

THE EFFECT OF IRON, NITROGEN AND IRRIGATION ON YIELD OF FLAX (*linum usitatissimum* L.)

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ABSTRACT

A field experiment of flaxseed was carried out during the growing season of 2011-2012 at agriculture field Mosul University in clay soil. The experimental design was split-split plot design with using the RCBD with three replicates. Irrigation treatments occupied the main plot (Rainfall and integral irrigation). Nitrogen fertilizer (0, 100, 200)Kg N/h occupied the subplots, while the iron treatments (0. 5, 1, 1. 5)% Fe occupied the sub-sub plots. The results showed increasing nitrogen fertilizer levels to 200kg N/h significantly increased in all characters except oil percentage decreased with increase levels of nitrogen. Iron fertilizer gave at 1. 5% Fe significantly increased in number capsules / plants and seed yield/ plant and seed yield / h, while 1% Fe gave significantly increased of percentage of oil in seed and oil yield/ h. integral irrigation gave significantly increase the number capsules / plant, seed yield /h, oil percentage and oil yield/h. The second order interactions between different factors show significantly differences in the studied characters. Concluded of this study of the flax crop sensitive to water stress and need to provide humidity containing ready for absorption from soil, also it is response highly effect to nitrogen and iron fertilizer in increase seed yield and oil.

Key words: nitrogen , iron , irrigation , Linseed