

Spectrum and Frequency of *Induced Chlorophyll Mutation in Chickpea (*Cicer Arietinum L.*) in M₂ Generation*

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ABSTRACT

The chlorophyll mutation frequency in M₂ generation is the most effective and dependable index for evaluating the genetic effects of mutagenic treatments. In general, all mutagenic treatments induced fairly high frequency of chlorophyll mutations. It is also obvious from these results that chlorophyll mutation rate increased with increasing dose of radiation (gamma-rays) exception in few cases, whereas medium dose of chemicals was found to be the most efficient for inducing chlorophyll mutations. The present investigation is found to have obtained higher frequency of chlorophyll mutation with medium or low doses mutagens. It seems that the strong mutagens reach their saturation point even at lower doses in the highly mutable genotypes and further increase in dose does not add to mutation frequency, with increase in dose beyond a point, the strong mutagens become more toxic than the higher dose of relatively weaker mutagens. It was assumed that specific chemical reactions would take place between a mutagen and a gene mutations in a definite manner if the right chemical applied. Several morphological characters through different mutagens i.e. xantha > albino > viridis, are founded respectively.

Keywords: Chickpea; Spectrum; Frequency; Chlorophyll.