

**EFFECT OF POTASSIUM FERTILIZER UNDER TWO PLANTING DATES ON  
 YIELD AND YIELD COMPONENTS OF GIZA 80 COTTON CULTIVAR**

**BY**

**Sary, G.A.\*; Roshdy, A.\*; Wassel, O.M.M.\*\* and Abd El-Gayed, S.Sh.\*\***

\* Agronomy Dept. Fac. of Agric., Moshtohor, Benha Univ.

\*\* Cotton Res. Inst., Agric. Center, Giza, Egypt.

**ABSTRACT**

**Two** field experiments were carried out at Sids Agriculture Research Station, during 2005 and 2006 seasons, to study the effect of two planting dates 15<sup>th</sup> March and 15<sup>th</sup> April and three treatments of potassium fertilizer I. 24 kg K<sub>2</sub>O/fed as soil application, II. 24 kg K<sub>2</sub>O/fed as soil application + 2.4 kg K<sub>2</sub>O/fed as foliar spraying at flowering stage, III. 2.4 kg K<sub>2</sub>O/fed spraying at squaring + 2.4 kg K<sub>2</sub>O/fed foliar spraying at flowering stage, on yield and yield components of Giza 80 cotton cultivar.

Results revealed that the early planting date (15<sup>th</sup> March) significantly increased boll weight, seed index and lint percentage in the second season. While number of open bolls/plant in the first season and seed cotton yield/feddan in the two seasons were significantly increased by late planting date on (15<sup>th</sup> April). On the other hand, number of fruiting branches/plant, seed cotton yield/plant and earliness % showed insignificant effect.

Potassium fertilizer significantly affected number of fruiting branches/plant in the first season, no. of open bolls/plant, in the second season. While, seed cotton yield/plant, earliness % and lint % were insignificantly affected. However, seed cotton yield/fed was significantly affected by potassium fertilizer in both seasons.

The interaction between planting date and potassium fertilizer treatments significantly affected the number of fruiting branches/plant and earliness in the first season. However, boll weight, seed cotton yield/fed and seed index were significantly affected in both seasons. While no. of open bolls/plant and lint percentage were significantly affected only in 2006 season.

**Key Words:** *G. barbadense*, L., planting date, potassium fertilizer, yield components, interaction.

**INTRODUCTION**

Planting date is considered the most important factor among different factors, influencing growth and yield of cotton. In Egypt, many investigations showed that early planting had favorable effect on seed cotton compared with late sowing. Many workers studied the effect of planting date on cotton plant viz.

Abd El-zaher (1995) and El-Debaby *et al.* (1995) they found that no. of open bolls/plant, boll weight, seed cotton yield and earliness increased with early planting, Assyi

and Abd El- Malak (1997) reported that early planting date increased seed cotton yield/plant, seed index and lint percentage, El-Shahawy (1999) found that early planting date increased no. of open bolls/plant, boll weight, lint percentage, seed index and seed cotton yield, El-Tabbakh (2001) found that the late sowing of 1<sup>st</sup> may significantly decreased no. of total bolls/plant, seed cotton yield/plant and fed and earliness%. However delaying planting showed significantly increased lint percentage and seed index, Kassem (1999) and Ali and El-Sayed (2001) they found that seed cotton