

Ochroma lagopus Sw.

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BOMBACACEAE (KAPOK-TREE FAMILY)

Ochroma bicolor, *O. grandifolia*, *O. pyramidale*

Balsa, balso, lana

Ochroma lagopus is a very fast-growing tree that reaches 20 m in height and 20 cm d.b.h. The trunk has a smooth bark, and the tree has an umbellate crown. The opaque green leaves are wide, alternate, and villous, with long, thick petioles and a nervation similar to the palm of a hand. Edaphic requirements are high; optimal growth occurs in soils of alluvial origin with good ventilation and no flooding, or in sandy soils resulting from the meteorization of rocks. The species has a high demand for light, growing as a pioneer species in secondary forests, large clearings, burned acres, or recent alluvial soils. Generally, it requires annual precipitation from 1500 to 3000 mm, temperatures between 22 and 27 °C, and altitudes between sea level and 2000 m. The species can tolerate drought periods of up to 4 months when atmospheric humidity is not lower than 75 percent. This species, a pioneer par excellence, shows abundant natural regeneration (Lamprecht 1990, Venegas 1978).

The wood is difficult to plane and does not hold nails or screws. However, it can be easily glued or saturated. It has a relatively high mechanical resistance, which increases as temperature decreases. For this reason it makes a good insulating and packing material; it was used as insulating material in U.S. spaceships. It is moderately easy to dry in the open air with moderate twisting and cracking. In drying chambers the wood tends to crack, twist, or harden superficially. The wood of *O. lagopus* is also used for boards, toys, sports articles, model airplanes, packing, net floaters, lifeboats, canoes, and signaling buoys. Its fiber is very long and it produces a very valuable,

high-yielding pulp. The cellulose is easy to whiten, and the woolly and silky fibers of the seed are used in hats and to fill mattresses. The bark is used in making ropes (Lamprecht 1990, Escobar and Rodriguez 1993).

Ochroma lagopus first fructifies between 3 and 5 years. The white flowers are 10 cm long. The fruits are brown elongated capsules, 18 cm long, with seeds that show hairiness (Camargo 1970).

The seeds cannot be stored and pregermination treatments are required to ensure germination rates greater than 10 percent. The fibers must be removed by hand or by burning. The seeds are then placed in boiling water and the heat source is removed. After soaking in the water for 15 minutes, the seeds must be planted immediately. In nurseries, germination occurs in 10 days.

Because the roots of young plants can be damaged easily, seeds are frequently planted directly in the field (Centro Agronómico Tropical de Investigación Enseña 1998a, Palacios 1979). The sowing site must be well prepared and free of underbrush. Sowing holes are 3 m apart, and the sowing distance is 3 by 3 m. For direct planting, 15 seeds are placed in each hole. Later, the plants in each hole are thinned. During the plantule's initial phase of development, the site must be kept free of underbrush.

In nurseries the seeds are planted in containers of clayey-sandy soil and lightly covered. When the plantules are 20 to 25 cm high, at about 3 months, they are outplanted (Camargo 1970).