



RESEARCH ARTICLE :

Morphological variation as influenced by colchicine treatment in African marigold

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SUMMARY : An experiment on effect of colchicine on polyploidy induction in white marigold was conducted in CRD with six treatments and five replications. The seeds of white marigold were treated with 0.0, 0.5, 1.0, 1.5, 2.0 and 2.5 % colchicine at room temperature for 12 hrs. and germinated in protray. Thirty days old seedlings were transplanted in the field with spacing of 45 cm × 30 cm in ridges and furrow. Observations on morphological variations were recorded on each and every plant in each treatment. Reduced stem elongation, slow growth, slower node development as compared to control seedlings, abnormal first 1-2 true leaves were major morphological and growth characteristics observed due to colchicine treatments. These effects on seedling growth were most evident at the higher colchicine concentrations (1.5 to 2.5 %). Maximum number of 12 variant types were observed in 0.5 % colchicine followed by 1 % colchicine which recorded 8 variant types. This study lead to the conclusion that seeds treated with 0.5 % colchicine for 2 hrs. was optimum for inducing variation in marigold. The colchiploid treated marigold plants identified on the basis of morpholoigical variation requires to be confirmed from further cytological studies.

KEY WORDS :

Marigold,
Colchicines, Variation

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