Abstract

A comparative intra-specific karyotype analysis was performed on eight Kenyan tea cultivars, Camellia sinensis (L.) O. Kuntze by examining shoot tip meristematic cells by acetic orcein and giemsa staining methods. Six of the cultivars were diploids (2n = 2x = 30) while two were naturally evolved triploids (2n = 3x = 45). Most of the chromosome complements in the eight cultivars were generally homotypic and symmetrical in relative length and kinetochore position and consisted of perfect to near-perfect metacentric chromosomes with an arm ratio range of 1.00 to 1.30. Mitotic metaphase chromosomes of the eight cultivars were also consistently lacking in secondary constrictions and satellites and often had "sticky" tips. No marker chromosomes were identified. Differential staining with giemsa did not give positive results and had very limited resolution of heterochromatic regions.