

1. Genus:*Cosmos* Cav.

2. Systematic position:

APG IV (2016)

- Kingdom:Plantae
- Clade: Angiosperms
- Clade: Eudicots
- Clade: Superasterids
- Clade: Asterids
- Order: Asterales Link
- Family: Asteraceae Bercht. & J. Presl
- Genus: *Cosmos* Cav.

Bentham and Hooker (1862)

Kingdom: Plantae
Division: Phanerogamia
Class: Dicotyledons
Subclass: Gamopetalae
Series: Inferae
Cohors: Asterales Link
Ordo: CompositaeGiseke
Genus: *Cosmos* Cav.

3. Species:

Global: 42

India: 3

4. Taxonomic riddles:

5. Distribution:

Global: Argentina, Bolivia, Brazil, Canada, Caribbean, China, Colombia, Costa Rica, El Salvador, Guatemala, Guyana, Honduras, India, Mexico, Venezuela, Peru, USA

India: Cultivated

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6. Habit and Habitat:Herb.

7.Economic Importance:Garden Plant

8. DNA content range:

Methodology

2C(3.08pg) ¹Microdensitometer

9. Basic chromosome number(s):

10. Zygotic chromosome number(s):2n= 24 ¹⁻¹¹, 2n= 48 ¹⁶

11. Gametic chromosome number(s): $n=12^{2,8,12-14},n=24^{16,17}$

12. Specialized chromosomes (B chromosomes/Sex chromosomes/Polytene Chromosomes/ 1 chromosomes):

13. Ploidy level:

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

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

16. Karyograms:¹Meiosis:^{2,8,12-14,16,17}

17. Banding pattern(s):

18. Physical mapping of chromosomes:GISH:

19.Phylogenetic relationship atChromosomal; DNAlevel:

20. Cytogenetic mechanism (s) underlying evolution:

21. Linkage map:

22. Any other information:Chromosome number is not reported in the following taxa:

*Cosmos steenisiae*Veldkamp