

## RESEARCH ARTICLE

# Frequency and spectrum of chlorophyll mutants induced by gamma rays and EMS in two chickpea varieties (Variety- Vijay and PKV-2)

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### SUMMARY

Chickpea is one of the most important leguminous food grain grown worldwide. Mutagenesis could be used as a classical way to increase genetic variability in chickpea considering its narrowing genetic base. Present study was an attempt to analyze the frequency and spectrum of chlorophyll mutations induced by gamma rays (300, 400 and 500 Grey) and ethyl methanesulphonate (0.2%, 0.3% and 0.4%) in  $M_2$  generation of varieties of chickpea (Var- Vijay and PKV-2). Broad spectrum chlorophyll mutants were isolated from  $M_2$  generation. The relative frequency of these mutants in both varieties was observed in order of Tigrina > Viridis > Chlorina > Xantha and Albina. The total chlorophyll mutation frequency increased with increase of dose upto certain limit and then started declining. However, the effectiveness of EMS was found to be more prominent than gamma rays especially in inducing chlorophyll mutations in Chickpea.

**Key Words :** Chickpea, Chlorophyll mutants, Ethyl methanesulphonate, Gamma rays, Frequency

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