

Cytological Characterization of Capsicum Annuum Var. Paprika (Tatassi) {solanaceae}cultivated in Owerri, Eastern Nigeria

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Abstract

Cytological investigation of Capsicum annuum Lin. Var. paprika (tatassi) cultivated in Owerri, eastern Nigeria was undertaken in order to generate cytological information on its karyological profile which could be factored into decisions pertaining to appropriate crop improvement regimes for the crop. Ripe fruits were obtained from three small Holding farms within Owerri metropolis. Seeds of fruits were extracted, air-dried and processed for chromosomal investigation. Root-tips were pretreated in 0.05% colchicine and fixed in acetic ethanol. A somatic chromosome number of $2n=24$ was after squashing in 2% acetic orcein. Further karyological findings showed that chromosome size ranged from medium to large with a mean of $5.45\mu\text{m}$. Metacentrics dominated the karyotype (75%) while remaining were submetacentrics and subtolocentrics. A coefficient of variation (CV) value of 10.08 lent credence to the inference that ample karyotypic variability exists in this crop to ensure positive response to selection and/or intra-varietal hybridization methods of crop improvement