

Species Datasheet

DBT- Network Programme

Datasheet No. A-140.047.130
(family.genus.species)

1. Taxon:

Species *Crotalaria spectabilis* Roth
Subspecies
Variety
Cultivar
Hybrid

Image file

2. Synonyms:

- *Crotalaria altipes* Raf.
- *Crotalaria cuneifolia* (Forssk.) "Schrank, p.p.B"
- *Crotalaria cuneifolia* (Forssk.) Schrank
- *Crotalaria lechnaultii* DC.
- *Crotalaria leschenaultii* DC.
- *Crotalaria macrophylla* Wiemann
- *Crotalaria retzii* Hitchc.
- *Crotalaria sericea* Retz.
- *Crotalaria spectabilis* subsp. *spectabilis*

3. Systematic Position:

APG IV (2016)

- Kingdom: Plantae
- Clade: Angiosperms
- Clade: Eudicots
- Clade: Superrosids
- Clade: Rosids
- Clade: Fabids
- Order: Fabales Bromhead
- Family: Fabaceae Lindl.
- Subfamily: Faboideae Rudd
- Genus: *Crotalaria* L.
- Species: *C. spectabilis* Roth

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: *Crotalaria* L.
Species: *C. spectabilis* Roth

4. Distribution:

Global: Argentina, Australia, Belize, Brazil, China, Colombia, Costa Rica, Dominica, Dominican Republic, Ecuador, French Polynesia, Guadeloupe, Honduras, India, Liberia, Madagascar, Mexico, Micronesia, Nicaragua, Panama, Papua New Guinea, Peru, Taiwan, United States.

India

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

6. Threat Status:

IUCN

BSI

7.Habit and Habitat:Erect Undershrub. Habitat: Deciduous forests and shola margins.

8.Life Form:Annual

9.Economic Importance:

10. Probable Progenitor of:

11.DNA

C-valueMethodology

12.Basic chromosome number(s): $x=8$ 10, 42, 45

13. Zygotic chromosome number(s): $2n=16$ ^{1,2,3}, 8, 10, 14-16, 29, 34, 37, 42, 45-47, 51, 65, 73,79, 86, 96, 97, 109

14. Gametic chromosome number(s): $n=8$ 2, 8, 10, 14,17, 37, 45, 51, 82, 99, 100, 108

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

Image file

16.Ploidy level:Diploid^{1,2, 3, 8, 14, 15, 34, 37, 42, 45, 47}

Image file

17.Agametoploidy:

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

19.Genomic formula:

20.Aberrant chromosome number(s)(aneuploidy, aneusomaty, polysomaty):

21.Somatic chromosomes:^{3,8, 15, 34, 37, 45, 47}

Karyotype:Majority Submetacentric/ Metacentric chromosomes

Chromosome size: Small, Large

NOR chromosome(s): 2-4

Degree of asymmetry:Symmetrical

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22. Banding pattern(s):DAPI, CMA, CMA/DA ⁴²

Image file

23.Physical mapping of chromosomes:

In situ hybridization

Image file

Fluorescent in situ hybridization 45S and 5S rDNA gene families⁴²

Image file

24. Genomic in situ hybridization:

Image file

25. Linkage map:

Image file

26. Chromosome associations: 8II^{2, 45, 47}

Female meiosis

Male meiosis^{2, 45}

Image file

27. Chromosome distribution at anaphase I: 8:8⁹⁷

28. Genetic diversity:

Chromosomal level

DNA level^{69, 70}

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

Pollen viability: 99.3%³⁷

Pollen stainability: 75-100%²

Paracentric inversions⁹⁷