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# Improvement of Egyptian cotton variety Suvin (*Gossypium barbadense* L.) for yield and its attributes

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**ABSTRACT :** An attempt has been made to improve the genetic background of variety Suvin with desirable traits of high yield and ginning percentage from the variety Giza; short duration in the sense of early maturity from variety Pima and high fibre strength and length from the variety Sudan, respectively. Promising single plant each was selected from the BC<sub>2</sub>F<sub>1</sub> populations involving the crosses of Suvin x Giza, Suvin x Pima, Suvin x Sudan, (Suvin x Giza) x (Suvin x Pima) and was advanced upto BC<sub>2</sub>F<sub>6</sub> generation. The selected progenies of each cross combination was raised in RBD with three replications during *Kharif* season of the years from 2011-12, 2012-13 and 2013-14 and advanced upto BC<sub>2</sub>F<sub>6</sub>. The data were recorded for the traits seed cotton yield, lint yield, ginning outturn, 100 seed weight, boll weight, 2.5 per cent span length, micronaire and elongation. The cross derivatives of all the eight progenies evaluated during the years 2011-2014 had exhibited increased mean value over control for the traits boll weight (g), seed cotton yield (kg/ha), lint yield (kg/ha) and ginning outturn (in percentage) consistently. However, in regard to quality parameters such as 100 seed weight, 2.5 per cent span length, strength (g/tex), micronaire value and elongation, the lines showed both positive and negative shift of mean value over control. The results indicates that F<sub>1</sub>s of all the cross combinations required to be backcrossed further with Suvin beyond BC<sub>3</sub> and, thereafter, the progenies selected in BC<sub>3</sub>F<sub>1</sub>, needs to be advanced up to BC<sub>3</sub>F<sub>6</sub> for improvement of yield parameters without altering the fibre qualities of Suvin.

**KEY WORDS :** Egyptian cotton, Suvin, Pima, Giza, Sudan, *Gossypium barbadense* L., Improvement, Quality parameters, Seed cotton yield, Ginning outturn, 2.5 per cent span length

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