

# Species Datasheet CalU+SUK-Phase I

Datasheet No. A-074.005.003  
(family.genus.species)

DBT- Network Programme

## 1. Taxon:

Species *Agave angustifolia* Haw.

Subspecies

Variety

Cultivar

Hybrid

Image file

## 2. Synonyms:

## 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. angustifolia* Haw.

Kingdom: Plantae

Division: Phanerogamia

Class: Monocotyledones

Series: Epigynae

Ordo: Amaryllideae

Tribus: Agaveae

Genus: *Agave* L.

Species: *A. angustifolia* Haw.

## 4. Distribution:

**Global:** Mexico, Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panamá, St. Helena, Cape Provinces India, East Himalaya, Pakistan, West Himalaya, Australasia, Queensland, Spain, Caroline Is., Caribbean, Cuba, Leeward Is., Puerto Rico, Venezuelan, Antilles, Windward Island, Ecuador

**India:** Himalayas

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

## 6. Threat Status:

IUCN: Not evaluated

BSI:

## 7. Habit and Habitat: Succulent herbaceous plant; Grows in dessert and xeric scrublands

## 8. Life Form: Perennial

## 9. Economic Importance: Fiber yielding plant; used in folk medicine

## 10. Probable Progenitor of:

## 11. DNA

### C- value

### Methodology

4C (0.0993 au)<sup>1,2</sup>

Feulgen microspectrophotometry<sup>1,2</sup>

4C (29.8 pg)<sup>21</sup>, (45.04 pg)<sup>21</sup>, (45.24 pg)<sup>21</sup>

Flow Cytometry<sup>21</sup>

4C (14.0 pg)<sup>22</sup>

Feulgen microdensitometry<sup>22</sup>

2C (8477 pg)<sup>23</sup>, (12420 pg)<sup>23</sup>

Flow Cytometry<sup>23</sup>

## 12. Basic chromosome number(s):

**13. Zygotic chromosome number(s):**  $2n=60^{1,2,4,7,9, 10,11,22,23,24,25,26,27,28}$ ;  $2n=45-62^{19}$ ;  $2n=90^{10,11,23,26}$ ;  $2n=110^{24}$ ;  $2n=120^{12,21,26}$ ;  $2n=136^{13}$ ;  $2n=180^{13,21,27}$

## 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<sup>1,2,4,7,10,19,22,23,24,27,28</sup>; triploid<sup>10,23</sup>; tetraploid<sup>12,21</sup>; hexaploid<sup>21,27</sup>

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  $2n=26^4$ ;  $2n=36^4$ ;  $2n=45^4$ ;  $2n=52^{13}$ ;  $2n=124^{13}$

**21. Somatic chromosomes:**

**Karyotype** Majority nearly submetacentric chromosomes<sup>4</sup>; majority metacentric chromosomes<sup>13,23,28</sup>

**Chromosome size** very small to medium<sup>4,13,23</sup>; very small to small<sup>13,23</sup>

**NOR chromosome(s)** 2NOR<sup>21,28</sup>; 4NOR<sup>24</sup>; 8NOR<sup>1,4</sup>; 14NOR<sup>13</sup>; 16NOR<sup>13</sup>

**Degree of asymmetry:** Bimodal karyotype with 5 long and 25 short chromosomes in haploid complement<sup>1,4,28</sup>

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 probes<sup>21</sup>; 5S and 18S rDNA<sup>28</sup>

Image file

**24. Genomic in situ hybridization:**

Image file

**25. Linkage map:**

Image file

**26. Chromosome associations:**

**Female meiosis**

**Male meiosis** 30II<sup>24</sup>

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):**