

- Warrand, J.; P. Michaud ; L. Picton ; G. Muller ; B. Courtois ; R. Ralainirina and J. Courtois (2005). Flax (*Linum usitatissimum*) seed cake: a potential source of high molecular weight arabinoxylans. J Agr Food Chem., 53: 1449-1452.
- Zhao, G. T. D. Etherton; K. R. Martin; P. J. Gillies ; S. G. West and P. M. Kris-Etherton (2007). Dietary  $\alpha$ - linolenic acid inhibits proinflammatory cytokine production by peripheral blood mononuclear cells in hypercholesterolemic subjects. Am J ClinNutr., 85(2): 385-39.

## EFFECT OF SOWING DATE AND TREATMENT WITH ASCORBIC ACID ON GROWTH AND YIELD OF FLAX (*Linum usitatissimum* L.

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### ABSTRACT

The present study was conducted during the growing season 2015/2016 and 2016/2017 in medicinal and aromatic plants field of the College of Agriculture/ Basrah University, to study the effect of sowing date 1/11, 1/12 and spraying with Ascorbic acid 400mg. L<sup>-1</sup> or without (spraying with distil water) after 30 and 60 day from planting and their interaction on growth and seed, oil yield of flax plant (*Linum usitatissimum* L.).

The results showed Cultivated plants on 1/11 had a significant increases in plant height, number of main vegetative branches.plant<sup>-1</sup>, leaves number. plant<sup>-1</sup>, length and weight of root system, Seed yield. plant<sup>-1</sup>, seed yield. unit area<sup>-1</sup>, oil percentage, oil yield. plant<sup>-1</sup>, oil yield. hectare<sup>-1</sup> for both seasons, seed yield. hectare<sup>-1</sup> in second season only.

Spraying with Ascorbic acid 400 mg. L<sup>-1</sup> give significant increases in, leaves number. plant<sup>-1</sup>, length of root system for both seasons, plant height, weight of root system, weight of 1000 seed, oil percentage in second season only. oil yield. plant<sup>-1</sup> in first season only.

The interaction between first sowing date and spraying with Ascorbic acid gave highest in leaves number. plant<sup>-1</sup>, highest percentage of the dry matter of the vegetative total, length and weight of root system, seed and oil yield. plant<sup>-1</sup>, seed yield. unit area<sup>-1</sup>, oil percentage and seed and oil yield. hectare<sup>-1</sup>