

Species Datasheet CalU+SUK-Phase I

Datasheet No. A-074.005.007
(family.genus.species)

DBT- Network Programme

-

1. Taxon:

Species: *Agave sisalana* Perrine

Subspecies

Variety

Cultivar

Hybrid

Image file

2. Synonyms: *Agave amanuensis* Trel. & Nowell; *A. rigida* var. *sisalana* (Perrine) Engelm.; *A. rigida* var. *sisaliana* (Perrine) Engelm.; *A. segurae* D.Guillot & P.Van der Meer; *A. sisalana* f. *armata* (Trel.) Trel.; *A. sisalana* var. *armata* Trel.

3. Systematic Position:

APG IV (2016)

- Kingdom: Plantae
- Clade: Angiosperms
- Clade: Monocots
- Order: Asparagales Link
- Family: Asparagaceae Juss.
- Subfamily: Agavoideae
- Genus: *Agave* L.
- Species: *A. sisalana* Perrine

Bentham and Hooker (1862)

Kingdom: Plantae
Division: Phanerogamia
Class: Monocotyledones
Series: Epigynae
Ordo: Amaryllideae
Tribus: Agaveae
Genus: *Agave* L.
Species: *A. sisalana* Perrine

4. Distribution:

Global: Aldabra; Algeria; Andaman Is.; Angola; Ascension; Bahamas; Bangladesh; Belize; Benin; Bermuda; Burundi; Cambodia; Canary Is.; Cape Provinces; Cape Verde; Caroline Is.; Cayman Is.; Central African Repu; China South-Central; China Southeast; Cuba; Dominican Republic; Ecuador; El Salvador; Eritrea; Ethiopia; Fiji; Florida; Gambia; Gilbert Is.; Guatemala; Guinea; Gulf of Guinea Is.; Haiti; Hawaii; Honduras; India; Jamaica; KwaZulu-Natal; Leeward Is.; Libya; Line Is.; Madagascar; Marianas; Marshall Is.; Mauritius; Mexico Northeast; Mexico Northwest; Mexico Southeast; Morocco; Mozambique; Mozambique Channel I; Myanmar; Nansei-shoto; Nauru; Nepal; Netherlands Antilles; Northern Provinces; Pakistan; Puerto Rico; Queensland; Runion; Rwanda; Senegal; Seychelles; Solomon Island; Somalia; Southwest Caribbean; Spain; St.Helena; Swaziland; Thailand; Trinidad-Tobago; Turks-Caicos Is.; Venezuelan Antilles; Windward Island

India: Telangana, Assam, Rajasthan, Uttar Pradesh

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

6. Threat Status:

IUCN: Not evaluated

BSI:

7. Habit and Habitat: Succulent herb; wet places

8. Life Form:

9. Economic Importance: Used in folk medicine and traditional chinese medicine

10. Probable Progenitor of:

11. DNA

C- value	Methodology
4C (0.1870 au) ^{1,2}	Feulgen microspectrophotometry ^{1,2}
2C (20.2 pg) ³	Flow Cytometry ^{3,21}
4C (40.4 pg) ³	
4C (36.79 pg) ²¹	
4C (34.0 pg) ²²	Feulgen microdensitometry ²²
4C (12.9 pg) ²²	

12. Basic chromosome number(s):

13. Zygotic chromosome number(s): $2n=60^{22,24}$, $2n=54-65^{19}$, $2n=77-99^{19}$, $2n=118-128^{19}$, $2n=137-151^{19}$, $2n=c.138^{24}$, $2n=149^{12}$, $2n=150^{1,2,3,9,10,11,16,22,27,29}$, $2n=180^{21}$

14. Gametic chromosome number(s): $n=30^{24}$

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

Image file

16. Ploidy level: Diploid^{19,22,24}, Triploid¹⁹, Tetraploid¹⁹, Pentaploid^{1,2,3,10,12,16,19,22,24,27}, Hexaploid²¹

Image file

17. Agametoploidy

18. Nature of polyploidy (auto, segmental, allo, autoallo): Autoployploid²⁴

19. Genomic formula:

20. Aberrant chromosome number(s) (aneuploidy, aneusomaty, polysomaty): variant metaphase plates showing $2n=60$ ¹⁶

21. Somatic chromosomes:

Karyotype

Chromosome size very small to medium¹⁶

NOR chromosome(s) 2NOR²², 4NOR²⁴, 5NOR²², 16NOR^{1,16}

Degree of asymmetry: Bimodal karyotype with 5 long and 25 short chromosomes in haploid complement^{1,16}

Image file

22. Banding pattern(s):

Image file

23. Physical mapping of chromosomes:

In situ hybridization

Image file

Fluorescent in situ hybridization 5S and 45S rDNA probe²¹

Image file

24. Genomic in situ hybridization:

Image file

25. Linkage map:

Image file

26. Chromosome associations:

Female meiosis

Male meiosis 30II²⁴

Image file

27. Chromosome distribution at anaphase I:

28. Genetic diversity:

Chromosomal level

Image file

DNA level

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