

Genus Datasheet

Datasheet No. A-078.001
(family,genus)

DBT- Network Programme

1. Genus: *Commelina* L.

3. Systematic position:

APG IV (2016)

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

Bentham and Hooker (1862)

Kingdom: Plantae
Division: Phanerogamia
Class: Monocotyledones
Series: Coronarieae
Ordo: Commelinaceae Mirb.
Genus: *Commelina* L.

3. Species:

Global:215

India: 24

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:Perennialor annual herbs; many of the species naturalized as weed in crop fields, but few are typically found in forests

7.Economic Importance:Medicinal applicationson burns, external woundsand Leprosy

8. DNA content range:

(2C: 5.1-20.7pg.; 4C: 10.3-41.4pg.)³⁵

Methodology

Feulgen Microdensitometry(Fe)³⁵

9. Basic chromosome number(s):x=4^{2,15,5,2,11,2,24,39,44,47,52,53,54,65,69}12²⁴14²15^{29,35,37,38,39,40,44,42,47,54,69}

10.

Zygotic

chromosome

number(s):2n=18⁶¹22^{1,2,3,4,6,7,8,10,11,12,13,14,15,16,36,39,46,50,51,52,53,54,55,57,58,59,65,66,69}28^{2,3,17,27,41,67}30^{2,3,8,11,12,13,19,20,21,28,29,30,32,35,36,38,39,41,44,47,54,62,63,64,66,69}

11.

Gametic

chromosome

number(s):n=11^{1,3,4,5,9,11,13,36,39,45,46,53,54,55,56}12¹⁴14¹³15^{2,3,6,11,13,22,26,29,31,36,37,38,54}22⁵⁴24^{8,26}

30^{2,3,8,18,22,27,29,31,33,34,37,40,42,49,54}45^{2,25,29,31,40,55}60^{37,75}31

12. Specialized chromosomes (B chromosomes/Sex chromosomes/Polytene Chromosomes

Neocentric chromosomes):B chromosome (0-2)^{12,17,29,20,21,51}, (0-4)⁴⁵

13. Ploidy level:Diploid^{2,11,19,22,24,35,37,38,39,44,47,52,53,54,65,69}Tetraploid^{2,9,14,22,24,29,35,37,40,42,47,54}Hexaploid^{24,35,37,40,44}Octaploid³⁵

14. Nature of polyploidy (auto, segmental, allo, autoallo):Allopolyploidy^{40,42}

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

16. Karyograms:

Meiosis:

17. Banding pattern(s):

18. Physical mapping of chromosomes:GISH:

19. Phylogenetic relationship at Chromosomal; DNA level:

20. Cytogenetic mechanism (s) underlying evolution:

21. Linkage map:

22. Any other information:

The Genus Commelina is represented by 24 species as per APG IV classification. Out of 24 Species, 18 have been investigated for chromosome data available on databases. Remaining 06 species C. appendiculata, C. avenifolia, C. hirsuta, C. kotschyi, C. tricolor, and C. tuberosa have not been worked out as chromosome data available on databases.