Species Datasheet

Datasheet No. G-007.005.019
(family.genus.species)

1.Taxon:

Species: *Pinus radiata* D.Don
Subspecies:
Variety:
Cultivar:
Hybrid:

Image file

2. Synonyms:*Pinus adunca* Bosc. ex Poir., *P. californica* Loisel., *P. insignis* Douglas ex Loudon, *P. insignis* var. *laevigata* Lemmon, *P. insignis* var. *macrocarpa* Hartw. ex Carrière, *P. montereyensis* Rauch. ex Gordon, *P. radiata* subsp. *insignis* Schwer., *P. radiata* var. *radiate, P. radiata* var. *tuberculata* (D.Don) Lemmon, *P. rigida* Hook. & Arn., *P. sinclairii* Hook. & Arn., *P. tuberculata* D.Don

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.radiata* D.Don

Bentham and Hooker (1862)
Kingdom: Plantae
Division:Phanerogamia
Class: Gymnospermeae
Ordo: Coniferae
Tribus: Abietineae Eichler
Genus: *Pinus*L.
Species: *P. radiata* D.Don

4.Distribution:

Global: Native toMexico, United States

India: Tamil Nadu

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

6.Threat Status:

IUCN: Endangered

BSI:

7.Habit and Habitat: Evergreen tree (15 to 30 m tall).*P. radiata* is in its natural habitat confined to promontories and strips of rocky coast as well as two offshore islands; it is rarely found more than 11 km from the sea.

8.Life Form: Phanerophytes

9.Economic Importance: Timber.This species has been widely planted as a landscape tree in urban areas, parks and large gardens, where it can grow to huge size in relatively short time. It is a very suitable tree to form a living screen against wind and traffic noise and tolerates relatively high levels of air pollution.

10. Probable Progenitor of:

11.DNA

C-value	**Methodology**
2C (22.00 pg) [12]	Feulgen microdensitometry[12]
2C (22.30 pg) [13]	Feulgen microdensitometry[13]
2C (48.60 pg) [90]	Feulgen microdensitometry[90]
2C (44.00 pg) [61]	Flow cytometry[61]
2C (44.86 pg) [22]	Flow cytometry [22]
2C (46.20 pg) [90]	Flow cytometry [90]
2C (48.50 pg) [96]	Flow cytometry[96]
2C (54.04 pg) [20]	Flow cytometry[20]

12.Basic chromosome number(s):x=12 [12, 31, 35, 49, 74]

13. Zygotic chromosome number(s):2n=24[12, 31, 49, 74]

14. Gametic chromosome number(s):n=12 (female gametophyte)[64]

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

Image file

16.Ploidy level: Diploid [12, 31, 49, 64, 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: 31, 49, 74

Karyotype Median and submedian[31, 49, 74]

Chromosome size Large[31, 49, 74]

NOR chromosome(s) 20 [31]

Degree of asymmetry Symmetrical[31, 49, 74]

Image file

22. Banding pattern(s):C-bands, CMA+, DAPI+[31]

Image file

23.Physical mapping of chromosomes:

In situ hybridization

Image file

Fluorescent in situ hybridization:18S-25S rDNA, 5S rDNA[31]

Image file

24.Genomic in situ hybridization:

Image file

25. Linkage map:[11]

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.):