

عنوان مقاله:

.Effect of Nutrition and Harvest Time on Growth and Essential Oil Content of *Thymus vulgaris* L

محل انتشار:

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خلاصه مقاله:

Thyme (*Thymus vulgaris* L.) is an important medicinal plant with highly valuable essential oils. In this study, effects of different fertilizer treatments and cuts on *Thymus vulgaris* L. was evaluated in ۲۰۰۸-۲۰۰۹. The research was conducted at Alborz Research Station, Research Institute of Forests and Rangelands, Karaj, Iran. The Experimental design was split plot in time in the form of a randomized complete block design with three replications. The main factor was nutrition in ۱۶ levels consisting of different combinations of nitrogen (N), phosphorus (P), potassium (K) and manure (M): N۰P۰K۰M۰, N۴۰P۳۲K۴۰M۰, N۸۰P۶۴K۸۰M۰, N۱۲۰P۹۶K۱۲۰M۰, N۱۶۰P۱۲۸K۱۶۰M۰, N۱۴۰P۱۱۲K۱۴۰M۵, N۱۲۰P۹۶K۱۲۰M۱۰, N۱۰۰P۸۰K۱۰۰M۱۵, N۸۰P۶۴K۸۰M۲۰, N۶۰P۴۸K۶۰M۲۵, N۴۰P۳۲K۴۰M۳۰, N۲۰P۱۶K۲۰M۳۵, N۰P۰K۰M۴۰, N۰P۰K۰M۳۰, N۰P۰K۰M۲۰ and N۰P۰K۰M۱۰ (indices following the letters N, P and K are application rates in kg/ha, indices following the letter M are the application rates of manure in t/ha). The sub factor was harvest (cut) time (late May and early September). Results indicated that fertilizer, harvest date and their interactions significantly affected most of the traits. Mean comparison of the interactions indicated that treatments containing both chemical fertilizers and manure showed positive effects, although the most plant height was achieved with N۱۶۰P۱۲۸K۱۶۰M۰ × 1st cut, in both years (۳۲.۵ cm in ۲۰۰۸ and ۳۲.۶۶ cm in ۲۰۰۹). Essential oil yield was the highest in ۲۰۰۸ in N۱۲۰P۹۶K۱۲۰M۱۰ × ۲nd cut (۲۶.۰۱ kg/ha), and in ۲۰۰۹ in N۱۰۰P۸۰K۱۰۰M۱۵ × 1st cut (۲۶.۷۹ kg/ha). Generally, it can be concluded from the results that *T. vulgaris* responds well to fertilization, and selecting the best treatment depends on the objective of production.

کلمات کلیدی:

essential oil, P-cymene, Thyme, Thymol, γ -terpinene

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