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Occurrence of Cereal Cyst Nematodes (*Heterodera* spp.) in Wheat Fields in Ismailia Governorate, Egypt

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Abstract

Cereal cyst nematodes (*Heterodera* spp.) are important plant-parasitic nematodes of wheat and occur in most wheat growing regions of the world. In Egypt and particularly in Ismailia Governorate, relatively little information is available on the occurrence of cereal cyst nematodes in wheat fields. Therefore, a survey to determine the occurrence and distribution of cereal cyst nematodes in wheat fields was carried out in 2008. Seven different localities representing Ismailia governorate, Egypt, were surveyed for the presence of cyst nematodes. Soil and root samples were taken to the lab and standard nematode extraction procedures were followed to determine juveniles and cysts, respectively, in the soil. Females if present in roots of wheat plants were removed and counted. The results of this work reveal that *H. avenae* is widely distributed in wheat fields of several regions in Ismailia governorate, Egypt. However, no cyst nematodes were detected during the survey in samples from El-Wasfia region and from the experimental farm of the Faculty of Agriculture, Suez Canal University. Samples from Abou-Khalifa and Abou-Swair revealed that wheat fields were slightly infested with cyst nematodes. Highest population densities and frequency of occurrence of second stage juveniles, cysts and females were recorded in samples collected from El-Shark, El-Kasaseen and Sarabium. Cereal cyst nematode populations from wheat fields in different regions of Ismailia governorate were identified as *H. avenae*. Morphometric identification of the populations from the surveyed locations revealed no distinct variations in shape and size of eggs, females, cysts, vulval cone and second stage juveniles among the populations from Ismailia, Egypt. The investigated populations also showed a great morphometric similarity to a German population of *H. avenae*. Data on population densities, frequency of occurrence and morphometrics are presented.

Keywords: Egypt, *Heterodera avenae*, wheat