Response of Lentil to Foliar Application of Potassium Phosphate under Different Irrigation

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Abstract:

Abstract Two field experiments were conducted during 2011/2012 and 2012/2013 seasons at Agronomy Dept. Farm., Agric. Fac., Assiut Univ., to study the response of lentil to foliar application of mixture phosphorus and potassium under different irrigation treatment. The results showed that: Irrigation treatments had a highly significant influence on the all studied traits except harvest index in both seasons. So, plants which received one irrigation (I1) at pre-flowering (45 days after sowing) produced the highest values of all studied traits. While, plants which received highest values of foliar application of mixture phosphorus and potassium produced the highest mean values of all studied traits except harvest index and protein% in both seasons. The interaction between irrigation management and foliar application of mixture phosphorus and potassium had a significant effect on all studied traits except harvest index and protein% in both seasons. Plants which received the mixture phosphorus and potassium with I1 irrigation produced the highest values of plant height (47.34 and 45.36 cm), number of branches plant-1 (4.52 and 4.25), number of pods plant-1 (46.25 and 44.35), seed yield (1.46 and 1.42 g plant-1), seed yield (1.42 and 1.41 kg plot-1), seed index (26.57 and 27.05), straw yield (6.43 and 6.65 kg plot-1), and seed yield (568.0 and 560.0 kg fed.-1) in the first and second season respectively, comparing with plants control.

Keywords:

Lentil, foliar application, phosphorus, potassium and irrigation management.

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