

Species Datasheet

Datasheet No. G-007.003.001
(family.genus.species)

1.Taxon:

Species: *Larix gmelinii* (Rupr.) Kuzen.

Subspecies:

Variety:

Cultivar:

Hybrid:

Image file

2. Synonyms: *Abies gmelinii* Rupr., *A. kamtschatica* Rupr., *A. ledebourii* Rupr., *Larix cajanderi* Mayr, *L. dahurica* Turcz. ex Trautv., *L. dahurica* C.Lawson, *L. dahurica* Turcz., *L. dahurica* var. *cajanderi* (Mayr) Staf., *L. dahurica* subsp. *cajanderi* (Mayr) Nikolin, *L. dahurica* f. *chlorocarpa* Kom., *L. dahurica* f. *denticulata* Liou&Z.Wang, *L. dahurica* f. *erythrocarpa* Kom., *L. dahurica* f. *glaucula* Liou&Z.Wang, *L. dahurica* var. *heilingensis* (Y.C.Yang&Y.L.Chou) Kitag., *L. dahurica* f. *macrocarpa* Liou&Z.Wang, *L. dahurica* f. *multilepis* Liou&Z.Wang, *L. dahurica* var. *prostrata* Regel, *L. dahurica* var. *pubescens* Patschke, *L. dahurica* var. *pumila* Doktor. &Flerow, *L. europaea* var. *dahurica* Loudon, *L. gmelinii* var. *cajanderi* (Mayr) Silba, *L. gmelinii* subsp. *cajanderi* (Mayr) Kozhev., *L. gmelinii* f. *genhensis* (S.Y.Li&K.T.Adair) L.K.Fu& Nan Li, *L. gmelinii* var. *genhensis* S.Y.Li&K.T.Adair, *L. gmelinii* subsp. *genhensis* (S.Y.Li&K.T.Adair) Silba, *L. gmelinii* var. *gmelinii*, *L. gmelinii* f. *hsinganica* (Y.C.Yang&Y.L.Chou) Y.L.Chou, *L. gmelinii* var. *hsinganica* Y.C.Yang&Y.L.Chou, *L. gmelinii* f. *macrocarpa* (Liou&Q.L.Wang) Y.C.Yang&Y.L.Chou, *L. gmelinii* subsp. *prostrata* (Regel) A.E.Murray, *L. gmelinii* f. *pubibasis* Y.C.Yang&S.C.Nie, *L. heilingensis* Y.C.Yang&Y.L.Chou, *L. kamtschatica* (Rupr.) Carriere, *L. komarovii* Kolesn., *L. ledebourii* (Rupr.) Cinovskis, *L. middendorffii* Kolesn., *L. ochotensis* Kolesn., *L. olgensis* var. *heilingensis* (Y.C.Yang&Y.L.Chou) Y.L.Chou, *L. olgensis* var. *komarovii* (Kolesn.) Dylis, *L. pumila* Doktor.&Flerow, *Pinus dahurica* Fisch.exTurcz., *P. kamtschatica* (Rupr.) Endl., *P. larix* var. *dahurica* (Loudon) Antoine, *P. ledebourii* (Rupr.) Endl.

3.Systematic Position:

Christenhusz et al. (2011)

- Class: Equisetopsida C. Agardh
- Subclass: Pinidae Cronquist
- Order: Pinales Gorozh.
- Family: Pinaceae Spreng.
- Genus: *Larix* Mill.
- Species: *L. gmelinii* (Rupr.) Kuzen.

Bentham and Hooker (1862)

Kingdom: Plantae
Division: Phanerogamia
Class: Gymnospermeae
Ordo: Coniferae
Tribus: Abietineae Eichler
Genus: *Larix* Mill.
Species: *L. gmelinii* (Rupr.) Kuzen.

4.Distribution:

Global:Native to China, Korea, Mongolia, and Russian Federation.

India:

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

6.Threat Status:

IUCN: Least concern

BSI:

7.Habit and Habitat: Medium sized deciduous tree (10-30 m tall),*L.gmelinii* occupies a very large area and therefore occurs in a wide range of habitats: on lowland subarctic plains, in river valleys, in mountains and also on the edges of moors and swamps. Its altitudinal range is between 300 m and 1,800 m a.s.l.

8.Life Form:Phanerophytes

9.Economic Importance:an extremely important timber tree in the Russian Far East, where it provides building logs for traditional log houses, railway sleepers, fences, and gates, as well as timber for construction, ship building (in Japan and Sachalin), and the pulp industry.

10. Probable Progenitor of:

11.DNA

C-value

2C (27.98pg) ¹⁸

2C (25.70 pg) ²⁷

Methodology

Feulgen microdensitometry¹⁸

Flow cytometry²⁷

12.Basic chromosome number(s): $x=12^{2, 3,4,5, 6, 8, 11, 17, 26}$

13. Zygotic chromosome number(s): $2n=24^{2, 3,4,5, 8, 11, 17, 26},$

$24+0-1B, 36^{12},$

$22/24, 24, 24/36^{22},$

24+0-1B, 24/48, 36¹³,

14. Gametic chromosome number(s):n=

15.Specialized chromosomes (B chromosomes/Sex chromosomes/Polytene chromosomes/Neocentric chromosomes):

Image file

16.Ploidylevel:Diploid^{2, 3,4,5, 8, 11, 17, 26}

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:^{2, 4, 5}

KaryotypeMedian, submedian and subterminal^{2, 4, 5}

Chromosome size Large^{2, 4, 5}

NOR chromosome(s)6²

Degree of asymmetry Moderatelyasymmterical^{2, 4, 5}

Image file

22. Banding pattern(s):DAPI+ bands², DAPI+, CMA+ bands⁵

Image file

23.Physical mapping of chromosomes:

In situ hybridization

Image file

Fluorescent in situ hybridization:45S, 5S rRNA²

Image file

24.Genomic in situ hybridization:

Image file

25. Linkage map:

Image file

26.Chromosome associations:

Female meiosis

Male meiosis

Image file

27.Chromosome distribution at anaphase I:

28. Genetic diversity:

Chromosomal level

Image file

DNA level

29.Any other information (Apomixis; Inversion; Male sterility;Pollen grain mitosis; Pollen stainability;Translocationsetc.):