

Genus Data Sheet

Datasheet No. A-078.008
(Family.Genus)

DBT- Network Programme

1. Genus: *Tradescantia* L.

2. Systematic position: APG IV; Bentham and Hooker: Commelinaceae

Bentham and Hooker (1862)

Kingdom: Plantae
Division: Phanerogamia
Class: Monocotyledones
Series: Coronarieae
Family: Commelinaceae Mirb.
Genus: *Tradescantia* L.

APG IV (2016)

- Kingdom: Plantae
- Clade: Angiosperms
- Clade: Monocots
- Order: Commelinales Mirb. ex Bercht. & J. Presl
- Family: Commelinaceae Mirb.
- Genus: *Tradescantia* L.

3. Species:

Global: 75

India: 01

4. Taxonomic riddles:

5. Distribution:

Global: Cosmopolitan

India: Andhra Pradesh, Daman and Diu, Karnataka, Kerala, Maharashtra, Madhya Pradesh, North East India, Orissa, Pondicherry, Rajasthan, Tamil Nadu, Uttar Pradesh

6. Habit and Habitat: Perennial or annual herbs; many of the species naturalized as weed in crop fields, but few are typically found in forests.

7. Economic Importance:

8. DNA content range:

2C: 15.5 pg⁴⁵

4C: 31.0 pg⁴⁵

Methodology

(Flow cytometry with the fluorochrome propidium iodide)⁴⁵

9. Basic chromosome number(s): $x=6^9$

10. Zygotic chromosome number(s):

$2n=12^{2,3,5,6,7,8,9,10,11,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,36,39,40,43,44,46}$
 $13^7 18^{4,23,30,34,35} 24^{25,39}$

11. Gametic chromosome number(s): $n=6^{1,13,19,21,22,31,36,39} 12^{11,25}$

12. Specialized chromosomes (B chromosomes/Sex chromosomes/Polytene Chromosomes/ Neocentric chromosomes):

13. Ploidy level: Diploid^{4,18,21,22,23,28,30,33,35,36,46} Triploid^{4,23,28,30,34,35} Tetraploid^{21,25,28,33,39}

14. Nature of polyploidy (auto, segmental, allo, autoallo): Autopolyploidy

(Autotriploid^{4,23,28,30,34,35}; Autotetraploid^{21,28,39}; Induced tetraploid^{18,25})

15. Aberrant chromosome number(s) (aneuploidy, aneusomaty, polysomaty): Aneuploid³⁹

16. Karyograms:

Meiosis: Ring configuration: ring of $12^{4,16,17,18,19,27,28,46}$; $11+1^{28}$; $10+2^{28}$; $8+4^{28}$; $7+5^{18,28}$; 12II

17. Banding pattern(s): Q-banding¹⁷ C-banding^{3,31,43}

18. Physical mapping of chromosomes: FISH using 25S rDNA, 5S rDNA^{42,43}

19. Phylogenetic relationship at Chromosomal; DNA level:

20. Cytogenetic mechanism (s) underlying evolution: Complex translocation heterozygotes^{4,16,17,18,19,27,28,33,34,35,40,41,42,43,46}

21. Linkage map:

22. Any other information: