# Species Datasheet

**Datasheet No. A-028.003.013** **DBT- Network Programme**
**(family.genus.species)**

**1. Taxon:**

Species *Amorphophallus paeoniifolius* (Dennst.) Nicolson
Subspecies
Variety
Cultivar
Hybrid

Image file

**2. Synonyms:** *Amorphophallus campanulatus* Decne., *A. campanulatus* var. *blumei* Prain, *A. campanulatus* f. *darnleyensis* F.M.Bailey, *A. chatty* Andrews, *A. decurrens* (Blanco) Kunth, *A. dixenii* K.Larsen & S.S.Larsen, *A. dubius* Blume, *A. giganteus* Blume, *A. gigantiflorus* Hayata, *A. malaccensis* Ridl., *A. microappendiculatus* Engl., *A. paeoniifolius* var. *campanulatus* (Decne.) Sivad., *A. rex* Prain, *A. rex* Prain ex Hook. f., *A. sativus* Blume, *A. virosus* N.E.Br., *Arum campanulatum* Roxb., *Arum decurrens* Blanco, *A. phalliferum* Oken, *A. rumphii* Gaudich., *A. rumphii* Oken, *Candarum hookeri* Schott, *C. roxburghii* Schott, *C. rumphii* Schott, *Conophallus giganteus* Schott ex Miq., *C. sativus* (Blume) Schott, *Dracontium paeoniifolium* Dennst., *D. polyphyllum* Dennst., *D. polyphyllum* G.Forst., *Hydrosme gigantiflora* (Hayata) S.S.Ying, *Kunda verrucosa* Raf., *Plesmonium nobile* Schott, *Pythion campanulatum* Mart.

**3. Systematic Position:**

**APG IV (2016)**

- Kingdom: Plantae
- Clade: Angiosperm
- Clade: Monocots
- Order: Alismatales R. Br. ex Bercht. & J. Presl
- Family: Araceae Juss.
- Genus: *Amorphophallus* Blume *ex* Decne
- Species: *A. paeoniifolius* (Dennst.) Nicolson

**Bentham and Hooker (1862)**
Kingdom: Plantae
Division: Phanerogamia
Class: Monocotyledones
Series: Nudiflorae
Ordo: Aroideae Arn.
Genus: *Amorphophallus* Blume *ex* Decne
Species: *A. paeoniifolius* (Dennst.) Nicolson

**4. Distribution:**

**Global:** India, Sri Lanka and Pacific Islands.

**India:** Karnataka, Kerala, Maharashtra, Tamil Nadu

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

**6. Threat Status:**

**IUCN:**

**BSI:**

**7. Habit and Habitat:** Tuberous herb. It grows in secondary forest, forest edges, teak forest, village groves and highly disturbed areas.

**8. Life Form:** Geophyte

**9. Economic Importance:** The tubers of *A. paeoniifolius* is widely used sources of carbohydrate foods in tropical Asia.

**10. Probable Progenitor of:**

**11. DNA**

| C- value | Methodology |
|---|---|
| 2C (8.02pg)[1] | Feulgen microdensitometry [1] |
| 2C (8.42pg)[1] | |

**12. Basic chromosome number(s):** x=14[5]

**13. Zygotic chromosome number(s):** 2n=26 [15,17,18]
2n=28 [1,5,6,7,8,9,10,15,18,19,20,21,22,23,24]
2n=36 [4]
2n=39 [15]

**14. Gametic chromosome number(s):** n=14 [6,15,21,22,25]

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

Image file

**16. Ploidy level:** Diploid [10,18]

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 [1,6,8,10], majority submetacentic chromosomes [8,18,23]

**Chromosome size** Small [1,6,10,18,23], small to medium[1,8,9,18], large [5]

**NOR chromosome(s)** 2NOR [1,6,21,25], 4NOR [18]

**Degree of asymmetry:** symmetrical[10], Stebbins 1A,2A,2B class[8]

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** 14II [6]

Image file

**27. Chromosome distribution at anaphase I:**

**28. Genetic diversity:**

**Chromosomal level** [8,9]

Image file

**DNA level** [11,12,27,28,29,30,42]

**29. Any other information (Apomixis; Inversion; Male sterility; Pollen grain mitosis; Pollen stainability; Translocations etc):** Pollen mitosis [21,25],
desynapsis [26]