

Effects of sulfur and manure levels on yield and yield components of canola (*Brassica napus* L. var. Okapi) on a calcareous soil in Iran

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This research was conducted to study the effect of different levels of sulfur and manure on yield and yield components of canola (*Brassica napus* L. var. Okapi) in a two-year experiment (2015-2016). The field experiment had a completely randomized block design consisting of a 3 × 3 factorial combination of three sulfur rates (0, 152.5 and 305 kg S ha⁻¹) and three manure rates (0, 10, 20 ton ha⁻¹) in threefold replication. The following plant characteristics were determined: plant height, number of seeds per pod, weight of pods, weight of 1000 seeds, number of pods, number of lateral branches, economic yield, biomass, oil and glucosinolate content. The results of the ANOVA revealed that the sulfur rates had a significant influence on plant height, number of seeds per pod, weight of 1000 seeds (P <0.01). The manure levels influenced the number of seeds per pod (P <0.01) and the weight of thousand seeds (P <0.05) significantly. Sulfur × manure interactions were significant with respect to the oil content, number of pods (P < 0.05), glucosinolate content, lateral branches and biomass (P <0.01). The data showed that 20 ton ha⁻¹ manure together with 305 kg ha⁻¹ sulfur resulted in the highest yield and oil content of canola with the lowest glucosinolate content in the Miyaneh region of Iran.