

SHORT COMMUNICATION

Introduction and Establishment of *Gossypium darwinii* (AD5) in India – A Tetraploid Wild Species

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Fig. 1: *G. darwinii* (AD5) – a tetraploid wild species

G. darwinii (AD5) is a wild allotetraploid species, one of the sources of primary germplasm and has originated from the Galapagos island. It is a relative of cultivated tetraploid species *G. barbadense* (AD2). The seeds of *G. darwinii* were procured from Dr. RJ Kohel, USDA, USA under the enrichment of germplasm programme through NBPGR, New Delhi. *G. darwinii* plants have been introduced and established for the first time in India.

G. darwinii is a perennial shrub, densely branched and moderately hairy. The plant grows to a normal height of 68 cm while one of the three plants established in existing wild species garden of CICR, Nagpur has grown exceptionally tall to a height of 167 cm with spreading of branches upto 94 cm, leaves 8.5–9×5 cm, softly tomentose when young, central lobe much longer, linear-oblong acuminate, with deep sinuses on both side drawn and turned in folds, veins prominently covered by trichomes,

petioles 3.8–4 cm long. Inflorescence axillary, flower solitary, on short rigid pedicels, bracteoles quite free with no extra floral glands (nectarines), ovate cordate, cut into many very narrow awl-shaped teeth that become almost forked and hooked, membraneous, prominently reticulated completely enclosing the capsule. Flowers very large, wide spreading, yellow, with a dark red plant blotch, calyx undulated or cut square across and pollen grains distinctive. Capsule elongated, long, with acute apex and four loculed, with 8-10 seeds per capsule and light brown lint and fuzz.

The introduction and establishment of *G. darwinii* known as a donor for drought and nematode resistance has opened up, avenues for its utilization in introgressive hybridization for the improvement of cultivated cotton. Further *G. darwinii* has been utilized in crossing program to transfer these traits into the cultivated species of cotton.