

Abstract

In order to evaluate the effect of different levels of municipal compost and nitrogen fertilizer on yield and some qualitative characteristics of savory (*Satureja hortensis*), pot experiment in 2009 was carried out in the Darab region. This experiment as a factorial completely randomized design with four replications. In this study, different levels of municipal compost include four levels: C₀:0, C₁:10, C₂:20, C₃:30 tons per hectare and four levels of nitrogen fertilizer: N₀:0, N₁:30, N₂:60 and N₃:90 kg of pure nitrogen per hectare were applied as urea. Analysis of variance showed that the effect of different levels of nitrogen, compost and interaction between them on dry weight, height, number of leaves in the plant, the percentage and yield of savory essential oils and different levels of compost and nitrogen on the number of lateral branches in plant was statistically significant. Nitrogen application on the main stem diameter and use the compost on the amount of potassium and sodium in plant and soil pH was statistically significant. The results showed that maximum levels of compost and nitrogen fertilizer improved significantly dry yield, plant height, essential oil yield, number of leaves per plant. Maximum of dry matter and essential oil per unit area related to treatment with 90 kg nitrogen with 30 tons of municipal compost per hectare (C₃N₃) was obtained. Mean showed for increasing essential oil also can be used 60 kg/ ha of nitrogen fertilizer but higher levels of this fertilizer reduced the percentage of essential oil of savory. In total, using 60 kg of nitrogen per hectare along with 30 tons of municipal compost per hectare (C₃N₂) to increase yield and quality of this plant are suitable.

Key words: Essential oil, Yield, Compost, Nitrogen fertilizer, Summer savory



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**Effect of compost and nitrogen fertilizer
levels on yield and some quality properties
of summer savory in Darab region**

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