



Malabar spinach (*Basella rubra*): An excellent source of vitamins and minerals

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Introduction : Malabar spinach is native to tropical Asia, probably originating in India or Indonesia. Today, it is grown widely in the tropics as a perennial and in warmer temperate regions as an annual. Its vines with thick fleshy leaves exhibiting one of two leaf forms: closely spaced oval to rounded leaves. Malabar Spinach is an excellent source of vitamins A and C, Beta-carotene, riboflavin, folic acid, ascorbic acid and a good source of calcium and iron. Leaves and tender stems are eaten as salad, boiled, stewed or stir-fried, or in soups. Malabar Spinach plants are green (*Basella alba*) or purplish (*Basella rubra*). The leaves and young stems of Malabar Spinach are an excellent hot weather spinach substitute. The young leaves may be eaten raw in salads, the leaves and young stems cooked as a potherb mixed with vegetables, the leaves cooked separately as a spinach, or added to soups. The purple juice from the fruits may be used as a food dye to colour pastries or sweets. Boiled seeds are sometimes added to dahl in Bangladesh. The plant is often grown as an ornamental.

Environmental factors:

- Light requirement : Full sun, partial sun.
- Photoperiod: Short-day.

- Temperature requirement : Hot.
- Soil type : Humus-rich sandy loam.
- Soil pH : 6.0-7.0.
- Tolerance : heat, high rainfall, flooding, brief drought; sensitivity: frost, salinity.

Method of cultivation: Malabar spinach may be direct-seeded in tropical or temperate gardens if all danger of frost has passed and night temperatures are above 14 C (60 F). Plant seed 2.5 cm (1 in) deep, 2.5 cm (1 in) apart in rows 75 cm (2.5 ft) apart. Thin established seedlings to 30 cm (1 ft). In temperate regions it is preferable to start seedlings in pots indoors eight weeks prior to the last spring frost. Stem tip cuttings (15-20 cm/6-8 in) also may be used to propagate Malabar Spinach. Initially, cuttings require partial shade. Malabar spinach tolerates a wide range of soil conditions but does best on slightly acidic (pH 6-6.7) humus-rich sandy loams. Mulching is recommended to keep the soil moist. Trellis- or pole-grown vines have cleaner leaves than unsupported plants. Malabar spinach is not cold tolerant; its growth is slow and stunted by cold weather.

Harvesting and seed production : Plant tips (8-12 cm/3-5 in) may be cut from unsupported plants as soon as the



Basal alba



Basal rubra

tips bend downward. Trellis-supported plant tips and leaves may be cut after the vine reaches 60-70 cm (2 ft). Very early harvests stunt growth. Repeated (weekly) harvests of vigorous vines stimulates branch development. Picking of young flower stalks may promote vegetative growth as well. Although very young flower stalks may be eaten, avoid harvests of older tough flower stalks for food. To save seeds, the pulpy flesh can be completely removed and rinsed until the water runs clear. Or the seeds can just be dried on screens with the pulp on. Be sure the seed is dry before storing.

Plant protection: Malabar spinach is extremely sensitive to nematode damage and can be grown for only a few months if at all where nematode populations are high. Otherwise, it is usually pest and disease free. A fungus, *Cercospora beticola*, causes red spots and holes in leaves.

Remove and destroy infected leaves to prevent disease spread.

Cooking : The leaves and cut tips of Malabar spinach are used in food preparations much like one uses spinach or chard. Young Malabar spinach leaves may be added raw to salads or the leaves and stem tips are cooked with other vegetables as a potherb, cooked separately as a spinach or added, chopped, to soups and stews. Oriental chefs steam or stir-fry Malabar spinach. Although the cooking odor of Malabar spinach is strong, the flavour is mild. Red leaves lose their attractive red colour upon cooking. The thick leaves and stems of Malabar spinach are somewhat mucilaginous especially with prolonged cooking.

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