

INVASIVE NEMATOFAUNA AFFECTING PLUM UNDER THE ENVIRONMENTAL CONDITIONS OF THE REPUBLIC OF MOLDOVA

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Abstract

Parasitic nematodes and virus diseases individually can cause serious losses in plum production, however in combination, they can be very destructive to crops in the long-term. The result of the conducted investigation revealed that abundance of nematodes in the Northern area of the Republic of Moldova ranged from 50 to 250 specimens per 100 g of sampled soil. In the Central area, the values varied more comparative to Northern part, ranging from 80 to 300 specimens per 100 g of soil, due to temperature variations and humidity. Altogether, 32 species of free living and plant parasitic nematodes from fruit trees crops were revealed. The most frequent proved to be species from the orders *Thylenchida* and *Dorylaimida*, the genera *Pratylenchus*, *Rotylenchus*, *Ditylenchus* and *Criconemoides*. In addition, the species *Xiphinema index*, *X. brevicole*, *X. vuitennezi* and *Longidorus elongates* were identified as vectors of viral pathogens. According to the trophic specialization, 5 groups of nematodes were detected, the most abundant being the group of plant parasitic nematodes (18 species), which seriously affect absorbing bristles, followed by specialized endo- and ecto-parasitic adaptations and vectors of viral pathogens. These investigations present a major significance for developing netological management programs in plum orchards.

Key words: nematodes, plum crops, biological control, abundance, diversity, trophic specialization