

Species Datasheet

Datasheet No. G-007.005.002
(Family.genus.species)

DBT- Network Programme

1.Taxon:

Species: *Pinus banksiana* Lamb.

Subspecies:

Variety:

Cultivar:

Hybrid:

Image file

2. Synonyms: *Pinus banksiana* f. *procumbens* J.Rousseau, *P. divaricata* (Aiton) Dum.Cours., *P. divaricata* (Aiton) Sudw., *P. divaricata* f. *procumbens* (J.Rousseau) B.Boivin, *P. hudsonica* Poir., *P. rupestris* Michx.f., *P. sylvestris* var. *divaricata* Aiton

3.Systematic Position:

Christenhusz et al. (2011)

- Class: Equisetopsida C. Agardh
- Subclass: Pinidae Cronquist
- Order: Pinales Gorozh.
- Family: Pinaceae Spreng.
- Genus: *Pinus* L.
- Species: *P.banksiana* Lamb.

Bentham and Hooker (1862)

Kingdom: Plantae

Division: Phanerogamia

Class: Gymnospermeae

Ordo: Coniferae

Tribus: Abietineae Eichler

Genus: *Pinus* L.

Species: *P. banksiana* Lamb.

4.Distribution:

Global: Northern North America, from Nova Scotia and Pennsylvania to Northwest Territories and Alberta.

India:

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

6.Threat Status:

IUCN: Least concern

BSI:

7.Habit and Habitat:Tree 9-22 m tall. *P. banksiana* is a boreal to subarctic pine with a wide distribution in the lowlands of the North (max. alt. 800 m a.s.l.). It grows mostly on dry, sandy soils but is also found on thin soils over granite or metamorphosed rock and on peat.

8.Life Form:Phanerophytes

9.Economic Importance:An important timber tree for pulpwood, lumber and round timber

10. Probable Progenitor of:

11.DNA

C-value Methodology

2C (34.35 pg) Feulgen microdensitometry⁶³

2C (29.8 pg) Feulgen micridensitometry⁶⁸

2C (28.10 pg) Flow cytometry⁹²

2C (40.80 pg) Flow cytometry¹

2C (43.96 pg) Flow cytometry²⁰

2C (45.50 pg) Flow cytometry ⁹⁶

12.Basic chromosome number(s): $x=12$ 2, 23, 35, 37, 44, 47, 63, 74

13. Zygotic chromosome number(s): $2n=24$ 2, 23, 37, 44, 47, 63, 74

14. Gametic chromosome number(s): $n=$

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

Image file

16.Ploidy level:Diploid 2, 23, 37, 44, 47, 63, 74

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: 23, 44, 47, 74

Karyotype Median, one shortest pair submedian^{23, 44, 47, 74}

Chromosome size Large^{23, 44, 47, 74}

NOR chromosome(s)^{10 47}

Degree of asymmetry Symmetrical^{23, 44, 47, 74}

Image file

22. Banding pattern(s):C-bands⁴⁴

Image file

23. Physical mapping of chromosomes:

In situ hybridization

Image file

Fluorescent in situ hybridization: 18S-5.8S-26S rDNA⁴⁷, pKF J660 probe of rice blast fungus, 18S-5.8S-26S rDNA⁵⁹

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; Translocation etc.):