

## **Pterogyne nitens**

viraro

Tul.

Fabaceae - Caesalpinioideae

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### **LOCAL NAMES**

Portuguese (viraró,pau fava,ibiráro,ibiraró,guiáro,amendoim viraro,amendoim); Spanish (viraró,tipa colorada); Trade name (viraro)

### **BOTANIC DESCRIPTION**

*Pterogyne nitens* is a south American tree which attains a maximum height of over 30 m but more commonly not over 25 m with a well-formed trunk, diameter 60-90 cm, exceptionally 120 cm. Branches grey, round, wrinkled and lenticellate.

Leaves alternate, pinnate, with 6 pairs of alternate folioles, petiole sulcate in the upper part, with a strong pulvinus at the base; short petioled folioles, oblong, entire, shiny above and opaque below, with protruding ribs and veins.

Inflorescence an axillary panicle made up of 3 racemes of small flowers, with yellow, pubescent peduncles, brown at the base, white on top, with a deciduous bract at the insertion of each pedicel.

Fruit a winged achene with pedicel on the seminiferous thick side; the wing is connate to the pericarp by an oblique slit. The back side of the seed has protruding ribs; the wing also has curved wings.

Seed elliptical, long and dark yellow.

The species is becoming rare because of continued exploitation in the areas of natural occurrence. A high genetic variation has been observed in *P. nitens*, the Instituto Forestal de Sao Paulo maintains 4 base populations and 100 selected trees.

The generic name means 'winged ovary' which later develops into a winged seed whereas the specific name refers to the shiny leaves.

### **BIOLOGY**

*P. nitens* is hermaphroditic. Flowering occurs from January-March. Fruit ripening takes place from May-June. Seeds may be collected from April-May, however most authorities recommend August as the best seed harvesting season. Seeds are dispersed by wind.

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### ECOLOGY

The tree occurs in the dry deciduous forests of the sertoes where there is a well defined dry season.

### BIOPHYSICAL LIMITS

Soil type: Tolerates several soil types.

### DOCUMENTED SPECIES DISTRIBUTION

Native: Argentina, Brazil, Paraguay

Exotic: Kenya



The map above shows countries where the species has been planted. It does neither suggest that the species can be planted in every ecological zone within that country, nor that the species can not be planted in other countries than those depicted. Since some tree species are invasive, you need to follow biosafety procedures that apply to your planting site.

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### **PRODUCTS**

**Fuel:** The branches can be used as fuelwood.

**Timber:** Heartwood reddish brown suggesting mahogany often with darker striping; not sharply demarcated from the yellowish-brown sapwood. Luster medium to high; texture medium; grain often roey; without distinctive odour or taste. Has a low retractibility, handsome appearance and medium mechanical resistance. Wood reported to be fairly durable with a basic specific gravity of 0.66. Works easily and finishes smoothly. Used for fine furniture and cabinet work, turnery, floor tiles, veneers, interior trim, cooperage, and steam-bent work. The wood is also recommended for the construction of truck bodies and interiors of railway wagons.

### **SERVICES**

**Erosion control:** The root system of *P. nitens* protects the soil from wind and water erosion.

**Shade or shelter:** *P. nitens* is a shade providing tree.

**Reclamation:** Grows in a range of climatic and soil conditions and can be used in rehabilitation and reclamation projects.

**Soil improver:** Leaf litter of *P. nitens* enriches surrounding soil.

**Ornamental:** *P. nitens* is a beautiful ornamental tree grown in amenity parks in Kenya.

**Intercropping:** The tree offers little shade and is unlikely to deleteriously affect other crops.

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### **TREE MANAGEMENT**

*P. nitens* survives well once established. An average height growth of 0.68 m for a one year old provenance trial set up in Pederneiras-SP is recorded. Fruit stays on the tree for a long time and should be picked once ripe. In Brazil seed harvesting commences from April-May.

### **GERMPLASM MANAGEMENT**

Germination occurs between 3-47 days after sowing. A 75% germination success after 45 days storage in the open has been observed. There are about 5 500 seeds/kg.

### **PESTS AND DISEASES**

Seeds are attacked by fungi when stored in the open.

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**FURTHER READING**

CABI. 2000. Global Forestry Compendium. CD-ROM. CABI

FAO. 1986. Databook on endangered tree and shrub species and provenances. FAO Forestry Paper 77. FAO, Rome.

**SUGGESTED CITATION**

Orwa C, A Mutua, Kindt R, Jamnadass R, S Anthony. 2009 Agroforestry Database: a tree reference and selection guide version 4.0 (<http://www.worldagroforestry.org/sites/treedbs/treedatabases.asp>)