

## **EFFECT OF NITROGEN AND PHOSPHORUS ON SOME SWEET SORGHUM CULTIVARS**

By

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### **ABSTRACT**

Two field experiments were carried out at Mallawi Agric. Res. Station, El- Minia, Egypt during the two seasons (1993 and 1994 seasons) to study the effect of four levels of nitrogen (0, 40, 80 and 120 kg N/ fed.), three levels of phosphorus (0, 16 and 32 kg P<sub>2</sub>O<sub>5</sub>/ fed. ) on technological properties of juice and syrup of some sweet sorghum cultivars (Hybrid 405 and Honey cultivars). The treatments were arranged in split- split plot experimental design in four replications. The following are the most important results.

The application of 120 kg N/fed. gave the maximum syrup yield, purity percent in juice, T.S.S % and sucrose percent in juice at different maturity stage, juice extraction and reducing sugars content at dough stage.

The mean values of juice extraction percent, sucrose %, syrup yield at different maturity stages, purity percent at milk and ripe stages were increased by increasing the levels of phosphorus .

Honey cultivar gave the highest juice extraction percent, T.S.S percent, sucrose percent in juice, reducing sugar content in juice and syrup yield. While Hybrid 405 cultivar significantly surpassed Honey cultivar in purity percent in juice at milk and dough stages. In general, juice extraction and reducing sugars concentration reached its maximum at milk stage, whereas total soluble solids, sucrose percent in juice and syrup yield/ fed. increased gradually up to ripe stage.