ITTO

LESSER USED SPECIES

PINABETE (PINUS MAXIMINOI)

TRADE NAME

Pineapple

SCIENTIFIC NAME

Pinus maximinoi H.E. Moore.

FAMILY

Pinaceae

COMMON NAMES

Pino canis, Pino ocote (Honduras)

SCIENTIFIC NAME SYNONYMS

Pine douglasiana ssp. maximinoi (HE Moore) Bui .; Pine escandoniana Roezl .; Pine hoseriana Roezl .; Pinus pseudostrobus ssp. trnuijolia (Benth.) Shaw .; Pine trnuijolia L. .; Pine tzompoliana Roezl.

DESCRIPTION OF THE TREE

BOTANICAL DESCRIPTION

It has a bark on the young tree that is thin and smooth; in the mature tree it is fissured reddish brown, flaking off in elongated plates. Acicular leaves, generally with 5 needles per fascicle, thin, long, 20-28cm long, usually with 2 resin canals. Angular, ovoid cones 5-10cm long and 4-7cm wide, with an oblique peduncle that remains attached to the cone when

it falls. The cones mature in March and April. An increase (m3 / ha / year) of 12.2 is reported for this species. These trees can reach heights of 20-35 m to 50 m in height and a diameter of 70-90 cm and in some cases up to one meter. Its straight trunk develops horizontal, juvenile branches and a smooth, gray and brown bark. At maturity, it has a deeply fissured bark in large gray and brown plates. The persistent leaves 2-2.5 years, very thin, pendulous, the margins seen under a 10X lens; They are the stomata in 2-3 lines on the three surfaces; 2-4 half resin canals. Sheath fascicles are orange and brown fading to gray and 15-25 to 30 mm long. The pollen near the cones in the extreme proximal part of the new leaders (sometimes lateral), are cylindrical, pink and brown in color. The seeds found in the cones are arranged in groups of 3-4, their color is light brown in the first year. Sheath fascicles are orange and brown fading to gray and 15-25 to 30 mm long. The pollen near the cones in the extreme proximal part of the new leaders (sometimes lateral), are cylindrical, pink and brown in color. The seeds found in the cones are arranged in groups of 3-4, their color is light brown in the first year. Sheath fascicles are orange and brown fading to gray and 15-25 to 30 mm long. The pollen near the cones in the extreme proximal part of the new leaders (sometimes lateral), are cylindrical, pink and brown in color. The seeds found in the cones are arranged in groups of 3-4, their color is light brown in the first year.

NATURAL HABITAT

Its growth is optimal between 800-1500 meters above sea level. The soils required by this species are loamy to clayey in texture, with good depth and optimal drainage. Acids that can vary from 4.2-6.5 are recommended for pH; the physical characteristics of humus should be kept 15-35 cm thick. For the chemical characteristics, it must have low calcium content and medium nitrogen and potassium content. The average temperature is 19 degrees C. and ranges from 18-22 with a rainfall of 1000–2000 mm. This species of Pines does not tolerate frost, so they can be a limitation for its planting in some areas.

FLOWERING AND FRUITING MONTHS

The cones mature from late December to March.

Fruiting

Jan. Feb. Sea. Apr. May. Jun. Jul. Aug. Sep. Oct. Nov. Dec.

REGENERATION EASE

Regeneration is by seeds and also by grafting.

NATURAL DISTRIBUTION

It is originally from Mexico and Central America

PLANTATIONS AVAILABLE?

This is one of several species of pine trees native to Mexico and Central America for which important genetic improvement works, experimental plantations and applied research have been carried out in several countries, including South Africa and Colombia. See Clarke, 2003 for relationships of age, altitude, and density (572).

TIMBER LOCAL USES

Sawn timber, veneer, plywood, luxury furniture, fine furniture, handicrafts, molding, matchsticks, tongue depressors, doors, windows, general construction, posts, treated pilings.

Tree Photo

Bark Photo

Photos Of Leaves
Flowers Fruit

WOOD IDENTIFICATION

ANATOMIC DESCRIPTION OF WOOD

The wood is moderately heavy, fine textured, medium to high gloss. It shows a slight difference between the creamy yellow sapwood and the slightly darker pale brown heartwood. The marbling is pronounced because the growth rings are typically visible. It has a characteristic odor (due to the resin) but no taste.

SPECIALIZED BIBLIOGRAPHY FOR THIS TOPIC

412 - Trees of Central America, A Manual for Extension Workers

AVAILABILITY

CITES STATUS

Unrestricted

GENERAL WOOD DESCRIPTION

ODOR

Characteristic (due to resin)

COLOUR

Shows a slight difference between creamy yellow sapwood and slightly darker pale brown heartwood

LUSTER

Medium to high

NATURAL DURABILITY

It is susceptible to attack by fungi and insects. Generally speaking it is low resistance.

NATURAL DURABILITY INDEX (1= VERY HIGH DURABILITY, 7=VEY LOW DURABILITY)

6

RESISTANCE TO IMPREGNATION

It is easy to preserve by hot and cold bath and vacuum-pressure methods. Water-soluble or oily materials can be used.

SPECIALIZED BIBLIOGRAPHY FOR THESE TOPICS

542 - Study of some physical and mechanical properties of the canis pine (Pinus maximinoi) HE MOORE from Yarumal (Antioquia)
412 - Trees of Central America, A Manual for Extension Workers
397 - Catalog of one hundred forest species of Honduras. Distribution, properties and uses.

WOOD PHYSICAL PROPERTIES

BASIC DENSITY OR SPECIFIC GRAVITY (O.D. WEIGHT/VOL. GREEN) (G/CM^3)

0.41 (542)

AIR-DRY DENSITY (WEIGHT AND VOLUME AT 12%MC) (G/CM^3)

0.52 (542)

NORMAL SHRINKAGE TANGENTIAL (SATURATED TO 12%MC) (%)

3.6 (542)

TOTAL SHRINKAGE TANGENTIAL (SATURATED TO 0%MC) (%)

7.4 (542)

NORMAL SHRINKAGE RADIAL (SATURATED TO 12%MC) (%)

1.8 (542)

TOTAL SHRINKAGE RADIAL (SATURATED TO 0%MC) (%)

3.7 (542)

VOLUMETRIC TOTAL SHRINKAGE (SATURATED TO 0%MC) (%)

11.4 (542)

DRYING DEFECTS

It is fast drying in the open air requiring good ventilation when it is freshly sawn to avoid the blue stain.

RECOMMENDED DRY KILN SCHEDULE

In conventional drying, normal or fast programs can be used.

DIMENSIONAL STABILITY RATIO (TOTAL TANGENTIAL SHRINKAGE %/TOTAL RADIAL SHRINKAGE %)

2.2 (542)

SPECIALIZED BIBLIOGRAPHY FOR THIS TOPIC

542 - Study of some physical and mechanical properties of the canis pine (Pinus maximinoi) HE MOORE from Yarumal (Antioquia)
397 - Catalog of one hundred forest species of Honduras. Distribution, properties and uses.

WOOD CHEMICAL PROPERTIES

HEATING VALUE

6500

PULPING PROPERTIES

See study available on the internet on pulp quality in relation to altitude and age of this and four other species of pines introduced to South Africa.

Clarke, 2003 (572)

SPECIALIZED BIBLIOGRAPHY FOR THIS TOPIC

572 - Effect of environment on wood density and pulp quality of five pine species grown in Southern Africa. Results of a research project carried out for the Usutu pulp Company Ltd., Swaziland. (http://www.bodley.ox.ac.uk/users/millsr/isbes/ODLF/TFP43.pdf)
542 - Study of some physical and mechanical properties of the canis pine (Pinus maximinoi) HE MOORE from Yarumal (Antioquia)
567 - 1995 (http://English)

WOOD MECHANICAL PROPERTIES

BENDING STRENGTH (MOR),12%MC (KGF/CM^2)

668 (542)

STIFFNESS (MOE) 12%MC (KGF/CM^2)

39 963 (542)

COMPRESSION PARALLEL TO FIBER 12%MC (KGF/CM^2)

348 (542)

SPECIALIZED BIBLIOGRAPHY FOR THIS TOPIC

542 - Study of some physical and mechanical properties of the canis pine (Pinus maximinoi) HE MOORE from Yarumal (Antioquia)

WORKABILITY

SAWING

Easy sawing.

TURNING

542

GLUING

Satisfactory.

FINISHING

It has an excellent polish.

RESPONSE TO HAND TOOLS

Easy to work with hand tools.

SPECIALIZED BIBLIOGRAPHY FOR THIS TOPIC

397 - Catalog of one hundred forest species of Honduras. Distribution, properties and uses.

REFERENCED USES

END USES SUMMARY

GENERAL EXTERIOR, transmission poles, posts for palisades, GENERAL HOUSING, beams, joists, floors, frames, wood accessories, blinds, FURNITURE AND CABINETS, PLYWOOD AND VENEER, TURNING, turned articles, TOOLS, tool handles, PACKING, pallets, food containers, NAVAL CONSTRUCTION, ports shelving, OTHER AND MUSICAL INSTRUMENTS, door core, paper pulp.

GENERAL EXTERIOR

542 - Study of some physical and mechanical properties of the canis pine (Pinus maximinoi) HE MOORE from Yarumal (Antioquia)

POLES

542 - Study of some physical and mechanical properties of the canis pine (Pinus maximinoi) HE MOORE from Yarumal (Antioquia)

PALING FENCE PICKETS

542 - Study of some physical and mechanical properties of the canis pine (Pinus maximinoi) HE MOORE from Yarumal (Antioquia)

GENERAL HOUSING

542 - Study of some physical and mechanical properties of the canis pine (Pinus maximinoi) HE MOORE from Yarumal (Antioquia)
529 - Tropical Tree Seed Manual (http://www.rngr.net/publications/publicaciones-en-espanol)

BEAMS

542 - Study of some physical and mechanical properties of the canis pine (Pinus maximinoi) HE MOORE from Yarumal (Antioquia)

JOISTS

542 - Study of some physical and mechanical properties of the canis pine (Pinus maximinoi) HE MOORE from Yarumal (Antioquia)

FLOORING

542 - Study of some physical and mechanical properties of the canis pine (Pinus maximinoi) HE MOORE from Yarumal (Antioquia)

FRAMES

542 - Study of some physical and mechanical properties of the canis pine (Pinus maximinoi) HE MOORE from Yarumal (Antioquia)

FITTINGS

542 - Study of some physical and mechanical properties of the canis pine (Pinus maximinoi) HE MOORE from Yarumal (Antioquia)

SHUTTER BOARDS

542 - Study of some physical and mechanical properties of the canis pine (Pinus maximinoi) HE MOORE from Yarumal (Antioquia)

FURNITURE CABINETS

542 - Study of some physical and mechanical properties of the canis pine (Pinus maximinoi) HE MOORE from Yarumal (Antioquia)

PANELS, VENEERS

542 - Study of some physical and mechanical properties of the canis pine (Pinus maximinoi) HE MOORE from Yarumal (Antioquia)

TURNING

542 - Study of some physical and mechanical properties of the canis pine (Pinus maximinoi) HE MOORE from Yarumal (Antioquia)

ORNAMENTS

542 - Study of some physical and mechanical properties of the canis pine (Pinus maximinoi) HE MOORE from Yarumal (Antioquia)

TOOLS

542 - Study of some physical and mechanical properties of the canis pine (Pinus maximinoi) HE MOORE from Yarumal (Antioquia)

TOOL HANDLES

542 - Study of some physical and mechanical properties of the canis pine (Pinus maximinoi) HE MOORE from Yarumal (Antioquia)

PACKING

542 - Study of some physical and mechanical properties of the canis pine (Pinus maximinoi) HE MOORE from Yarumal (Antioquia)

FOOD CONTAINER

542 - Study of some physical and mechanical properties of the canis pine (Pinus maximinoi) HE MOORE from Yarumal (Antioquia)

SHIPBUILDING

542 - Study of some physical and mechanical properties of the canis pine (Pinus maximinoi) HE MOORE from Yarumal (Antioquia)

PORT STORAGE

542 - Study of some physical and mechanical properties of the canis pine (Pinus maximinoi) HE MOORE from Yarumal (Antioquia)

OTHER & MUSICAL INSTRUMENTS

542 - Study of some physical and mechanical properties of the canis pine (Pinus maximinoi) HE MOORE from Yarumal (Antioquia)

BY CORES

542 - Study of some physical and mechanical properties of the canis pine (Pinus maximinoi) HE MOORE from Yarumal (Antioquia)

PAPER

542 - Study of some physical and mechanical properties of the canis pine (Pinus maximinoi) HE MOORE from Yarumal (Antioquia)