

Species Datasheet

Datasheet No. A-074.002.006
(family.genus.species)

DBT- Network Programme

-

1. Taxon:

Species *Asparagus densiflorus* (Kunth) Jessop

Subspecies

Variety

Cultivar

Hybrid

Image file

2. Synonyms: *Asparagopsis densiflora* Kunth, *Asparagus myriocladus* Baker, *A. sarmentosus* var. *comatus* Baker, *A. sarmentosus* var. *densiflorus* (Kunth) Baker, *Protasparagus densiflorus* (Kunth) Oberm.

3. Systematic Position:

APG IV (2016)

- Kingdom: Plantae
- Clade: Angiosperms
- Clade: Monocots
- Order: Asparagales
- Family: Asparagaceae Juss.
- Genus: *Asparagus* L.
- Species: *A. densiflorus* (Kunth) Jessop

Bentham and Hooker (1862)

Kingdom: Plantae
Division: Phanerogamia
Class: Monocotyledones
Series: Coronarieae
Ordo: Liliaceae Juss.
Tribus: Asparageae Dumort.
Genus: *Asparagus* L.
Species: *A. densiflorus* (Kunth) Jessop

4. Distribution:

Global: Africa, Australia, Europe, Asia.

India: Western India

5. Indigenous/Exotic/ Endemic; Cultivated/Wild: Ornamental/ Cultivated

6. Threat Status:

IUCN:

BSI:

7. Habit and Habitat: Scrambling herb; Grows in Mediterranean Forest, woodlands, sandstone and sandy soils.

8. Life Form: Hemicryptophytes

9. Economic Importance: Horticultural and ornamental values.

10. Probable Progenitor of:

11. DNA

C- value

1C (1.51 pg)⁸

1C (0.85 pg)¹⁵

1C (0.73 pg)¹⁵

2C (3.03 pg)⁸

4C (23.24 pg)⁷

4C (34.02 pg)⁷

Methodology

Flow cytometry^{8, 15}

Feulgen cytophotometry⁷

12. Basic chromosome number(s):

13. Zygotic chromosome number(s): $2n=20$ ^{15, 17, 18, 19}

$2n=40$ ^{2, 3, 8, 20}

$2n=60$ ^{7, 21}

14. Gametic chromosome number(s): $n=20$ ^{4, 22}

15. Specialized chromosomes (B chromosomes/Sex chromosomes/Polytene chromosomes/Neocentric chromosomes): B chromosomes (2- 3)²

Image file

16. Ploidy level: Tetraploid^{3, 4, 8}

Hexaploid⁷

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 chromosomes^{2, 7}; Majority submetacentric chromosomes³

Chromosome size Very small to small³; Small⁷

NOR chromosome(s) 3- 4 NOR³; 6 NOR⁷

Degree of asymmetry Low level of asymmetry³; Asymmetric⁷

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 10 II⁴

Image file

27. Chromosome distribution at anaphase I: Regular⁴; Stickiness⁴; late separation⁴

28. Genetic diversity:

Chromosomal level³

Image file

DNA level^{7, 15, 23}

29. Any other information (Apomixis; Inversion; Male sterility; Pollen grain mitosis; Pollen stainability; Translocations etc): Pollen stainability- 90%⁴

