Mimosa caesalpiniaefolia Benth.[1/]

FAMILY

Leguminosae Subfam. Mimosoideae

VERNACULAR NAME

Sabiá

BOTANICAL DESCRIPTION

General

Tree which reaches up to 8 m in height, with branching from soil level, and a crooked trunk; the trunk when young, has few thorns that disappear when the tree reaches adult age. The rootsystem has nodules with nitrogen fixation capacity.

Inflorescence

A cylindrical spike of 5 to 10 cm in length, consisting of axillary and terminal panicules. Flowers are white, small, and in a capitulum, and are rich in nectar production. Flowering takes place from March to April and August to October; however, the seeds produced during this later period are the most healthy.

Fruit

The fruit is an articulated legume (pod), 7 to 10 cm in length by 10 to 13 mm in width, with a stipe of approximately 10 mm, segmented and held together by

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1/ Based on the work of I.E.Pires & C.E. de S. Nascimento, EMBRAPA/CPATA, P.O. Box 23, Petrolina, Pernambuco, Brazil.

fibrous filaments that bears the petiole at the end of the legume; one seed in each segment.

Foliage

Leaves bipinnate with six opposite pinnae and six opposite folioles sometimes 4 to 8, with prominent ribs; petioles 2 to 5 cm in length, with winged stipules about 3 mm long with or without curved thorns. The leaves have a high forage value, containing approximately 17% protein.

Bark

The bark is 3 to 5 mm thick, light brown in colour, with parallel fissures that show lengthwise bands, which scale off slowly.

WOOD PROPERTIES AND PRODUCTS

It has a yellow-brown to dark purple coloured heartwood and a cream coloured sapwood; darkens with time to red-brown. The surface is shiny and smooth. Appropriate for external use for stakes, and pillars due to its high durability even when in contact with the soil; suitable also for the production of fuel wood and charcoal due to its high calorific value.

NATURAL DISTRIBUTION

The "sabiá" grows in Northeastern Brazil, in the State of Ceará, and is also found from Maranhão to Bahia.

CLIMATE

The dry climate of Northeastern Brazil is the most appropriate for the "sabiá". Climate varies however from dry subhumid tropical or subtropitcal to semi-arid tropical or subtropical, with average temperatures between 20 and 28°C, yearly average precipitation between 500 to 1 300 mm, with a dry period of 6 to 12 months, and water deficit varying between 200 and 1000 mm.

SOIL

Grows preferably in deep soils, principally in the aluvials, and in the deep sandy alluvials. Good performance in shallow soils is observed, in accordance with the low nutrient requirements of the species.

HABITAT

"Sabiá" developes naturally in association with other xerophytic species such as Anadenanthera sp., Tabebuia sp., Astronium sp., and Torresea sp.

SEED HANDLING

The seeds are tiny and light, with about 12,000 seeds/kg. Care must be taken with regard to the harvesting time, due to attack of the seeds by the Coleopteran, Bruchus pisorus L., while the seeds are still on the tree. In nature the seeds maintains viability till the first winter after the seed fall. Germination takes places 5 to 10 days after the first rains. Although the coat dormancy of the "sabiá" seeds is not a problem, it is recommended that they be treated in boiling water for 1 to 2 minutes to obtain the most uniform germination.

SILVICULTURE

Although this species is not intensively cultivated, existing experiments show its potential for afforestation for the production of wood for stakes, fuelwood and charcoal. Results obtained in the swamp region of Paraíba, demonstrate that the most convenient planting spacings are 2.0 x 2.0 and 3.0 x 1.5 m, the latter being the most appropriate when planted with Vigna sinensis Endl. during the first year. On fertile soils, trees may be cut when three to four years old. In a coppice regeneration system, it is possible to carry out four cuttings (rotations). Natural regeneration after cutting from the stumps, as well as through root sprouting and seed germination is reported. The need for thinning in order to manage the stands for regeneration is stressed.

STATUS

The species is suffering a slow decline.

PROTECTIVE MEASURES TAKEN AND RECOMMENDED

No measures have been taken neither for ex situ nor in situ conservation of the original genetic pool. The studies underway on this species are limited to studying its behaviour in pure stands. In-situ preservation, is highly recommended. However, the fact that the geographical distribution of this species is widespread, along with the non-existence of homogeneous and/or continuous stands means that, this would require very vast areas. Studies of the reproductive system of this species and establishment of base populations are recommended, to preserve the original genetic variation and to provide reproductive material.

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