

# Species Datasheet

DBT- Network Programme

Datasheet No. A-140.047.052  
(family.genus.species)

## 1. Taxon:

Species *Crotalaria juncea* L.

Subspecies

Variety

Cultivar

Hybrid

Image file

## 2. Synonyms:

- *Crotalaria benghalensis* Lam
- *Crotalaria fenestrata* Sims
- *Crotalaria ferestrata* Sims
- *Crotalaria porrecta* Wall.
- *Crotalaria sericea* Willd
- *Crotalaria tenuifolia* Roxb
- *Crotalaria tenuifolia* Roxb. ex Hornem
- *Crotalaria viminea* Wall

## 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. juncea* 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. juncea* L.

## 4. Distribution:

**Global:** Southern-Eastern Asia, Antarctica, Antigua, Australia, Cameroon, Africa, Costa Rica, Guadeloupe, Hungary, Mexico, Papua New Guinea, Paraguay, Peru, Portugal, Trinidad and Tobago, Turkmenistan, United States.

## India

**5. Indigenous/Exotic/Endemic; Cultivated/Wild:** Exotic and wild, cultivated.

## 6. Threat Status:

IUCN

BSI

**7.Habit and Habitat:**Erect herb.

Habitat: Dry deciduous forests, also grown as green manure in the plains.

**8.Life Form:**Annual

**9.Economic Importance:**Used as a source of green manure, fodder and lignified fiber obtained from its stem. Sunn hemp is also being looked at as a possible bio-fuel.

**10. Probable Progenitor of:**

**11.DNA**

**C-valueMethodology**

2C DNA = 2.46pg

Feulgen Microdensitometer<sup>11</sup>

4C DNA = 4.92pg

Feulgen Microdensitometer<sup>11</sup>

**12.Basic chromosome number(s):** $x=8$ <sup>42, 61, 67, 70</sup>

**13. Zygotic chromosome number(s):** $2n=14$ <sup>59</sup>

$2n=16$ <sup>8, 10, 11, 13, 15, 17, 23, 29, 42, 47, 49, 54, 55, 56, 58, 60, 61, 62, 65-68</sup>

$2n=20$ <sup>64</sup>

**14. Gametic chromosome number(s):** $n=8$ <sup>8, 10, 17, 25, 55, 57, 63, 68</sup>

$n=10$ <sup>64</sup>

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

**chromosomes/Neocentric chromosomes):**B chromosome<sup>18</sup>

Image file

**16.Ploidy level:**Diploid<sup>8, 11, 15, 23, 47, 55, 61, 65, 67</sup>

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:**<sup>8, 13, 15, 23, 42, 47, 60, 66, 67</sup>

**Karyotype:** Majority Metacentric and Submetacentric Chromosomes

**Chromosome size:**Small

**NOR chromosome(s):**2

**Degree of asymmetry:**Symmetrical

Image file

**22. Banding pattern(s):**

CMA/DABanding: <sup>42,66</sup>

C banding: <sup>66</sup>

DAPI: <sup>42</sup>

CMA: <sup>42</sup>

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 <sup>42,66</sup>

45s and 5s rDNA <sup>66</sup>

Image file

**24. Genomic in situ hybridization:**

Image file

**25. Linkage map:**

Image file

**26. Chromosome associations:**8II <sup>23, 47, 61, 68</sup>

**Female meiosis**

**Male meiosis:** <sup>23, 68</sup>

Image file

**27. Chromosome distribution at anaphase I:**8:8 <sup>23, 68</sup>

**28. Genetic diversity:**

**Chromosomal level**

**DNA level:** <sup>69, 70</sup>

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

**Pollen stainability; Translocation etc):**

Pollen stainability: 96-100% <sup>71</sup>