

Species Datasheet

Datasheet No. A-073.002.012
(family.genus.species)

DBT- Network Programme

-

1. Taxon:

Species *Allium consanguineum* Kunth

Subspecies

Variety

Cultivar

Hybrid

Image file

2. Synonyms:

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. consanguineum* Kunth

Bentham and Hooker (1862)

Kingdom: Plantae
Division: Phanerogamia
Class: Monocotyledones
Series: Coronarieae
Ordo: Liliaceae Juss.
Genus: *Allium* L.
Species: *A. consanguineum* Kunth

4. Distribution:

Global: India, Pakistan

India: Himachal Pradesh, Jammu and Kashmir

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

6. Threat Status:

IUCN: Not been assessed yet

BSI:

7. Habit and Habitat: Herbaceous, height ~70cm; near moraine, in open fields or in crevices of rocks at an altitude of 2440 m – 3050 m, Temperate

8. Life Form: Bulbous geophyte

9. Economic Importance: Grown for vegetables and condiments

10. Probable Progenitor of:

11. DNA

C- value

Methodology

12. Basic chromosome number(s): $x=8^{5,37}$

13. Zygotic chromosome number(s): $2n=16^{6,9,10,11,13,14,35,37,38}$

14. Gametic chromosome number(s): $n=8^{5,9,11,36,37,38,40}$

15. Specialized chromosomes (B chromosomes/Sex chromosomes/Polytene chromosomes/Neocentric chromosomes): B chromosome (1) ¹⁰

Image file

16. Ploidy level: Diploid ^{5,6,11,37,38}

Image file

17. Agametoploidy

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

19. Genomic formula:

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

21. Somatic chromosomes:

Karyotype Majority metacentric or sub-metacentric chromosomes³⁸

Majority metacentric chromosomes⁶

Chromosome size Medium to large^{6,38}

NOR chromosome(s) 2 NOR⁶

Degree of asymmetry: Symmetrical³⁸

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 8 II ^{5,11,37,38}; medium to strong desynaptic, maximum 14 I per PMC ³⁷; 6 II+1 IV ³⁹

Image file

27. Chromosome distribution at anaphase I: Irregular with 1-4 laggards ³⁷; Regular ^{5,11,38};

Regular disjunction high although 3 disjunction patterns observed ³⁹

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 (%): 20% ³⁷; 25% ³⁹; 100%⁵