Malabar spinach (*Basella alba*) is a Nutritious and Ornamental Plant

### Background and Culinary Uses

Malabar spinach (also known as Indian spinach, Ceylon spinach, vine spinach and climbing spinach) is a perennial native of tropical Asia, widely consumed in Asia and Africa. It can be grown easily as an annual in summer months, as it does very well in hot weather, unlike real spinach. It is also highly ornamental and is a good candidate for edible landscaping. A vigorous, twining climber, the soft-stemmed plant can grow up to 10 feet long. It produces an abundance of dark green, glossy, oval to heart-shaped leaves which taste like spinach, though the two are not closely related. Like spinach, the leaves (and tender stems) may be eaten raw in salads, sautéed, steamed, boiled and curried. The thick, succulent, peppery-flavored leaves can also be used to condense soups and stew. Due to the mild okra-like sap in leaves, some people prefer to eat it cooked, rather than raw in salads.

### Health Benefits

The leaves are a good source of vitamins A and C, calcium, potassium and iron, with many other vitamins and minerals in lower quantities. It has over 3 times more vitamin C than spinach, and over 1.5 times more vitamin A than kale. Shoots have many medicinal properties, and are febrifuge, diuretic and laxative, whereas roots are used to treat diarrhea. Leaf poultice is applied to treat boils and sores. The purple fruit juice is used to treat eye infections, and as a food colorant and dye.

### Cultivation

There are two common varieties of Malabar spinach – green (*Basella alba*) and red (*Basella alba* cv. *rubra*, often listed as *Basella rubra*). The red variety has attractive red stems and pink veins on leaves. A tropical perennial, Malabar spinach can also be grown as an annual, and flourishes in hot, humid climates and moist, fertile, well-drained soils. It can tolerate both full sun and partial shade and does reasonably well in poor soils. The plant is flood-tolerant, but sensitive to frost, and will not survive if night temperatures dip below 60 degrees F. Dry conditions, low temperatures, and short days of less than 12 hours induce flowering. A temperature of 75-95°F is considered optimum for germination and growth. It can be grown on rooftops, in large planters, high tunnels, greenhouses, field rows (with black plastic mulch), raised beds, or in yards. This no-fuss plant is also suitable for hydroponics and aquaponics, and can even be grown indoors and in hanging pots, if placed in a brightly lit spot. It is easily propagated through seed and stem cuttings of 8-10 inch length. Seeds sown about an inch deep directly in the field with a spacing of 1 ft. between plants, will germinate in about 6 days, continuing up to 3 weeks. To ensure even and quick germination, seeds may be soaked overnight in water prior to sowing, or mechanically scarified with a file, sharp knife, or sandpaper. Trellising is required for the vine to climb and spread; as an ornamental, it can be grown in hanging baskets and large containers, trellised, or trained to climb on posts, fences, and live support. If sowing directly, seeds may be planted outdoors after the last spring frost date. If transplanting, seeds may be started indoors 6-8 weeks earlier. Plants are watered as needed, and a slow-release fertilizer may be used. Urban farmers who grow two crops of cool season species such as kale and spinach would be highly benefited by planting fast-growing Malabar spinach in the intervening months.
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Harvesting

Robust and fast-growing, Malabar spinach is ready for harvest in less than two months. Removing tips of seedlings at 5-6 leaf stage promotes lateral branching. First harvest of 8-12 inches of tender tips and leaves can be done 30-45 days after planting, or about 50 days after seeding. Subsequent harvest can be done every 2-5 days. At the end of summer, when days get shorter, plants bear small white (green variety) or light pink (red variety) colored bisexual flowers on short spikes in leaf axils, quickly followed by purple-black berries (drupes). Both flowers and berries are edible. As the plant ages, and under prolonged high temperatures, leaves turn red due to the accumulation of anthocyanins, leading to a slightly bitter taste. Malabar spinach has a good shelf life and can be refrigerated for up to 4 days.

Pests and Diseases

Malabar spinach is highly resistant to insect and disease, with no known serious threats.

Saving Seeds

Flowers are bisexual and set seed easily. Ripe berries that fall to the ground sprout readily, as they do not undergo dormancy. If saving seed for next season’s crop, ripe berries should be dried and stored in a cool, dry place. Over time, seed collected from robust plants will ensure progeny that are best adapted to local growing conditions.

Further Information

5. Malabar spinach (Basella spp.) https://avrdc.org/malabar-spinachbasella-spp/

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