

Effect of Priming on Germination and Seedling Quality Parameters of Chickpea (*Cicer arietinum* L.)

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ABSTRACT

Chickpea (*Cicer arietinum* L.) is an important *rabi* pulse crop grown in India. An experiment was conducted to know the effect of different priming methods on germination parameters of chickpea. Among the treatments studied seeds soaked in GA₃ solution for 16 hrs enhanced the germination, root length, shoot length, seedling fresh and dry weight, vigour index and field emergence followed by GA₃ with 12 hours priming. Hydropriming for 12 hours and 16 hours duration showed moderate improvement on seed germination parameters. Irrespective of the priming duration, lowest germination and other seedling quality parameters were observed in seeds primed with KCl. Superiority of GA₃ to record highest effect on germination parameters may be due to its stimulation effect in the formation of enzymes which are important in the early phases of germination helping for faster radical protrusion and plumule elongation. The present study indicated that, priming with GA₃ was found to improve the germination and seedling quality parameters in chickpea. Correlation analysis showed that field emergence is highly depended on germination and vigour index.

Key words: *Chickpea, Germination parameters, Priming.*