

Datasheet No. A-061.009.001
(family.genus.species)

DBT- Network Programme

1. Taxon:

Species: *Arundinagraminifolia*(D.Don) Hochr.

Subspecies:

Variety:

Cultivar

Hybrid

Image file

2. Synonyms:

[*Arundinaaffinis*Griff.](#)

[*Arundinabambusifolia*Lindl. \[Illegitimate\]](#)

[*Arundinachinensis*Blume](#)

[*Arundinachinensis* var. *major* S.Y.Hu](#)

[*Arundinadensa*Lindl.](#)

[*Arundinadensiflora*Hook.f.](#)

[*Arundinagraminifolia* var. *chinensis* \(Blume\) S.S.Ying](#)

[*Arundinagraminifolia* var. *revoluta* \(Hook.f.\) A.L.Lamb](#)

[*Arundinamaculata*J.J.Sm](#)

[*Arundinameyenii* \(Schauer\) Rchb.f.](#)

[*Arundinaminor*Lindl.](#)

[*Arundinaphilippii*Rchb.f.](#)

[*Arundinapulchella*Tejism. &Binn.](#)

[*Arundinapulchra*Miq.](#)

[*Arundinarevoluta*Hook.f.](#)

[*Arundinasanderiana*Kraenzl.](#)

[*Arundinaspeciosa*Blume](#)

[*Arundinaspeciosa* var. *sarasinorum*Schltr.](#)

[*Arundinastenopetala*Gagnep.](#)

[*Bletiagraminifolia*D.Don](#)

[*Cymbidiumbambusifolium* Roxb.](#)

[*Cymbidiummeyenii*Schauer](#)

[*Cymbidiumspeciosum*Reinw. exLindl.](#)

[*Limodorumgraminifolium*Buch.-Ham. exHook.f. \[Invalid\]](#)

[*Ophrysarundinacea* Noronha \[Invalid\]](#)

3. Systematic Position:

APG IV (2016)

- Kingdom: Plantae
- Clade: Angiosperms
- Clade: Monocots
- Order: Asparagales Link
- Family: Orchidaceae Juss.
- Subfamily: Epidendroideae
- Tribe: Arethuseae
- Subtribe: Arethusinae
- Genus: *Arundina*Blume
- Species: *Arundinagraminifolia* (D.Don) Hochr.

Bentham and Hooker(1862)

Kingdom: Plantae
Division: Phanerogamia
Class: Monocotyledonae
Series: Microspermae
Ordo: Orchideae
Tribus: Epidendreae
Genus: *Arundina*Blume
Species: *Arundinagraminifolia* (D.Don) Hochr.

4.Distribution:

Global:India, Nepal, Sri Lanka, Thailand, Laos, Cambodia, China, Japan, Taiwan, Malaya and Java.

India: Eastern Himalayas extending from Nepal to KhasiJaintia hills, Nilgiri and Anamali ranges in South India up to 2000m, Arunachal Pradesh, Assam, Kerala, Manipur, Meghalaya, Mizoram, Nagaland, Tamil Nadu, Tripura, Sikkim, West Bengal

5.Indigenous/Exotic/Endemic;Cultivated/Wild:Indigenous, wild as well as cultivated

6.Threat Status:

IUCN:

BSI:

7.Habit and Habitat:Terrestrial herbs,grows on gravelly slopesamong creeping grasses at 1400m

8.Life Form: Cryptophytes

9.Economic Importance:Cultivated ornamental, the rhizome is used for the controlling bacterial activity and the root decoction used for controlling diabetes, tumour and hepatitis

10. Probable Progenitor of:

11.DNA

C-value Methodology

12.Basic chromosome number(s): $x=19^{4,5}, 20^{1,3,7,8,10,11,12,13,14,15}$

13. Zygotic chromosome number(s): $2n=38^{4,5}, 40^{1,3,7,8,10,11,13,14,15}$

14. Gametic chromosome number(s): $n=20^{3,7,8,9,10,11,12}, 21^{6,8}$

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

Image file

16.Ploidy level:Diploid 1,3,4,5,6,7,8,10,11,12,13,14,15

Image file

17.Agametoploidy:

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

19.Genomic formula:

20. Aberrant chromosome number(s) (aneuploidy, aneusomaty, polysomaty): Aneuploid number of $n=21$ at diakinesis in one clone^{8, 12}

21. Somatic chromosomes:¹¹ (Shekhar 1984)

Karyotype median, submedian, 8 subterminal pairs¹¹

Chromosome size Small¹¹

NOR chromosome(s)

Degree of asymmetry Asymmetrical¹¹

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

Clone 1: $2n=40$ ^{8, 11, 12} (asynaptic)

Clone 2: $20II$ ^{8, 11, 12}

Clone 3: Shows multiple associations, early disjunction, late disjunction, anaphasic bridges with or without fragments^{8, 11, 12}

Clone 4: Shows pollen with aneuploid numbers $n=18, 19, 20$ ^{8, 12}

Clone 5: This clone showed 21 II's at diakinesis, about 4% PMC's show 20 II's^{8, 12}

Image file

27. Chromosome distribution at anaphase I: Some clone shows 20:20 segregation while others show irregular distribution^{8, 12}

28. Genetic diversity:

Chromosomal level

Image file

DNA level

29. Any other information (Apoixis; Inversion; Male sterility; Pollen grain mitosis; Pollen stainability; Translocation etc.):