rotylenchulus reniformis and Tylenchus* spp . in different localities i.e. El-Hamoul Barary and west Nubaria . Nematode genera , *Meloidogyne* and *Rotylenchulus* were dominantly found in all the examined fields with high population densities (Ibrahim, 1982 , Oteifa and El-Gindi, 1982 and Abd El-Massih , 1985 and Maareg *et.al.*,1988 and Maareg and Hassanein ,1999

In recent years, sugar beet is becoming an important crop in Egypt for supporting the expansion of Egyptian sugar industry, therefore efforts to protect the crop from the most destructive pests and diseases are crucial.

* Feddan = 4200m^2