

Species Datasheet

Datasheet No. A-140.001.040
(family.genus.species)

DBT- Network Programme

1. Taxon:

Species: *Arachis villosa* Benth.

Subspecies

Variety

Cultivar

Hybrid

Image file

2. Synonyms: *Arachis prostrata* var. *villosa* (Benth.) A. Chev.

3. Systematic Position:

APG IV (2016)

- Kingdom: Plantae
- Clade: Angiosperms
- Clade: Eudicots
- Clade: Rosids
- Order: Fabales
- Family: Fabaceae Lindl.
- Subfamily: Faboideae Rudd
- Genus: *Arachis* L.
- Species: *A. villosa* Benth.

Bentham and Hooker (1862)

Kingdom: Plantae
Division: Phanerogamia
Class: Dicotyledons
Subclass: Polypetalae
Series: Calyciflorae
Cohors: Rosales Bercht. & J. Presl
Ordo: Leguminosae Juss.
Subordo: Papilionaceae Giseke
Genus: *Arachis* L.
Species: *A. villosa* Benth.

4. Distribution:

Global: Brazil

India: Experimental stations

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

6. Threat Status:

IUCN:

BSI:

7. Habit and Habitat: Herbaceous, Tropical regions

8. Life Form: Perennial

9. Economic Importance:

10. Probable Progenitor of: *A. hypogaea*, *A. monticola* and *A. hypogaea* subsp. *hypogaea*^{14, 17, 18, 31}

11. DNA

C-value

Methodology

2C (3.04 pg)²

Flow cytometry

2C (5.98 pg)¹²

Feulgen cytophotodensitometry

2C (6.56 pg)⁸⁷

Feulgen microdensitometry

12. Basic chromosome number(s): $x = 10$ ^{2, 5, 7, 96}

13. Zygotic chromosome number(s): $2n = 20$ ^{2, 5, 6, 7, 14, 15, 17, 18, 19, 22, 23, 26, 27, 87, 96, 97}

14. Gametic chromosome number(s): $n = 10$ ^{7, 96, 109}

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

Image file

16. Ploidy level: Diploid^{2, 5, 6, 7, 14, 15, 17, 18, 19, 22, 23, 26, 27, 87, 96, 97}

Image file

17. Agamete ploidy:

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

19. Genomic formula: AA^{2, 14, 17, 18, 19, 22, 26, 34, 87, 96, 99, 109}

20. Aberrant chromosome number(s) (aneuploidy, aneusomy, polysomy):

21. Somatic chromosomes: 2, 6, 7, 14, 15, 19, 97, 106

Karyotype Majority metacentric / submetacentric chromosomes

Chromosome size Small

NOR chromosome(s) 2

Degree of asymmetry Symmetrical

Image file

22. Banding pattern(s): C - banding⁶, Heterochromatic DAPI⁺ bands^{2, 19, 106}, Centromeric

DAPI⁺ bands^{14, 17}

Image file

23. Physical mapping of chromosomes:

In situ hybridization

Image file

Fluorescent in situ hybridization: 18S - 5.8S - 26S and 5S ribosomal gene families^{14,19,106}

Image file

24. Genomic in situ hybridization:¹⁷

Image file

25. Linkage map:

Image file

26. Chromosome associations:

Female meiosis

Male meiosis 10II, Also IV^{7, 96, 109}

Image file

27. Chromosome distribution at anaphase I:

28. Genetic diversity:

Chromosomal level

Image file

DNA level^{23, 26, 27, 34, 38, 51, 63}

29. Any other information (Apomixis; Inversion; Male sterility; Pollen grain mitosis;

Pollen stainability; Translocation etc.): Pollen stainability: 88.17 %⁹⁶, 95.50 %¹⁰⁹