Effect of organic carbon and total nitrogen in the soil on the response of dryland wheat (Sardari c.v.) to application of nitrogen fertilizer and the critical levels of it in Kermanshah province

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Abstract

The effect of organic carbon and total nitrogen in the soil on the response of dryland wheat (Sardari c.v.) to application of nitrogen fertilizer and the critical levels of it in Kermanshah province is investigated. The experiment was conducted in a field plot design with four replicates. The treatments were nitrogen fertilization at 0, 90, 180, and 270 kg ha⁻¹ and two levels of organic carbon and total nitrogen in the soil at 5 and 10 mg kg⁻¹. The results showed that the response of dryland wheat to nitrogen fertilization was influenced by the level of organic carbon and total nitrogen in the soil. The critical levels of nitrogen fertilization for dryland wheat were determined to be 90 kg ha⁻¹ for organic carbon and 5 mg kg⁻¹ for total nitrogen in the soil.