

A NOTE ON THE OCCURRENCE OF DESYNAPSIS IN *CORCHORUS PSEUDO-OLITORIUS* I. AND Z. (TILIACEAE)

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Abstract: Two desynaptic plants of *Corchorus pseudo-olitorius* I. and Z. (Family: Tiliaceae; important genetic resource of Jute) showing no phenotypic variations than standard normal plants were identified from the natural population (2 out of 4 plants; 4 plants germinated from 100 seeds) of *Corchorus* spp. (the wild species are under acclimatization, 3rd year) following male meiotic analysis. Compared to normal plants, the spontaneous desynaptic plants (ds₁: 'weak type'; ds₂: 'medium strong type') demonstrated enhanced univalent frequency per cell, reduced number of chiasma and bivalent per nucleus (ds₁: 5.57II+1.63I/cell- diplotene, 6.38II+1.23I/cell- MI, chiasma 6.93±0.16/cell; ds₂: 4.56II+4.88I/cell- diplotene, 5.06II+3.89I/cell- MI, chiasma 5.41±0.20/cell; normal: 6.81II+0.38I/cell- diplotene, 6.75II+0.25I/cell- MI, chiasma 7.81±0.28/cell). Univalents were randomly distributed at MI irrespective of bivalent frequency in a meiocyte. Although variable chromosomal associations were noted in the plant types (ds₁: 7II to 1II+12I, ds₂: 7II to 14I; normal: 7II to 5II+4I at diplotene, 7II and 5II+4I at MI) 7II formation was the most predominant type. Occurrence of 14I in both diplotene (13.75%) and MI (11.81%) was only recorded in ds₂. Mostly (ds₁: 93.62%, ds₂: 86.84%, normal: 100.00%), AI cells were cytologically (7:7) balanced (rare often unequal distribution like 6:1:7, 7:9 and 5:9 were observed; ds₂ showed failure of cytokinesis- 2.63%). All AII cells were also cytologically normal. Pollen fertility (ds₁: 72.49%, ds₂: 65.35%), viability (ds₁: 72.06%, ds₂: 57.48%) and size (ds₁: 40.78±0.9×30.76±1.5, ds₂: 41.08±0.7×32.23±0.9) and seed set per capsule (ds₁: 88.81±2.1, ds₂: 87.50±1.2) were nearly in accordance to standard normal plants (pollen fertility: 76.48%, pollen viability: 74.48%, pollen size: 40.21±0.1×30.74±0.1, seed set/capsule: 88.02±1.8).

Keywords: *Corchorus pseudo-olitorius*, desynapsis, fertility, spontaneous, weak and medium strong types

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