Schinus molle L.

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ANACARDIACEAE (CASHEW FAMILY)

Schinus huingan Mol., *Schinus molle* L. var. *Huingan* (Mol.), *Schinus molle* var. *areira* (L.) DC

Aguaraiba en guarani, aguaribay, arbol de la vida, arbol del Peru, balsamo, cullash, cuyash, false pimiento, gualeguay, huaribay, huigan, huignan, huinan, lentisco del Peru, molle, molli, muelle, mulle, mulli, orighan, pepper-tree, pimentero, pimiento, pimiento de Bolivia, pirwi, tancar (Fossati 1996, Navi 1989, Schulte and others 1992)

In the genus, 27 species are distributed from Mexico to Argentina (Lindley 1993). *Schinus molle* embraces most of this range, extending from Central America, through Colombia, Ecuador, Peru, and Bolivia, and into Chile, Argentina, Paraguay, and Uruguay (Schulte and others 1992).

Schinus molle is an attractive tree with a strong, usually erect trunk supporting a full, dense, leafy canopy. It grows rapidly at about 1 m per year to a height of 20 m with a corresponding trunk diameter that ranges from 30 to 80 cm (Borja and Lasso 1990, Schulte and others 1992). Found growing in a wide spectrum of soils from sands to clays, alkaline to saline, this tree develops well on steep dry slopes, ravines, valleys, and areas composed of rocky and shallow soils (Soux 1987). This tolerance range is in part due to an extensive radial and vertical root system, which can penetrate to 30 m in depth (Navi 1989). Growing at elevations from 1000 to 3400 m, *S. molle* grows well where temperatures range from 15 to 28 °C and rainfall is between 300 and 700 mm per year (Borja and Lasso 1990, Fossati 1996).

Schinus molle is a tree of many uses. The wood is resinous, heavy, hard, fine textured, and resistant to termites. It has an average density of 0.669 g per cm^3 (Schulte and others 1992). The wood is used for posts and interior floors; farm implements, such as ploughs, yokes, and tool handles; rustic furniture; and home construction (Borja and Lasso 1990, Borter 1994). Because the wood burns slowly and emits uniform heat, it is considered a good fuel source. The tree's pendulant, informal branches and clusters of red-rose fruits add to its value as an ornamental. When fermented, the fruits make a refreshing alcoholic drink known as chicha de molle. The dried fruits are boiled to produce honey de molle which, when fermented, yields a vinegar-like substance (Schulte and others 1992). The fresh leaves, bark, and roots of the tree are used to alleviate or cure rheumatism, bronchial infections, high blood pressure, ulcers, tumors, anxiety, and inflammations of the skin (Centro Equatoriana de Servicios Agricolas 1993, Schulte and others 1992). Indigenous inhabitants of rural Bolivia decorate newlyweds with the branches of S. molle to confer perpetuity; also, in certain religious ceremonies, small branches are placed in the caps of the participants to establish a ritual relationship with their ancestors and the souls of the dead (Food and Agriculture Organization/Holanda/Cochabamba Departmental Forestal 1992).

Schinus molle begins to flower at 3 years in the Cochabamba Valley (elevation 2500 m) of Bolivia (Urquidi 1998). Flowering begins in August and continues until February (Fossati 1996). The inflorescence is a terminal panicle 8 to 20 cm in length that bears yellowish- to greenish-white, unisexual or hermaphroditic flowers (Unidad Evaluacion de Bosques y Unidad Planificacion y Monitoreo 1996, Urquidi 1988). The fruits, borne by racemes, are small, globose drupes, red-purple in color and about 4 to 6 mm in diameter (Fossati 1996, Schulte and others 1992). Fruits appear in October; each contains one round seed that is 3 to 5 mm in diameter and maroon to black in color and tastes similar to pepper (Fossati 1996, Navi 1989). Fruits drop to the ground upon maturity. A wide variety of birds eat the fruits and disperse the seeds (Soux 1987).

The mature, reddish-rose-colored fruits are collected by hand from the pendulant branches in April and May from trees at least 8 m in height (Fossati 1996, Schulte and others 1992). After collection, fruits are dried in the sun for 5 to 7

days and then rubbed by hand to release the thin husk. *Schinus molle* seeds average about 36,000 per kg (Fossati 1996). Stored in sealed glass jars or similar containers and kept in a dry, dark, cool environment, the seeds retain viability for about 2 years (Navi 1989).

Seeds are coated with a sweet and sticky substance that can attract insects. This substance must be removed before planting. Typically, the seeds are soaked in water at room temperature for 48 to 72 hours (Schulte and others 1992). Treated seeds germinate in 20 to 25 days with a germination rate of 50 to 80 percent (Schulte and others 1992).

Seeds of *S. molle* should be planted in beds of a loose substrate and topped with straw until germination (Schulte and others 1992). After germination, a shading system should be used to regulate the intensity of light reaching the seedlings (Schulte and others 1992). Seedlings may be moved to containers in 4 to 6 weeks (Navi 1989). When plants reach 30 cm, they are ready for outplanting (Soux 1987). Young plants should be protected from grazing animals. In areas with good soil and sufficient rainfall, direct seeding is feasible (Schulte and others 1992).


2cm
2cm