EFFECT OF SOME AGRONOMIC TREATMENTS ON STEVIA (*STEVIA REBAUDIANA*, BERTONI) YIELD AND QUALITY IN EGYPT

BY

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ABSTRACT

Ahmed El-Sayed Attia, Effect of some agronomic treatments on stevia (*Stevia rebaudiana*, Bertoni.) yield and quality in Egypt. Unpuplished Doctor of Philosophy Thesis, Agronomy Department, Fac. of Agric., Ain Shams Univ., 2005.

This study consisted of two field and two greenhouse experiments. Field experiments studied the effect of propagation methods, nitrogen fertilizer and their interaction on stevia plant yield and quality for plants during 2001/2002 and 2002/2003 seasons and ratoon crop of 2003/2004 season in five cuts of each season. Greenhouse experiments were conducted in glasshouse to study the effect of stem cutting position, IBA application and their interaction on stevia through stem cutting propagation. The obtained results showed that in both plant crop and ratoon crop, root cutting propagated plants exceeded both seed and tissue culture propagated plants for all studied characters. Meanwhile, application of 40 kg N/fed/cut gave maximum values over both 0 (control) and 20 kg N/fed/cut. Root cutting propagated plants of the fifth cut that received 40 kg N/fed/cut gave the maximum values of leaves dry weight (1.13 t/fed for plant crop and 1.15 t/fed for ratoon crop), total leaves dry weight (4.39 t/fed/year for plant crop and 4.58 t/fed for ratoon crop), stevioside percentage (24.60 % for plant crop and 28.50 % for ratoon crop), stevioside yield (278.77 kg/fed for plant crop and 327.75 kg/fed for ratoon crop) and total stevioside yield (962.43 kg/fed/year for plant crop and 1035.58 kg/fed/year for ratoon crop). Maximum value of

cutting survival percentage was obtained from basal cuttings treated with IBA concentration of 1000 ppm. (95.33 %) while the lowest value was obtained from tip cuttings with 0 ppm. IBA (70.00 %).

KEY WORDS

Stevia, propagation, fertilization, IBA, cutting and cutting position

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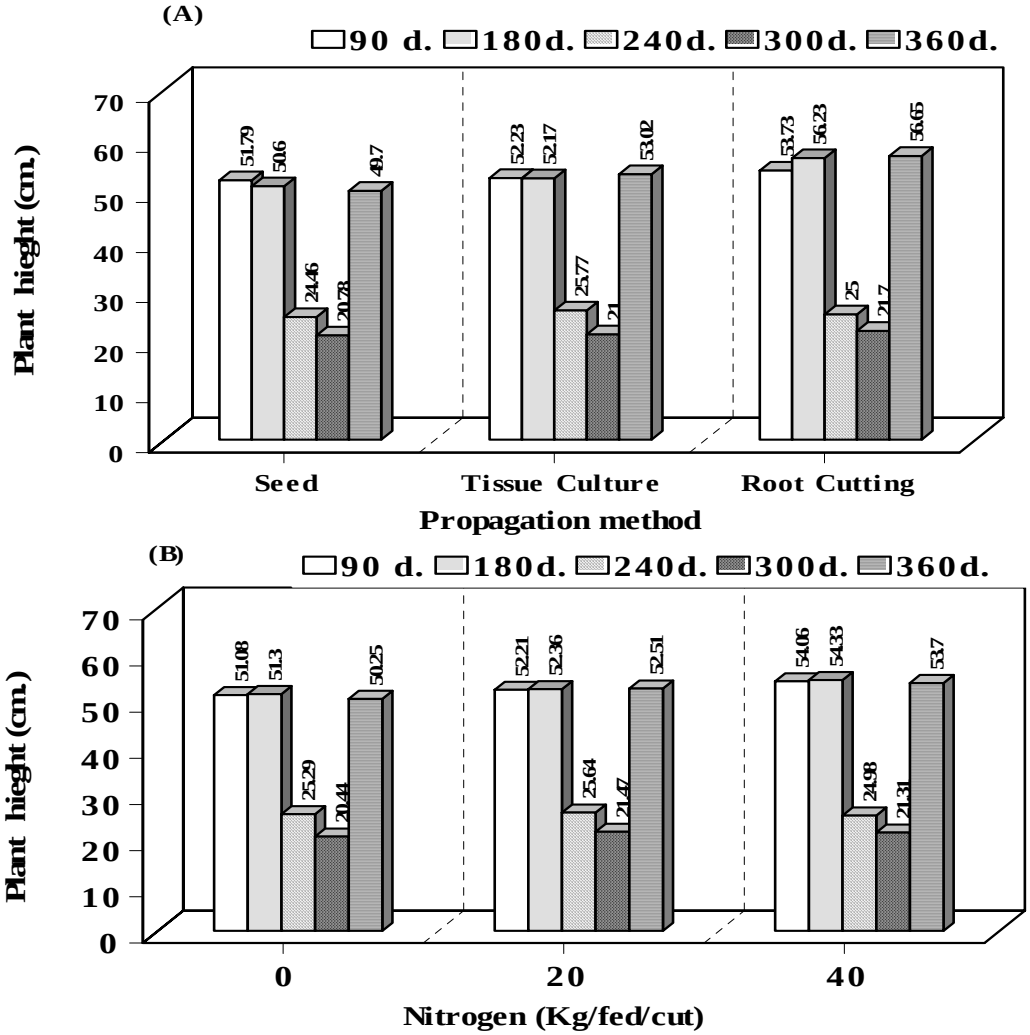

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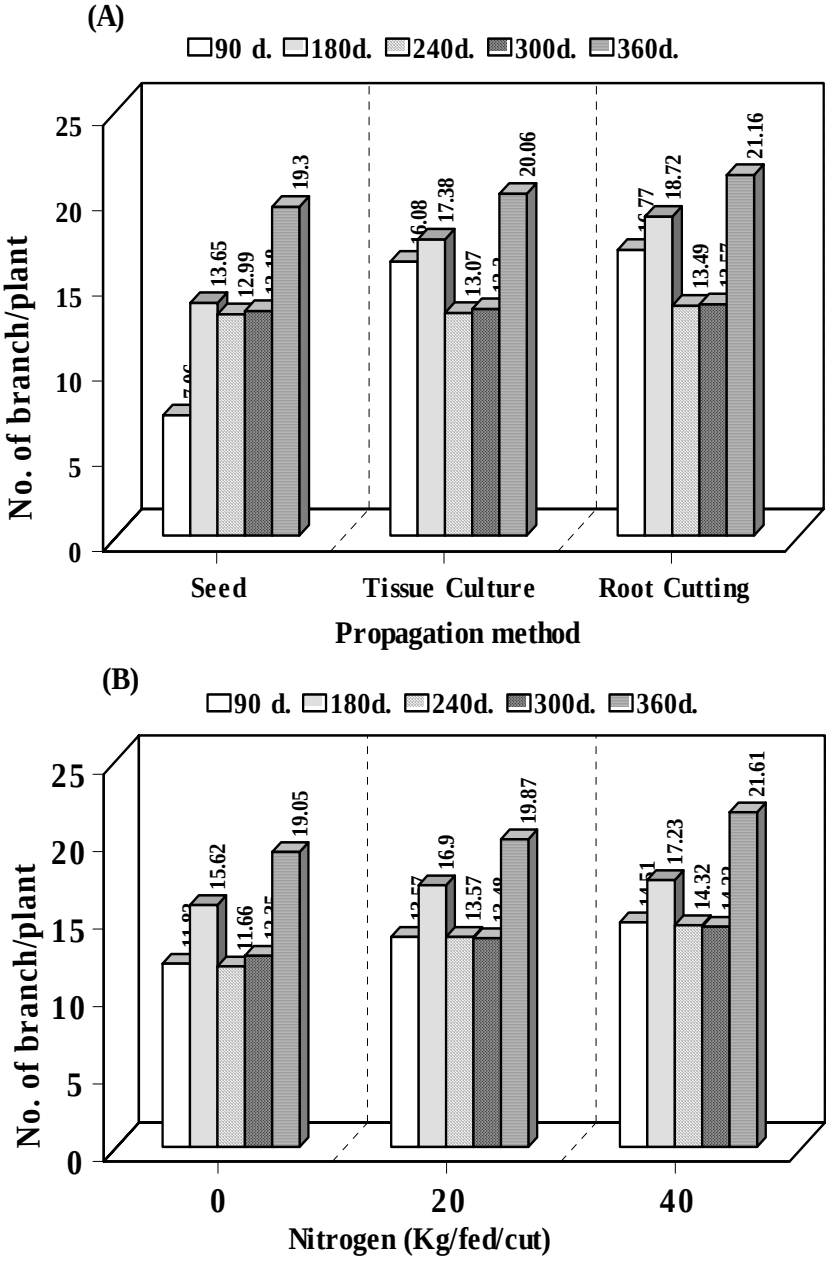

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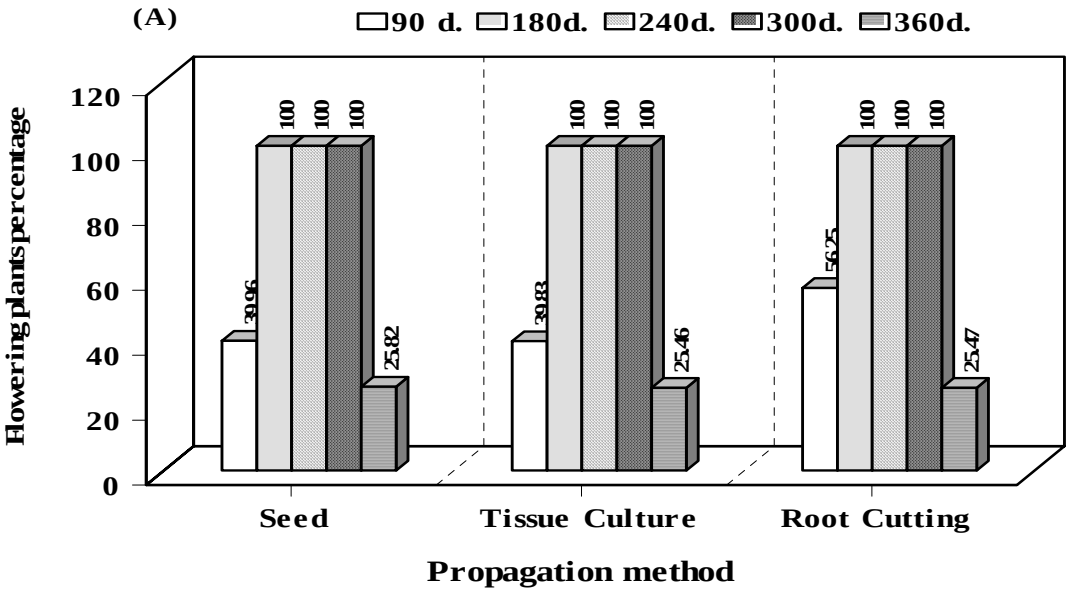

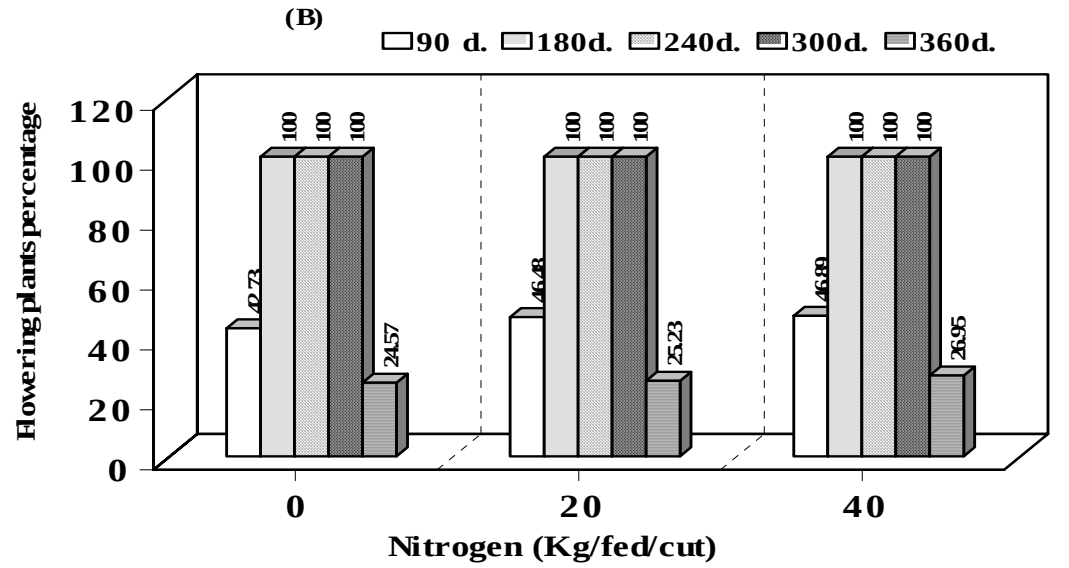

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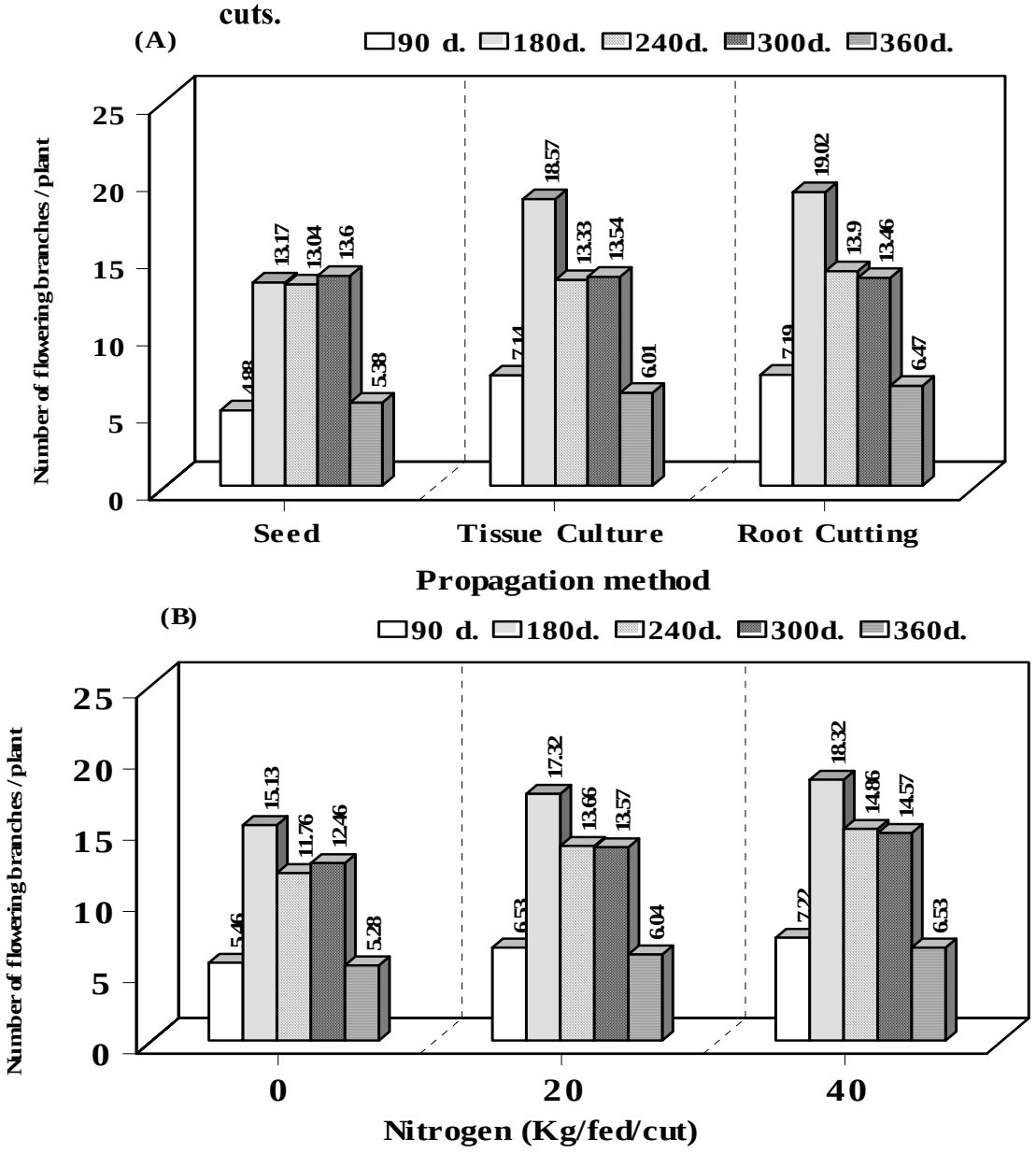

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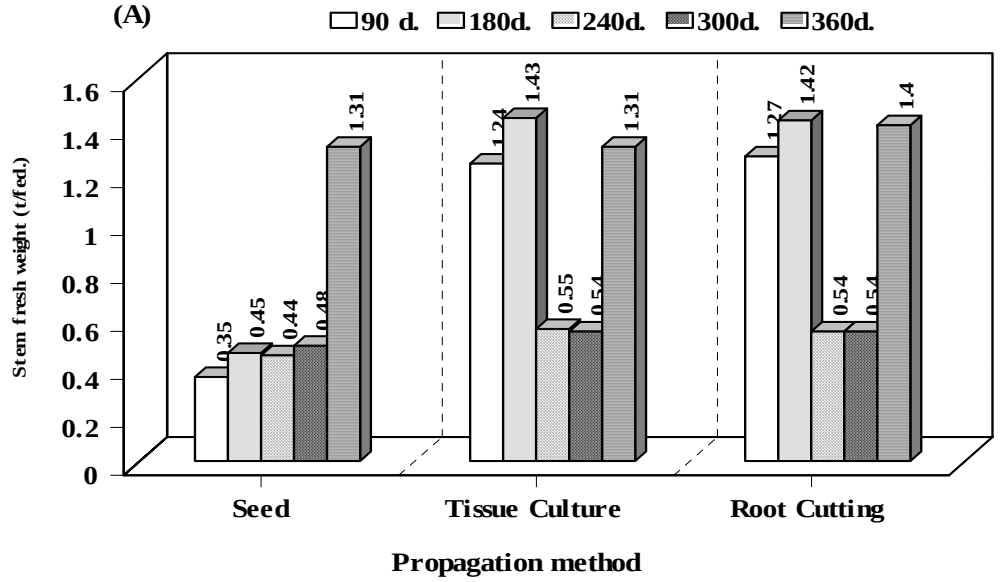

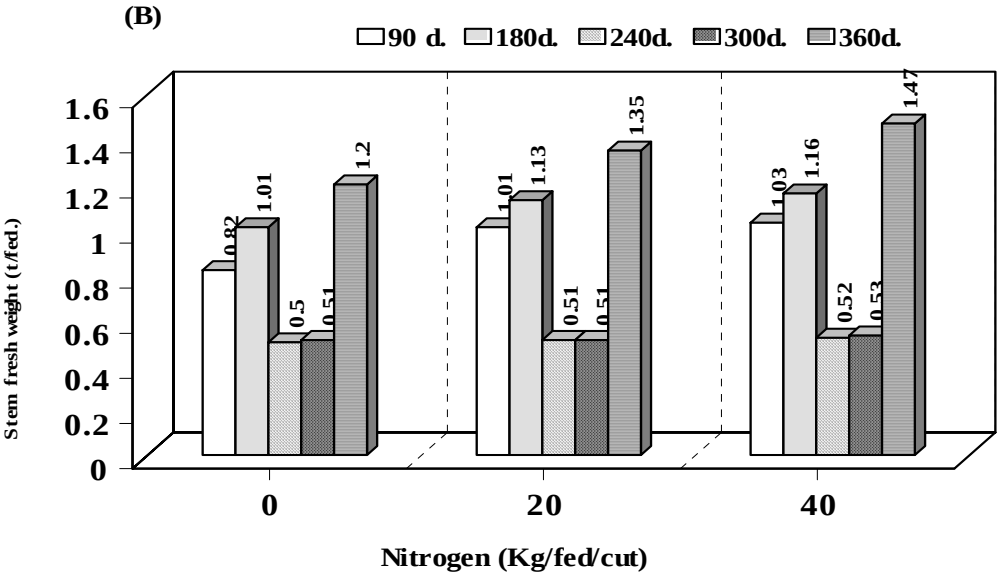

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