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Control and management of plant-parasitic nematodes in integrated production of garden strawberries (*Fragaria* ×*ananassa* Duchesne ex Rozier)

Elena Tsolova[1], **Lilyana Koleva**[2], **Spaska Kalcheva**[2]

[1]*Institute of Agriculture-Kyustendil, Sofjisko shose str., 2500 Kyustendil, Bulgaria, email: elena_tsolova@abv.bg*

[2]*University of Forestry, Sofia 10 Kliment Ohridski Blvd, 1797, Sofia, Bulgaria, email: liljanamarkova@abv.bg*

The arable soils are one of the most valuable natural resources and their long-term sustainable management is a determining factor in the integrated production of strawberries. It is well known that the current large-fruited garden strawberry (*Fragaria* ×*ananassa* Duchesne ex Rozier) cultivars are more susceptible to many species of plant-parasitic nematodes and other plant pathogens. The aim of this study was to evaluate the effects of some cultural practices as potential methods for control of nematodes in the integrated production of strawberries. The investigation of the nematode populations was carried out in the region of Western Balkan Mountains in Bulgaria (43°33'22.3"N 22°47'03.4"E), with cultivar 'Maya'. In the surveyed area, the plant protection products were applied under an approved scheme complying with the requirements for integrated fruit production (IOBC, IFP). Nematodes populations were identified and classified to trophic level. The following genera of plant-parasitic nematodes were identified: *Pratylenchus crenatus, Pratylenchus neglectus, Pratylenchus thornei, Tylenchorhynchus claytoni* and *Paratylenchus* spp. The density and species composition of plant parasitic nematodes were significantly reduced at the end of the study period comparing to the beginning of the researches. From the results, it is clear that the integrated production can be defined as an economically feasible production of high quality fruits, giving priority to environmentally safe methods of pest control.

Keywords: integrated pest control, Nematoda, *Paratylenchus*, *Tylenchorhynchus*

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