

Grevillea robusta A. Cunn. ex R. Br.

C. R. ALVARADO, C. A. ALVARADO, and O. O. MENDOZA

Jefe Programa Nacional de Viveiros Forestales, Administración

Forestal del Estado, Tegucigalpa, Honduras;

Jefe Departamento de Investigación Forestal, Escuela Nacional
de Ciencias Forestales, Siguatepeque, Honduras; and

Gerente General Semillas Tropicales, Siguatepeque, Honduras

PROTEACEAE (PROTEA FAMILY)

No synonyms

Gravilea, grevilea, pino rojo, roble australiano, roble de pelota, roble sedoso, silky oak

Grevillea robusta is naturally distributed in Australia, between latitude 25 and 39° S in Queensland and New South Wales. It can also be found between latitude 13 and 21° S. This species has been planted in tropical and subtropical countries such as Guatemala, Costa Rica (starting at 1000 m), eastern Africa (1200 to 1800 m), Sri Lanka (600 to 2000 m), India (300 to 1800 m), Java (50 to 2000 m), Israel, Cyprus, and South Africa. It grows naturally in coastal rain forests along with *Eucalyptus* sp. or frequently in small, pure patches.

Grevillea robusta is an evergreen tree, reaching heights of 30 to 35 m and diameters of 50 to 60 cm. The shaft is usually straight and very cylindrical, although it has a tendency toward bifurcation. The crown is generally long, narrow, and quite sparse. The limbs are deeply lobed in the upper side, with acute lobes, sometimes reaching the main vein, narrow and whole in the lower side; the back is hairy and whitish; the right side is glabrous. The tree has a strong smell. The bark is dark gray, deeply cracked, and brittle (Centro Agronómico Tropical de Investigación y Enseñanza 1984a). The leaves are bipinnately compound and alternate, emanating from 15 to 20 folioles which are narrow and lanceolate, measuring 2.5 cm in length; the right side is smooth, and the back is grayish-silvery (Standley 1931). The tree develops a deep radicle system. It tolerates sandy and acid soils; can develop in shallow and flooded soils, although it does not grow much there and the shaft shape is poor; but clayey, heavy soils are not favorable. It develops well in loose-sandy soils, from fresh to wet, and with a pH between 5 and 7. It prefers soils with a high content of gravel (Benitez and Montesinos 1988, U.S. Department of Agriculture 1974). *Grevillea robusta* can grow at low and high temperatures. The species is considered relatively resistant to frosts. It grows at

elevations between 600 and 2000 m. In Australia, it grows where annual rainfall is between 1200 and 1500 mm.

The wood is reddish brown and has beautiful streaks, especially in the knotty parts. It is hard, moderately heavy (specific gravity is 0.56), and flexible, with limited natural durability. It is very difficult to dry; it tends to crack and twist. The wood is used in carpentry, cabinetmaking, veneer, molding, boxes, interior finishes, furniture, sheets, parquet floors, and plywood. Mixed with long-fiber wood, it is used in the cellulose industry. It is especially important as a high-value fuel, especially in semiarid regions. In Australia and in vast areas of other regions where it is cultivated, *G. robusta* is also valued as an ornamental tree for gardens, promenades, street borders, and parks (Standley 1931).

The flowers are orange, arranged in axillary shoots, and up to 2 cm long. A small, lignified follicular fruit grows from the floral peduncles. The fruits are dehiscent, with very irregular ripening. The fructification period occurs May through October, primarily occurring in May and June. The fruit contains one or two thin seeds with a consistency similar to that of paper. Seeds average 50,000 to 150,000 per kg with 60 to 80 percent viability.

Under normal storage conditions, seeds remain viable only 2 to 3 months after being gathered, and germination declines very rapidly. With a physical moisture of 7 to 8 percent, seeds can be stored for up to 2 years at a temperature of approximately 4 °C and 60 percent relative humidity. The seeds are placed in plastic bags which are then placed in closed containers. Seeds are recalcitrant; they germinate easily in a substrate of sand.

