

Species Datasheet CalU+SUK-Phase I

Datasheet NoA-074.005.009
(family.genus.species)

DBT- Network Programme

1. Taxon:

Species: *Agave vivipara* L.

Subspecies

Variety

Cultivar

Hybrid

Image file

2. Synonyms: *Agave angustifolia* var. *marginata* Trel.; *A. angustifolia* var. *marginata* Gentry; *A. angustifolia* var. *variegata* Trel.; *A. bergeri* Trel. ex A.Berger; *A. ixtli* Karw.; *A. lurida* Jacq.; *A. lurida* var. *jacquiniana* (Schult. & Schult.f.) Ker Gawl. ex Hemsl.; *A. punctata* Hort.Berol. ex Kunth; *A. rigida* var. *longifolia* Engelm.; *A. theoxmulliana* Karw. ex M.Roem.; *A. vivipara* var. *vivipara*; *Aloe vivipara* (L.) Crantz

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. vivipara* L.

Bentham and Hooker (1862)

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

4. Distribution:

Global: Aruba, Bonaire, Curaçao, Bangladesh, Canary Island, India, Nepal, Pakistan

India: Cultivated

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

6. Threat Status:

IUCN: Not evaluated

BSI:

7. Habit and Habitat:

8. Life Form:

9. Economic Importance: Used as medicine in Ayurveda

10. Probable Progenitor of:

11. DNA

C- value

4C (0.0993au)^{1,2}

4C (29.8pg)²¹, (45.04pg)²¹, (45.24pg)²¹

4C (14.0pg)²²

2C (8477pg)²³, (12420pg)²³

Methodology

Feulgen microspectrophotometry^{1,2}

Flow cytometry²¹

Feulgen microdensitometry²²

Flow cytometry²³

12. Basic chromosome number(s):

13. Zygotic chromosome number(s): 2n=60^{1,2,4,7,9, 10,11,22,23,24,25,26,27,28}, 2n= 45-62¹⁹, 2n= 90^{10,11,23,26}, 2n=110²⁴, 2n=120^{12,21,26}, 2n=136¹³, 2n= 180^{13,21,27}

14. Gametic chromosome number(s): n= 30²⁴

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

Image file

16. Ploidy level: Diploid^{1,2,4,7,10,19,22,23,24,27,28}, Triploid^{10,23}, Tetraploid^{12,21}, Hexaploid^{21,27}

Image file

17. Agametoploidy

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

19. Genomic formula:

20. Aberrant chromosome number(s) (aneuploidy, aneusomy, polysomy): variant metaphase plates showing as low as 52 chromosomes¹³, $2n=26^4$, $2n=36^4$, $2n=45^4$, $2n=124^{13}$

21. Somatic chromosomes:

Karyotype: Majority nearly submetacentric chromosomes⁴, majority metacentric chromosomes^{13,23,28}

Chromosome size: very small to medium^{4,13,23}, very small to small^{13,23}

NOR chromosome(s) 2NOR^{21,28}, 4NOR²⁴, 8NOR^{1,4}, 14NOR¹³, 16NOR¹³

Degree of asymmetry: Bimodal karyotype with 5 long and 25 short chromosomes in haploid complement^{1,4,28}

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 probes²¹, 5S and 18S rDNA²⁸

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 (Apoixis; Inversion; Male sterility; Pollen grain mitosis; Pollen stainability; Translocations etc):