

21- Abbas, M. S., **M. D. H. Dewdar** ; G. I. El- Sayed and H. A. Abd El-Aleem (2014). Impact of boron foliar application on quantity and quality traits of sugar beet (*Beta vulgaris* L.) in Egypt. Research Journal of Pharmaceutical, Biological and Chemical Sciences.5(5):143-151.

ABSTRACT

The present investigation was conducted to study the effect of foliar application of boron with different concentrations (0.00; 0.05; 0.10; 0.15; 0.20 and 0.25 g/L) at two different times of foliar applications (80 days and twice at both 80 and 110 days after sowing) on quantity and quality traits of sugar beet in El-Fayoum, Egypt during 2011/2012 and 2012/2013 seasons. The results showed that application of boron showed significant increase for most traits, increasing boron fertilizer up to (0.20) g /L resulted in the highest recoverable sugar in the first season, the highest recoverable sugar was 15.84% with an increase of 15.82 % in the first season compared with the control but in the second season gave significant highest recoverable sugar 16.1% (0.25 g/L), corresponding to an increase of 17.62 % as compared with the control thus, lead to increase sugar yield as follows, the highest sugar yield was 7.516 tons/fedden with an increase of 65.17% in the first season but in the second season gave significant highest sugar yield 9.422 tones/fedden corresponding to increase of 46.14% as compared with the control. Sucrose, recoverable sucrose and juice purity percentages were also increased by adding high level of boron rate.

Keywords: *boron, sugar beet, sugar yield, sucrose and time addition*