

Abstract

Organic matter on of the useful sources for improved qualigt of the agricultural soild and yield increases diffren plants. In order to understand the effect of organic fertilizer on quantity and quality yield of anise an experiment was conducted in split plot base randomized completely block design with a replication of three in Mashhad, Khorasan Agriculture and Natural Resource Research Center. The treatments were included at the four levels as control, vermicompost 5 tons/ha, cow manner 25 tons/ha, full chemical (NPK) 60 kg/ha as the main factor and the subplot was given to the three level of plant densities with 17, 25 and , 50 plant.m². Results showed that there was observed a significant effect of fertilizer on Umbelas por planta, Shed of the umbrella, Chlorophyll and plant density on grain yield, biological yield, oil yield, number of lateral branches, and NPK absorption. Interaction effect in treat ments were significant in plant high, number of seed in Shed and Canopy cover.(1000 seed wieght, and number and Internode distance were not significant. Result showe that applying of the, vermicompost and plant density with 50 plants/m² had the best had important role in qualitative and quantitative yield and percentage of increasas concentration of elements absorption in anise.

Key words: Organic fertilizers, plant densities, anise, economic yield, essential oil, elements absorption.



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Title

**Effects of fertilizer and plant density on yield and quality of
anise (*Pimpinella anisum*)**

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