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BOOK OF ABSTRACTS



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IMPACT OF VERMICOMPOST EXTRACTS ON STRAWBERRY PRODUCTION AND SUSTAINABILITY OF AGROECO SYSTEMS

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Abstract

Quality and balanced fertilization is one of the most important orchard management practices in fruit production. However, fertilization in conventional production systems is mainly focused on obtaining the highest yield. This usually requires increased utilization of synthetic nitrogen fertilizers, which significantly contributes to a series of undesirable effects and results in excessive environmental pollution. Since organic production system is considered as an important factor of the strategy for the development of agricultural sector, it is necessary to increase this kind of production. To find a way to overcome the mentioned problems, the use of vermicompost extracts is appeared as potential solution. Therefore, we conducted a study on the effects of vermicompost extract on yield-related characteristics (yield per plant, yield per unit area), physical (fruit weight, length, breadth, and firmness) and chemical fruits properties (total phenolics and antioxidant capacity) of 'Senga Sengana' strawberry cultivar, as well as microbiological properties of strawberry rhizosphere (total microbial count, numbers of soil fungi, actinomycetes, aminoheterotrophs, oligonitrophilic bacteria and *Azotobacter*). The obtained results indicate that application of vermicompost extracts in organic strawberry production had a positive effect on plant yield and fruit quality. Positive effects on soil biogenicity have also been observed. Therefore, vermicompost extract application can be considered as an appropriate practice in production of healthy and environmentally safe strawberries with satisfying basic postulates of sustainable agriculture.

Keywords: *Vermicompost extracts, Microorganisms, Organic strawberry production, Yield, Fruit Quality.*