

# Effect of different intensities water deficit stress on some of agronomical characteristics and crop growth rate (CGR) of autumn rapeseed cultivars in Karaj local (*Brassica napus* L.)

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## Abstract

To assess the resistance to drought stress of two varieties of autumnal Rapeseed and study the their individual performance, a split plot experiment is carried out in 2005-2006 harvest season to executed in farm of Oil-Seed Science, and Breeding Research and Plant Supply Institute, Karaj, Iran, using 2 treatments and 3 replicates, in which irrigation remained as the main factor in seven levels and the two secondary factors consisting of Zarfam & Opera varieties. The results reveled that the effect of variety on the seed yield, seed-oil yield, seed-oil percent (1%) and 1000 seed weight (5%) found significant ( $P < 0.05$ ). The complimentary effects of irrigation and variety on attributes number of fructify in the secondary branches and the number of seed in fructify also showed a significant ( $P < 0.05$ ) impact. Considering growth index, it has been observed that drought stress led to reduced due to Crop Growth Rate (CGR). However in drought condition stress, the maximum CGR was belong to Zarfam variety with average of 1/47g per m<sup>2</sup>. Among the studied parameters, the correlation between the seed-oil yield and seed-oil percent was found positive and significant ( $P < 0.01$ ) compared to the number of seed in fructify and the maximum correlation was found between seed yield and oil yield ( $r = 0.99$ ).

Key words: varieties of rapeseed, drought stress, yield and yield component

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