



Journal

**J. Biol. Chem.
Environ. Sci., 2017
Vol. 12(2): 65-84
www.acepsag.org**

RESPONSE OF WASHINGTON NAVEL ORANGE TREES TO EXOGENOUS APPLICATION OF UREA, PUTRESCINE AND GA₃ UNDER NEWLY RECLAIMED AREA CONDITIONS I: VEGETATIVE GROWTH, YIELD AND NUTRITIONAL STATUS

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ABSTRACT

This study was carried out during two successive seasons 2010-2011 and 2011 – 2012 on 20 years old orange tree of Washington Navel orange cultivar budded on Sour orange (*Citrus aurantium*, L.Osbeck) rootstocks grown in sandy soil under drip irrigation system planted at 5x5m as a part in a private orchard (El-Shrouk farm) it located at (72 km of Cairo-Alex. desert road), El-Giza Governorate, Egypt. Results showed an improvement in the growth characters, yield and nutritional status with all foliar application treatments. Overall foliar application with urea, Putrescine at 4th week of December and Gibberellic acid (GA₃) on the first week of April improved leaf nutritional status. The Gibberellic acid (GA₃) increased the total yield.

Key words: full- bloom foliar application, Gibberellic acid (GA₃). , growth characters, Nutritional status, N, P, K. , Pre-bloom foliar application, Putrescine, Urea, Washington naval orange.