

Species Datasheet

Datasheet No. A-073.002.010
(family.genus.species)

DBT- Network Programme

-

1. Taxon:

Species *Allium chinense* G. Don.

Subspecies

Variety

Cultivar

Hybrid

Image file

2. Synonyms: *Allium bakeri* Regel, *A. bodinieri* H.Lev. & Vaniot, *A. exsertum* G.Don, *A. exsertum* Baker, *A. martini* H.Lev. & Vaniot, *A. splendens* Miq., *Caloscordum exsertum* (G.Don) Herb.

3. Systematic Position:

APG IV (2016)

- Kingdom: Plantae
- Clade: Angiosperms
- Clade: Monocots
- Order: Asparagales Link
- Family: Amaryllidaceae J. St.-Hil.
- Subfamily: Allioideae Herb.
- Genus: *Allium* L.
- Species: *A. chinense* G. Don.

Bentham and Hooker (1862)

Kingdom: Plantae
Division: Phanerogamia
Class: Monocotyledones
Series: Coronarieae
Ordo: Liliaceae Juss.
Genus: *Allium* L.
Species: *A. chinense* G. Don.

4. Distribution:

Global: China, Bangladesh, Japan, India

India: Assam, Meghalaya, Uttarakhand

5. Indigenous/Exotic/ Endemic; Cultivated/Wild: Wild, occasionally cultivated

6. Threat Status:

IUCN: Least concern

BSI:

7. Habit and Habitat: Herbaceous, height~ 16-50 cm; Temperate, 1220 m - 1830 m altitude

8. Life Form: Bulbous geophyte

9. Economic Importance: Cultivated for vegetable, pickle and condiment; culinary onion of importance

10. Probable Progenitor of:

11. DNA

C- value

2C (32.71pg)³

4C (130.86±1.12pg)⁴

Methodology

Feulgen cytophotometry^{3,4}

12. Basic chromosome number(s):

13. Zygotic chromosome number(s): $2n=16$ ¹⁸⁵

$2n=24$ ^{8,186,187,193}

$2n=32$ ^{3,4,7,8,13, 14, 31,32,34,168,186,187,188,189,190,191,192,193,194,195}

14. Gametic chromosome number(s):

15. Specialized chromosomes (B chromosomes/Sex chromosomes/Polytene chromosomes/Neocentric chromosomes):

Image file

16. Ploidy level: Triploid^{8,193}, Tetraploid^{3,4,8,13,32, 34,191,193}

Image file

17. Agametoploidy

18. Nature of polyploidy (auto, segmental, allo, autoallo): Segmental allotetraploid ³², Autotetraploid ³⁴

19. Genomic formula:

20. Aberrant chromosome number(s) (aneuploidy, aneusomy, polysomy): $2n = 30$ ³¹

21. Somatic chromosomes:

Karyotype Majority sub-metacentric chromosomes ³²

Majority metacentric chromosomes ^{34,193,194}

Majority metacentric or sub-metacentric chromosomes ¹⁸⁵

Chromosome size Medium to large ^{8,32}, large to very large ³⁴

NOR chromosome(s) 2-4 NOR ^{31,32,34}

Degree of asymmetry: Stebbins 2A category ³⁴

Image file

22. Banding pattern(s):

Image file

23. Physical mapping of chromosomes:

In situ hybridization

Image file

Fluorescent in situ hybridization

Image file

24. Genomic in situ hybridization:

Image file

25. Linkage map:

Image file

26. Chromosome associations:

Female meiosis

Male meiosis Irregular ¹³; Highly variable, in addition to IV's and II's, Multivalent (III to VI) and I's present ³²

Image file

27. Chromosome distribution at anaphase I: Irregular with bridge formation, fragmentation and laggards ³²

28. Genetic diversity:

Chromosomal level

Image file

DNA level

29. Any other information (Apomixis; Inversion; Male sterility; Pollen grain mitosis; Pollen stainability; Translocations etc): Pollen stainability (%): Sterile ¹³; 16.07% ³²