

عنوان مقاله:

Relationship between Soil Properties and Abundance of Tylenchulus semipenetrans in Citrus Orchards, Kohgiluyeh va Boyerahmad Province

محل انتشار:

مجله علوم و فناوری کشاورزی، دوره 16، شماره 7 (سال: 1393)

تعداد صفحات اصل مقاله: 12

نویسندگان:

A. Salahi Ardakani - *Head of Department of Plant Protection Agricultural and natural resources research center Kogyloyeh and Boyreahmad province*

Z. Tanha Mafi - *Department of nematology, Iranian research institute of plant protection*

A. Mokaram - *Afagh Gheyr-e-entefayi University of Urmia, Iran*

E. Mohammadi Goltapeh - *Department of Plant Pathology and Mycology, college of Agriculture, Tarbiat Modarres University, Tehran*

خلاصه مقاله:

To understand the relationship between natural physicochemical properties of soil and abundance of citrus root nematode (*Tylenchulus semipenetrans*), a survey was conducted during ۲۰۰۹-۲۰۱۰ in some ۳۷ citrus orchards, in Kohgiluyeh va Boyerahmad Province, Iran. Distribution of the citrus nematode was determined by collecting random samples from the soil and citrus plant roots, extracting and enumerating the number of second stage juveniles, males/۱۰۰ g of soil and females/۵ g of root. The relationships between nematode population, and the factors of: organic matter content, Nitrogen (N), Phosphorus (P), Potassium (K), organic carbon, Calcium Carbonate, soil texture, Electrical Conductivity (EC) and pH were determined. Increase in nematode population density was observed by increasing soil saturation percentage (up to ۴۳%), and by an increase in soil silt, sand, P, K and organic carbon, but by an increase in soil salinity, Calcium Carbonate, total Nitrogen and the amount of clay in soil, the nematode population decreased. Maximum nematode population density was recorded in a loamy soil texture. The most suitable soil pH for nematode activity was found almost seven while either an increase or decrease in soil pH, resulted in a decrease in nematode population. The number of second stage juveniles ranged from ۵۸ to ۲,۷۳۰/۱۰۰ g of soil while females were present by ۱۱ to ۳۳۱ individuals/g of root respectively. About ۶۲% of the studied orchards were infested with *T. semipenetrans*.

کلمات کلیدی:

Citrus nematode, Nematode population, Soil properties

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