

Species Datasheet

DBT- Network Programme

Datasheet No. A-140.047.094
(family.genus.species)

1. Taxon:

Species *Crotalaria pallida* Aiton

Subspecies

Variety

Cultivar

Hybrid

Image file

2. Synonyms:

- *Crotalaria brownei* Bertero ex DC.
- *Crotalaria fertilis* Delile
- *Crotalaria hookeri* Arn.
- *Crotalaria javanica* Jungh.
- *Crotalaria latifolia* Wight & Arn.
- *Crotalaria mucronata* Desv.
- *Crotalaria obovata* G. Don
- *Crotalaria pallida* Klotzsch
- *Crotalaria pallida* "sensu Klotzsch, non Aiton"
- *Crotalaria pallida* var. *pallida*
- *Crotalaria pallida* var. *obovata* (G. Don) Polhill
- *Crotalaria pisiformis* Guill. & Perr.
- *Crotalaria saltiana* Prain ex King
- *Crotalaria siamica* F.N. Williams
- *Crotalaria striata* DC.
- *Crotalaria striata* fo. *latifoliolata* De Wild.
- *Crotalaria striata* var. *acutifolia* Trin.
- *Crotalaria striata* var. *acutifolia* Trimen
- *Crotalaria tinctoria* Baill.
- *Crotalaria tinctoria* Boivin ex Baill.
- *Crotalaria zuccariniana* D. Dietr.
- *Lebeckiarostrata* Fenzl

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.

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. pallida* Aiton

- Species: *C. pallida* Aiton

4. Distribution:

Global: Antarctica, Australia, Africa, Americas, Southern-Eastern Asia, Armenia, Ireland.

India

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

6. Threat Status:

IUCN

BSI

7. Habit and Habitat: Erect, robust herb. Habitat: Found in plains, up to 1000m

8. Life Form: Annual

9. Economic Importance: Whole plant: Infusion used to bathe children to prevent skin infections and treat thrush. Boiled with salt and the liquid used for treating eczema and other skin conditions. Plant is toxic. Ants feed on the nectar. Cattle stay away from the plant. Children play with the fruits as a rattle. Widely grown as a ground cover and green manure. A kind of coffee can be made from roasted seeds, which are otherwise toxic. Some medicinal use is reported in Asia.

10. Probable Progenitor of:

11. DNA

C-value

2C DNA = 2.50pg

4C DNA = 5.00pg

Methodology

Feulgen Microdensitometer¹¹

Feulgen Microdensitometer¹¹

12. Basic chromosome number(s): $x=8$ ^{7, 87}

13. Zygotic chromosome number(s): $2n=16$ ^{1,2,7, 9, 11, 13-16, 22, 23, 29, 38, 47, 48, 49, 75, 79, 85-88}

$2n=14$ ⁵²

14. Gametic chromosome number(s): $n=8$ ^{2, 8, 13, 23, 57, 84, 100}

15. Specialized chromosomes (B chromosomes/Sex chromosomes/Polytene

chromosomes/Neocentric chromosomes): 1-2 B chromosome^{2, 15, 18}

Image file

16. Ploidy level: Diploid ^{7, 11, 13-15, 22, 23, 47, 87}

Image file

17. Agamete ploidy:

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

19. Genomic formula:

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

21. Somatic chromosomes: 2, 7, 13, 14, 15, 22, 23, 47, 87

Karyotype: Majority Metacentric and Submetacentric chromosomes

Chromosome size: Small

NOR chromosome(s): 2

Degree of asymmetry: Symmetrical

Image file

22. Banding pattern(s): DAPI, CMA, CMA/DA, DAPI-AMD⁸⁷

Image file

23. Physical mapping of chromosomes:

In situ hybridization

Image file

Fluorescent in situ hybridization: 45S and 5S rDNA gene families⁸⁷

Image file

24. Genomic in situ hybridization:

Image file

25. Linkage map:

Image file

26. Chromosome associations: 12 I + 2 II², 8II^{15, 23, 31}

Female meiosis

Male meiosis 2, 15, 23, 31

Image file

27. Chromosome distribution at anaphase I: 8:8^{2, 23}

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 stainability: 45%², 90%²³, 99.8%³¹

Male sterility: ⁸⁹