

# Genus Datasheet

Datasheet No. A-140.047  
(Family.Genus)

DBT- Network Programme

1. **Genus:** *Crotalaria* L.

2. **Systematic position:** APG IV; Bentham and Hooker:

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.

3. **Species:**

**Global:** 702

**India:** 108

4. **Taxonomic riddles:**<sup>22, 113</sup>

5. **Distribution:**

**Global:** Equatorial Guinea, Somalia, Asia, Africa, Caribbean.Americas, Brazil, Mauritania

**India**

6. **Habit and Habitat:** Herbs or shrubs of very varied habit

7. **Economic Importance:**

8. **DNA content range:**      **Methodology**

4C= (3.82-6.86) pg

Feulgen Photometry<sup>11</sup>

2C= (1.91-3.43) pg

Feulgen Photometry<sup>11</sup>

**9. Basic chromosome number(s):** $x=7$  32, 42, 44, 45

$x=8$  7, 10, 13, 17, 24, 25, 30, 31, 34, 42, 45, 61, 67, 70, 87, 92

**10. Zygotic chromosome number(s):** $2n=14$  1, 2, 11, 13-16, 36, 37, 41-46, 47, 49, 52, 53, 59

$2n=16$  1-17, 19, 21, 22, 23, 25, 26, 29, 30, 31, 33-40, 42, 43, 45-49, 51, 53-56, 58, 60, 61, 62, 65-68, 72, 73, 75, 76, 78, 79, 83, 85-88, 97, 101, 102, 103, 105, 109, 112

$2n=18$  20

$2n=20$  64

$2n=24$  26

$2n=32$  9, 17

$2n=42$  2

$2n=48$  7, 29, 32

**11. Gametic chromosome number(s):** $n=7$  2, 13, 34, 37, 42-48, 50, 51, 52

$n=8$  1-6, 8, 9, 10, 13, 14, 16, 17, 21, 23, 24, 25, 27, 28, 37, 45, 46, 49, 51, 55, 56, 57, 63, 68, 73, 74, 77, 81, 82, 84, 92, 93, 94, 95, 97-100, 102, 106, 107, 108, 110, 111, 112

$n=10$  64

$n=16$  9, 10, 17, 25

$n=21$  2, 17, 32, 37

$n=24$  32

**12. Specialized chromosomes (B chromosomes/Sex chromosomes/Polytene Chromosomes/**

**Neocentric chromosomes):**B chromosomes 2, 3, 15, 18, 30, 31

Polytene chromosomes: 104

Tetraploid<sup>9,17, 40, 80</sup>

Hexaploid<sup>2, 7, 17, 32, 36</sup>

**14. Nature of polyploidy (auto, segmental, allo, autoallo):** Allopolyploid or segmental allopolyploid

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

**16. Karyograms:**<sup>1, 2,3, 5, 7, 8, 13, 14, 15, 22, 23, 30, 33, 34, 37, 42-45, 47, 52, 60, 66, 67, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112</sup>

**Meiosis:**<sup>1-6, 8-10, 13-17, 21, 23, 24, 25, 27, 28, 31, 32, 34, 37, 42-52, 55, 56, 57, 61, 63, 64, 68, 70, 71, 72, 73, 74, 77, 81, 82, 84, 92, 93, 94, 95, 97-100, 102, 106, 107, 108, 110, 111, 112</sup>

<sup>74, 77, 81, 82, 84, 92, 93, 94, 95, 97-100, 102, 106, 107, 108, 110, 111, 112</sup>

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

CMA/DA banding:<sup>42, 66, 87</sup>

C banding:<sup>66</sup>

DAPI:<sup>42, 87</sup>

CMA:<sup>42, 87</sup>

DAPI-AMD:<sup>87</sup>

**18. Physical mapping of chromosomes:**

**FISH:** 18S–5.8S–26S and 5S ribosomal gene families<sup>42, 66</sup>  
45s and 5s rDNA gene families<sup>42, 66, 87</sup>

**GISH:**

**19. Phylogenetic relationship at Chromosomal; DNA level:**<sup>70, 114, 115</sup>

**20. Cytogenetic mechanism (s) underlying evolution:**

Pollen stainability-<sup>2, 23, 31, 71</sup>

Reciprocal translocation:<sup>34</sup>

Male sterility: <sup>89</sup>

Paracentric Inversion: <sup>97</sup>

Pollen viability: <sup>37, 71</sup>