Species Datasheet

Datasheet No. A-076.003.001
(family.genus.species)

DBT- Network Programme

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1. Taxon:

Species : *Arenga pinnata* (Wurmb) Merr.
Subspecies
Variety
Cultivar
Hybrid
Commonly known as 'sugar palm'.

Image file

2. Synonyms: *Arenga gamuto* Merr. *A. griffithii* Seem. ex H.Wendl., *A. saccharifera* Labill. ex DC.,*Borassus gomutus* Lour, *Caryota onusta* Blanco, *Gomutus rumphii* Corrêa, *G. saccharifer* (Labill. ex DC.) Spreng.,*G. vulgaris* Oken, *Saguerus pinnatus* Wurmb, *S. rumphii* (Corrêa) Roxb., *S. rumphii* (Corrêa) Roxb. ex Ainslie, *S. saccharifer* (Labill. ex DC.) Blume, *Sagus gomutus* (Lour.) Perr.

3. Systematic Position:

APG IV (2016)

- Kingdom: Plantae
- Clade: Angiosperm
- Clade: Monocots
- Clade: Commelinids
- Order: Arecales Bromhead
- Family: Arecaceae Bercht. & J. Presl
- Subfamily: Coryphoideae Burnett
- Genus: *Arenga* Labill.
- Species: *A. pinnata* (Wurmb) Merr.

Bentham and Hooker (1862)
Kingdom: Plantae
Division: Phanerogamia
Class: Monocotyledones
Series: Calycinae
Ordo: Palmar Juss.
Genus: *Arenga* Labill.
Species: *A. pinnata* (Wurmb) Merr.

4. Distribution:

Global: Bangladesh, Brunei, Cambodia, India, Indonesia, Laos, Malaysia, Myanmar, Papua New Guinea, Philippines, Singapore, Sri Lanka, Thailand, Vietnam

India: Andaman Islands

5. Indigenous/Exotic/ Endemic; Cultivated/Wild: Both cultivated and wild

6. Threat Status:

IUCN: Not assessed

BSI:

7. Habit and Habitat: Solitary, evergreen tree palm, 15- 20 meters tall; grow in tropical rain forest

8. Life Form: Phanerophyte

9. Economic Importance: The sap is harvested to yield sugar, vinegar and wine. The dark fibrous bark is manufactured into rope. This crop is a potential bio-fuel feedstock. The roots are a useful insect repellent and also provide medicinal products such as a tea decoction used to cure bladder trouble.

10. Probable Progenitor of:

11. DNA

C- value **Methodology**

12. Basic chromosome number(s):

13. Zygotic chromosome number(s): 2n= 26[1]

2n= 32[2, 3, 4, 5, 6, 7, 8]

14. Gametic chromosome number(s): n=16[3, 5]

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

Image file

16. Ploidy level:

Image file

17. Agametoploidy

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

19. Genomic formula:

20. Aberrant chromosome number(s) (aneuploidy, aneusomaty, polysomaty): Somatic cells with abnormal chromosomes number 2n= 6[5], 2n=16[5]

21. Somatic chromosomes:

Karyotype Majority metacentric to submetacentric chromosomes[5]

Chromosome size Very small[2]; Small[5]

NOR chromosome(s) 1 NOR[3], 4 NOR[5]

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 16II[5]

Image file

27. Chromosome distribution at anaphase I: Lagging chromosome[5,9]

28. Genetic diversity:

Chromosomal level

Image file

DNA level

29. Any other information (Apomixis; Inversion; Male sterility; Pollen grain mitosis; Pollen stainability; Translocations etc):
Ungerminated pollen= 28.4%[9]