

Genus Datasheet

DBT- Network

Datasheet No. G-007.003
Programme
(Family.Genus)

1. Genus:*Larix* Mill.

Kingdom: Plantae
Phylum: Tracheophyta
Class: Gymnospermeae
Ordo: Coniferae
Tribus: Abietineae Eichler
Genus: *Larix* Mill.

2. Systematic Position: Christenhusz *et al.* (2011)

- Class: Equisetopsida C. Agardh
- Subclass: Pinidae Cronquist
- Order: Pinales Gorozh.
- Family: Pinaceae Spreng.
- Genus: *Larix* Mill.

3. Species:

Global: Occurs in Bhutan, Eastern Nepal, southwestern China, eastern Himalayas from East Nepal, India, Russia

India: Arunachal Pradesh, Sikkim, West Bengal

4. Taxonomic riddles:²⁹

5. Distribution:

Global: 14

India: 1

6. Habit and Habitat: Trees, grow in high to very high altitudes, *L. griffithii* occurs in the cloud Himalayas, *L. gmelinii* occurs on lowland subarctic plains, in river valleys, in mountains and also moors and swamps.

7. Economic Importance: An extremely important timber tree, where it provides building logs for houses, railway sleepers, fences, and gates, as well as timber for construction, ship building, and industry.

8. DNA content range:

Methodology

2C (24.60-28.00 pg) ¹⁸ Feulgen microdensitometry¹⁸

2C (25.70-26.80 pg) ²⁷ Flow cytometry²⁷

9. Basic chromosome number(s): 12^{1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14, 17, 18, 21, 23, 24, 25, 26}

10. Zygotic chromosome number(s): 24^{1, 2, 3, 4, 5, 7, 9, 8, 10, 11, 12, 14, 17, 18, 21, 23, 24, 25, 26} ,

24+0-1B, 36¹² ,

22/24, 24, 24/36²² ,

24+0-1B, 24/48, 36¹³ ,

24, 36, 48^{19, 20}

24, 24+1B, 24/48²² ,

24, 24/48¹³ ,

24, 22/23/25/26, 24/36, etc.²⁸ ,

24+0-1B¹⁵

Neocentric chromosomes):B chromosome ¹⁵

13. Ploidy level:Diploid ^{3,4,5, 8, 11, 17, 26},

Triploid (sporadic)^{19, 20},

Tetraploid (sporadic) ^{19, 20},

Chimeras ^{13, 22 ,28}

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

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

16. Karyograms: ^{2, 4, 5, 23}

Meiosis:

17. Banding pattern(s):CMA+, DAPI+ bands^{2, 5}

18. Physical mapping of chromosomes:45S, 5S rRNA²

GISH:

19. Phylogenetic relationship at Chromosomal; DNA level:²⁹

20. Cytogenetic mechanism (s) underlying evolution:

