

Abstract

Savory (*Satureja hortensis* L.) as a medicinal plants is very important in pharmaceutical industries, food, cosmetics and health. In order to investigate the effect of various plant density and different fertilizers on Savory herb quantity and quality of yield in Sistan. The experimental was set up as split plot in randomized complete block design with three replications in Zabol University Research Center at 1390. Treatments included row spacing with 10, 20 and 30 cm as main plot, and different kind of fertilizers such as; control (no fertilizer), cattle manure, poultry manure, municipal solid waste compost and chemical fertilizer as subplot. Some characters were measured such as; plant height, branch number, dry weight (DW), chlorophyll α and β , mineral elements (K, Na, N and P), organic matter, essential oil and protein and Ash percentage in the vegetative parts at beginning flowering time. The result showed that plant density, various fertilizer and interaction between them had significant effect on most plant characters. The interaction of between density and fertilizers had significant on amount of nitrogen (1/53%) and crude protein (9/56 percent). According to this results, the best density and organic fertilizers for high production of Savory is 769 plant per m^2 . However, if the goal is produced high potential of essential oils, the best density is 257 plant per m^2 and municipal solid waste compost and organic fertilizers. Also, the results indicated that the amount of ash decreased and the percentage of dry matter, organic matter, protein and nitrogen increased. The results of the preliminary tests and subjective (macroscopic) of crude drugs including tests of smell, taste and touch , in quality and quantity Excellence of organic herbs from the mountains, particularly municipal solid waste compost was compared to other treatments.

Key words: Density, fertilizer, performance, quality, savory.



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Title

**Effects of plant density manure and fertilizers on quantity and
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Supervisors

Dr. M. mousavi Nick
Dr. Sh. najafy

Advisor

Dr. M. heydari

By

M. rahmati

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