Effect of vermicompost, cattle manure and different fertilization timing in soilless culture on yield and yield components of strawberry (*Fragaria × ananassa* Duch)

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Abstract

One of the important points for successful production in soilless culture system is the right fertilization timing during plant growing period for each substrate. In this respect, a factorial experiment based on completely randomized design with five replications was conducted at Sari University of Agricultural Sciences and Natural Resources. Treatments were four chemical fertilization timings (no fertilizer, fall, spring and fall + spring), three levels of vermicompost (10, 20 and 40% v/v), three levels of cattle manure (10, 20 and 40% v/v) and control medium (50% cocopeat: 50% perlite). The results showed that the highest strawberry yield (142.2 g per plant) was obtained in growth medium containing 10% cattle manure with fall + spring fertilization. Moreover, the growth medium supplemented with 10% cattle manure and fall + spring fertilization produced the highest marketable fruits (10 fruits per plant) and the highest total number of fruits (18 fruits per plant). Therefore, the growth medium containing 10% cattle manure along with fall + spring fertilization provided the most suitable conditions for strawberry cultivation.

Keywords: Substrate, Cocopeat, Perlite.

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