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## **INFLUENCE OF BORON SOURCES ON YIELD AND QUALITY OF SOME SUGAR BEET VARIETIES**

**Influence de sources de bore sur le rendement et la qualité de quelques  
variétés de betteraves sucrières / Einfluss von Borquellen auf Ertrag und  
Qualität einiger Zuckerrübensorten**

### **ABSTRACT**

Two field experiments were carried out at El-Nubaria region, Alexandria Governorate conditions, Egypt in 2010 / 2011 and 2011 / 2012 seasons to study the effect of four boron sources i.e. control (tap water), nitrate Balancer at the rate of 2 Liter / feddan, borax at the rate of 2 kg / feddan and nitrate Balancer at the rate of 1 Liter / feddan plus borax at the rate of 1 kg / feddan on yield and juice quality of three sugar beet varieties i.e. Pamella, Top poly and Fareda. The experiments were laid out in split plot design.

The obtained results showed that boron sources had a significant effect on all studied traits, except potassium percentage and sodium percentage in both seasons. Sugar beet plants sprayed with nitrate Balancer gave the highest values of root yield / feddan, sugar yield / feddan, TSS%, sucrose% and amino nitrogen as compared with other treatments in both seasons.

Results showed clearly that sugar beet varieties significantly differed in root yield / feddan, sugar yield / feddan, TSS% and sucrose% in both season, on other hand insignificantly differed in K%, Na% and amino nitrogen% in both season. Sugar beet variety Fareda gave the highest value of root yield / feddan, sugar yield / feddan, TSS% and sucrose% compared to other varieties in both seasons.

The obtained results observed clearly that sprayed sugar beet variety Fareda by nitrate Balancer gave the highest values of root yield per feddan, sugar yield per feddan, total soluble solids%, sucrose percentage and amino nitrogen percentage as compared with all other treatments in both seasons.