

Genus Datasheet

Datasheet No. A-140.085
(Family.Genus)

DBT- Network Programme

1. Genus: *Vicia* L.

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

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: *Vicia* L.

APG IV (2016)

- Kingdom: Plantae
- Clade: Angiosperms
- Clade: Eudicots
- Clade: Rosids
- Order: Fabales Bromhead
- Family: Fabaceae Lindl.
- Subfamily: Faboideae Rudd
- Genus: *Vicia* L.

3. Species:

Global ~190

India

4. Taxonomic riddles: ^{3,4,13,14,34,44,49,92,102,109,118,122,126,129,130,137,144,145,146,147,148,154}

5. Distribution:

Global Europe, Asia, Mediterranean region, North America, Temperate regions of South America and Tropical Africa

India Temperate regions

6. Habit and Habitat: Herbaceous. Erect / Climber. Height ~ 10- 200 cm

7. Economic Importance: Human food. Forage .Fodder. Soil improver

8. DNA content range:

Methodology

1C (10.94 - 14.73 pg)¹ Microdensitometer

2C (3.85 - 27.07 pg)^{4,29,90,91,92,112,140} Microdensitometer

4C(6.71 - 56.32 pg)^{2,3,4,8,98,99,113,119} Microdensitometer

9. Basic chromosome number(s): $x=5,6,7^{1,5,6,7,9,29,90,91,92,100,116,120,129,136,138,139,140,141,1}$

10. Zygotic chromosome number(s): $2n=10,12,14,24,28^{1,3,4,5,7-29,90,91,92,98-111,114-120,121,122,123,126,129,130,134-143,155,156,157}$

11. Gametic chromosome number(s): $n=5,6,7,12^{6,7,24,100,102,122,136,141,142,143,155,156}$

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

Neocentric chromosomes): B chromosomes⁵

13. Ploidy level: Diploid^{1,3,4,5,7-29,90,91,92,98-111,114-118,120,121,122,123,126,129,130,156,157}

Tetraploid^{90,91,137,138,141,143}

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

15. Aberrant chromosome number(s) (aneuploidv. aneusomatv. polvsomatv): Aneuploids^{136,1}

17. Banding pattern(s):C- banding^{2, 12, 19, 25, 33, 34, 35, 98, 118, 134, 136}, G - banding³⁶⁻⁴¹,
Q - banding^{11, 32}

18. Physical mapping of Chromosomes:GISH:18S - 5.8S - 26S and 5S ribosomal gene
families^{10, 15, 17, 22, 25, 26, 105, 106, 109}; Satellite DNA sequences^{11, 114}; Fok I repeat sequences²¹
Repetitive DNA sequences^{18, 23, 42, 108}; Transgenes²⁷

19. Phylogenetic relationship at Chromosomal; DNA level:Chromosomal level^{9, 117}; DNA
level^{3, 8, 44, 45, 49, 50, 67, 103, 144, 145, 146, 149, 150, 151, 152, 153}

20. Cytogenetic mechanism (s) underlying evolution:The chromosome evolution in the genus
Vicia was accompanied by large scale variation in chromosome number ($2n =$
10, 12, 14, 24, 28) based on $x = 5, 6, 7$, chromosome repatterning especially reciprocal
translocations and paracentric inversions, and large scale variation in chromosome size
reflected by seven fold (3.85 - 27.07 pg) variation in genome size .

21. Linkage map:^{79 – 89}

22. Any other information: