THE EFFECT OF IRON , NITROGEN AND IRRIGATION FOR ENHANCEMENT CONTENT OF TOTAL PHENOLIC AND ANTIOXIDANT ACTIVE OF SEEDS FLAXSEED .

A.Y. Hassen * **A.T. Shauker ****

*Dept. of Crops Sciences – College of Agriculture - Univ. of Diyala.
Ahmed74741@yahoo.com
** Dept. of Crops Sciences – College of Agriculture. Univ. of Mosul.

ABSTRACT

Afield experiment of flaxseed was carried out during the growing Seasons of 2010- 2011 and 2011- 2012 in clay soil in the college of Agriculture of university of Mosul . The experimental design was split- split plot design according to the randomized complete block design (RCBD) with two replications which involve soaking seeds at three levels of concentrations the first is iron (0. 5, 1, 1.5 % Fe sub subplot. The second is three levels of nitrogen fertilization (urea 45%), (0, 100, 200) kg N.h-1 as sub plot under rain fed only and with. Supplementary irrigation as main plot. The results revealed that:

1- The addition of (100 kg $N.h^{-1}$) of Nitrogen fertilization led to significant increasing in Total phenolic for the first season of growing, while (100 and 200) kg $N.h^{-1}$ led to significant Superiority of Antioxidant active for the first and second Seasons of growing.

2- The soaking seeds of 1% Fe iron concentration led to significantly increase in total phenolic in the first and second seasons, whereas the soaking of 1% and 1.5% Fe led to significant increase Antioxidant active in the first and second

seasons of growing .

3- The supplementary irrigation led to significant increase of total phenolic in the second season of growing. While the Antioxidant active gained significant increase at rain fed for the first and second seasons .

The second order interactions between different factors show significantly differences in the studied characters.

Key words : Flaxseed , Iron, Nitrogen , Irrigation , Antioxidant active , Total phenolic.

Diyala Agricultural Sciences Journal, 7 (1) 243 – 254. (2015). ISRA impact factor 4.758.
http://www.agriculmag.uodiyala.edu.iq
http://www.iasj.net/iasj?func=issueTOC&isId=4427&uiLanguage=en

Received for publication Feb. 10 , 2013 .
Accepted for publication Sept. 15 , 2014 .