

**KARYOTYPE ANALYSIS IN *ZEA MAYS* L. VAR. EVERTA (POPCORN)
CULTIVATED WITHIN OWERRI, SOUTHEAST NIGERIA**

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ABSTRACT

Karyotype analysis of *Zea mays* L. variety everta (Popcorn) was carried out with an aim of establishing any karyotypic features of this plant which could be useful in designing crop improvement efforts for the crop. Fruits of the plant were obtained from operators and certified in a University Herbarium. Germinating root tips were pretreated in colchicine solution and fixed with acetic ethanol. Metaphase chromosomes were accessed after hydrolysis and squashing in orcein. A diploid chromosome count of $2N = 20$ was recorded for all cells. The karyotype was highly asymmetrical with intrachromosomal asymmetry index of 0.4548 and interchromosomal asymmetry index of 0.4314. The shortarm had a very high coefficient of variation value of 84.14%, while total length coefficient of variation value was 43.14%. The implication of a history of both major and cryptic activities in this karyotype can be interpreted as karyotypic instability which could be exploited in improvement regimes such as recurrent selection.

KEYWORDS: Everta, Karyotype, Heterogenous, Asymmetrical, Selection