

ALL ABOUT HORSE RADISH TREE

BOTANICAL DESCRIPTION

The plant is small tree, 8m or less in height, with corky bark and soft white wood. The leaves are alternate, usually thrice pinnate, and 25-50 cm long. There are 3-9 leaflets on the ultimate pinnules. These leaflets are thin, ovate to elliptic and 1-2 cm long. The flowers are white and 1.5-2cm long on spreading panicles. The pod is 15-30 cm long, pendulous, three-angled and has nine ribs. The seeds are three-angled and winged on the angles.

ADAPTABILITY AND AVAILABILITY

Malunggay is strictly a tropical plant and grows well at lower elevations, both under wet and seasonal conditions. However, it can thrive up to 1,300 m altitude. It can be grown in various soils but thrives best in fertile, well-drained sandy loams. Malunggay is planted throughout the country especially in the Central and Northern provinces.

IMPORTANCE AND USES

Malunggay has multiple uses. The young fruits are a good substitute for yardlong bean (*Vigna unguiculata* (L) Walp.) often used in curries. Stewed fruits cannot be eaten whole, but the contents are sucked and the tough valves are thrown away.

The leaves and flowers are eaten as cooked vegetable or put in soups. Fried seeds taste like groundnuts.

The leaves and twigs are sometimes used as fodder. An edible oil extracted from the seeds is useful in illumination, cosmetics and lubrication. The root bark is used as a condiment or garnish.

Almost all parts of the tree, the leaves and root bark in particular have medicinal applications.

PROPAGATION

The horseradish tree is usually propagated by cuttings but can also be propagated by seed and through tissue culture.

CULTURAL PRACTICES

Cuttings or seedlings are planted before the onset of the rainy season. Commercially mature cuttings 2 or more cm in diameter and not less than 80 cm in length are preferred, as sprouts come out earlier and grow much faster. In preparing the cuttings, the desired branches are cut clean and planted directly in the field at a depth of not more than 30 cm. The ideal distance is 5 m each way to give room for the expansion of the tree top.

Malunggay usually receives little care apart from watering during initial growth. For good growth and high fruit yield, the application of organic fertilizer during the first year and inorganic nitrogen fertilizer once or twice a year is recommended. Malunggay tolerates drought very well but supplementary irrigation during a long dry season is beneficial. Old and weak branches are pruned out to promote regrowth and regulate the tree shape.

PEST AND DISEASE MANAGEMENT

The main insect pests are aphids, mites and insects that eat the fruit wall. However, the extent of damage is very minimal as to warrant pest control measures.

HARVESTING

For palatable malunggay vegetable, select medium tender or young leaves. Care must be taken in gathering the leaves to Fruits harvested in the afternoon are wrapped with banana leaves in order to keep them fresh, avoid damaging young sprouts and buds. Some people gather young fruits for salad purposes.



Department of Agriculture Bureau of Plant Industry

Los Baños National Crop Research,
Development and Production
Support Center

HORSERADISH TREE

Malunggay

(*Moringa oleifera*)



POST-HARVEST HANDLING

Fruits harvested in the afternoon are bundled at 50-100 pieces each and brought to the market the following day. The fruits and leaves are wrapped with banana leaves in order to keep them fresh.

PROSPECTS/OPPORTUNITIES

Malunggay is still underutilized at the moment. Its numerous uses (vegetables, seed oil, fiber, shade, hedge, ornamental, medicine), easy propagation and pan-tropical cultivation justify more intensive research into its biological and economic possibilities. It can be dehydrated for instant food preparation.

Source: *Indigenous Vegetables of the Philippines*
Bureau of Plant Industry

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