

Species Datasheet

Datasheet No. A-027.001.001
(family.genus.species)

DBT- Network Programme

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1. Taxon:

Species *Acorus calamus* L.

Subspecies

Variety

Cultivar

Hybrid

Image file

2. Synonyms: *Acorus angustatus* Raf., *A. angustifolius* Schott, *A. belangeri* Schott, *Acorus calamus* var. *angustifolius* (Schott) Engl., *A. calamus* var. *belangeri* (Schott) Engl., *A. calamus* var. *calamus*, *A. calamus* f. *submersa* Glück, *A. calamus* var. *verus* L. *A. calamus* var. *vulgaris* L., *A. calamus-aromaticus* Clairv., *A. casia* Bertol., *A. commersonii* Schott, *A. commutatus* Schott, *A. elatus* Salisb., *A. europaeus* Dumort., *A. flexuosus* Raf., *A. floridanus* Raf., *A. griffithii* Schott, *A. nilghirensis* Schott, *A. odoratus* Lam., *A. terrestris* Spreng. *A. undulatus* Stokes, *A. verus* (L.) Raf.

3. Systematic Position:

APG IV (2016)

- Kingdom: Plantae
- Clade: Angiosperms
- Clade: Monocots
- Order: Acorales Mart.
- Family: Acoraceae Martinov
- Genus: *Acorus* L.
- Species: *A. calamus* L.

Bentham and Hooker (1862)

Kingdom: Plantae
Division: Phanerogamia
Class: Monocotyledones
Series: Nudiflorae
Ordo: Aroideae Arn.
Genus: *Acorus* L.
Species: *A. calamus* L.

4. Distribution:

Global: Asia, North America

India: Throughout India

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

6. Threat Status:

IUCN: Least Concern

BSI:

7. Habit and Habitat: Herb. The species grows on the margins of standing or slow-flowing water, typically in river backwaters, canal margins and the margins of ponds and lakes.

8. Life Form: Rhizomatous Geophytes

9. Economic Importance: Remedy for the treatment of arthritis, neuralgia and diarrhea other disorders. The dried rhizomes of the plant constitute the drug calamus. It is used medicinally for a wide variety of ailments including head and stomach aches, aromatic stimulant, mild tonic, etc.

10. Probable Progenitor of:

11. DNA

C- value

2C (1.30 pg) ¹

Methodology

Flow cytometry ¹

12. Basic chromosome number(s): $x=7$ ²

$x=9$ ^{2,23,40}

$x=11$ ²³

$x=12$ ^{23,29}

13. Zygotic chromosome number(s):

$2n=14$ ²

$2n=18$ ^{2,3,4}

$2n=21$ ²

$2n=24$ ^{5,6,7,8,9,10,11,12}

$2n=27$ ²

$2n=33$ ¹³

$2n=34$ ¹³

$2n=35$ ¹⁴

$2n=36$ ^{5,7,8,9,12,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34}

$2n=42$ ³⁵

$2n=44$ ^{36,37,38,39}

$2n=45$ ⁴⁰

$2n=48$ ^{5,7,9}

$2n=54$ ^{4,22}

$2n=66$ ³⁹

14. Gametic chromosome number(s): $n=9$ ⁴¹

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

Image file

16. Ploidy level: Diploid ^{2,7,10,12}

Triploid ^{7,12,21,26,29,33}

Tetraploid ^{7,22, 39}

Pentaploid ⁴⁰

Hexaploid ^{22,39}

Image file

17. Agametoploidy

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

19. Genomic formula:

20. Aberrant chromosome number(s) (aneuploidy, aneusomy, polysomy): Aneuploidy^{13,14}

21. Somatic chromosomes:

Karyotype: Majority metacentric chromosomes¹⁰

Chromosome size: Very small to small^{2,10,23,29,40}

NOR chromosome(s)

Degree of asymmetry:

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

Image file

27. Chromosome distribution at anaphase I:

28. Genetic diversity:

Chromosomal level

Image file

DNA level ^{42,43,44,45,46,47,48,49,50}

29. Any other information (Apomixis; Inversion; Male sterility; Pollen grain mitosis; Pollen stainability; Translocations etc): High percentage of sterile pollen ¹³