

Genus Datasheet

Datasheet No. A-028.005
(Family.Genus)

DBT- Net

1. Genus: *Arisaema* Mart.

2. Systematic Position:

APG IV (2016)

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

Bentham and Hooker (1862)

Kingdom: Plantae
Division: Phanerogamia
Class: Monocotyledones
Series: Nudiflorae
Ordo: Aroidae Arn.
Genus: *Arisaema* Mart.

3. Species:

Global: 184

India: 36

4. Taxonomic riddles: Yes^{9,34}

5. Distribution:

Global: E. Zaire to Ethiopia and Tanzania, Arabian Pen. to Sakhalin and Malesia, C. & E. Canada to Mexico.

India: Deccan peninsular, Western ghats, North-East India, Eastern ghats and West Himalaya

6. Habit and Habitat: Perennial geophytic herbs grows in moist evergreen forests to moist deciduous forests.

7. Economic Importance: Folk medicine and food.

8. DNA content range:

2C (10.12pg)³⁹

4C (20.242pg)³⁹

Methodology:

Flow cytometry³⁹

9. Basic chromosome number(s): $x=7$ ³⁵

$x=13$ ^{6,21}

$x=14$ ^{6,9,21,34}

10. Zygotic chromosome number (s): $2n=20$ ^{12,35}

$2n=24$ ^{25,36}

$2n=26$ ^{3,12,20,24,41,50,42,57}

$2n=28$ ^{1,2,4,5,6,9,12,19,20,21,24,25,26,27,28,29,30,31,34,36,37,38,40,42,46,47,49,51,54,55,56,57}

$2n=32$ ^{20,41}

$2n=36$ ²⁰

$2n=39$ ³

$2n=48$ ^{4,32,33}

$2n=52$ ^{1,3,6,21,45}

$2n=56$ ^{1,4,5,6,7,8,9,11,12,13,14,15,16,19,22,23,24,31,34,37,40,47,52}

$2n=56-59$ ¹⁰

$2n=66-68$ ¹⁰

$2n=70$ ¹⁷

$2n=112$ ⁷

11. Gametic chromosome number (s): $n=14$ ^{21,43,44,48}

$n=26$ ⁵³

12. Specialized chromosomes (B chromosomes/Sex chromosomes/Polytene chromosomes/ Neocentric chromosomes): B chromosome^{20,41,49}

13. Ploidy level: Diploid ^{31,34}

Tetraploid ^{9,21,31}

Decaploid ⁹

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

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

16. Karyograms: ^{9,25,37,51}

Meiosis: ²¹

17. Banding pattern(s):

18. Physical mapping of chromosomes:

GISH:

19. Phylogenetic relationship at Chromosomal; DNA level: Chromosomal level ⁵⁸

DNA level ^{18,59,60,61,62,63,64,65,66,67,68}

20. Cytogenetic mechanism (s) underlying evolution: Intra and inter specific polyploidy along with aneuploidy played an important role in the evolution of the genus ²¹; Aneuploidy has been an effective means in the evolution of the genus ²⁵; Both aneuploidy and euploidy played important roles in the evolution of species ⁵¹

21. Linkage map:

22. Any other information: