

Genus Datasheet

Datasheet No. A-028.023
(Family.Genus)

DBT- Network Programme

1. Genus: *Typhonium* Schott

2. Systematic Position:

APG IV (2016)

- Kingdom: Plantae
- Clade: Angiosperm
- Clade: Monocots
- Order: Alismatales R. Br. ex Bercht. & J. Presl
- Family: Araceae Juss.
- Genus: *Typhonium* Schott

Bentham and Hooker (1862)

Kingdom: Plantae
Division: Phanerogamia
Class: Monocotyledones
Series: Nudiflorae
Ordo: Aroideae Arn.
Genus: *Typhonium* Schott

3. Species:

Global: 68

India: 8

4. Taxonomic riddles:

5. Distribution:

Global: Tropical & Subtropical Asia

India: Andaman & Nicobar Islands, North East India, South & East India.

6. Habit and Habitat:

7. Economic Importance:

8. DNA content range:

4C(6.44-12.40pg)³

4C(6.59-20.67pg)⁶

Methodology:

Feulgen cytophotometry³

Feulgen microdensitometry⁶

9. Basic chromosome number(s): x=8^{1,7}

x=9¹

x=10¹

x=13^{1,17}

10. Zygotic chromosome number(s): 2n=14⁸

$2n=16^{1,3,6,7,9,10,11,12}$
 $2n=17^{23}$
 $2n=18^{3,7,8,11,13,18,19,21,22,23}$
 $2n=19^{22}$
 $2n=20^{1,2}$
 $2n=28^{15}$
 $2n=36^1$
 $2n=40^1$
 $2n=50^{13}$
 $2n=52^{1,3,16}$
 $2n=54^{24}$
 $2n=65^1$

11. Gametic chromosome number(s): $n=8^{1,7}$
 $n=9^{7,13,21}$
 $n=10^1$
 $n=13^{2,7}$

12. Specialized chromosomes (B chromosomes/Sex chromosomes/Polytene chromosomes/ N chromosomes):

13. Ploidy level: Diploid¹
Tetraploid^{1,5}
Pentaploid¹

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

15. Aberrant chromosome number(s) (aneuploidy, aneusomy, polysomy): Variant chromosome somatic cells showing $2n=12^7$, $2n=16^7$, $2n=18^7$

16. Karyograms: $7,11,18,22,23$

Meiosis: $1,7$

17. Banding pattern(s): CMA+ Bands^{22,23}
DAPI+ Bands²²

18. Physical mapping of chromosomes:

GISH:

19. Phylogenetic relationship at Chromosomal; DNA level: DNA level^{4,5,14,25,26,27}

20. Cytogenetic mechanism(s) underlying evolution: Structural alterations in chromosomes to speciation of the genus and eventually got stabilized in evolution³; Variation in chromosome number tissue may play a part in speciation through vegetative means⁷. The interspecific variation of chromosome

In pentaploid- Pollen stainability- 86%