

WILD LUFFA

Ball luffa

Luffa operculata

Cucurbitaceae

ECHO® PLANT INFORMATION SHEET

Description

Wild luffa (*Luffa operculata*) is an annual vining plant of the Cucurbitaceae family that includes gourds, squashes, and cucumbers. Botanists consider the origin of this plant to be from Mexico to northern and eastern parts of Brazil. It has several common names, depending on the region where similar species exist. Related species include both the more edible *Luffa aegyptiaca*, *Luffa acutangula*, and the more industrial *Luffa cylindrica*. All are edible, but some varieties and growth stages are tastier than others. Wild luffa is egg-shaped and has spikes; whereas vegetable varieties and their cultivars are typically longer and smoother.

Uses

Wild luffa and its relatives are most familiar to us as the “Luffa sponge” used for cleaning (e.g., in the kitchen or bath). Stripping away the outer spiked skin and vegetative parts leaves the dense fibrous network used as a sponge. People use wild luffa as natural medicine to treat colds and sinus infections, a practice consistent with research showing its effectiveness in animal studies.

Common Names

- French
 - papangaye
- Portuguese
 - buchinha
- Spanish
 - paste

Cultivation

Wild luffa is not commonly farmed, so recommendations are often based on those for related species. The FAO provides environmental ranges for *Luffa* species:

- Elevation – lowlands, <500 m
- Rainfall – 700-3000 mm (minimum-maximum range); 1200-2000 mm (optimal range). When irrigating, be attentive to plant needs, keeping foliage dry to avoid diseases.
- Soil – pH 5.5-7.0 (optimal range); prefers fertile, well-drained soil
- Temperature Range – 15-38°C (minimum-maximum range); 20-32°C (optimal range)
- Day Length Sensitivity – short (<12 hours) to neutral (12-14 hours)

Wild luffa is propagated from seed. Scarification, by nicking/abrasion or soaking (12 to 24 hours) of the seeds before planting, can be done to speed up seed germination. Sow seed (about 1.5 cm deep) directly into prepared soil. Alternatively, start seeds in containers and then transplant when the first true leaves appear. Direct seeding is less laborious than transplanting, but transplanting allows for earlier planting and harvest, an important consideration for marketing and short growing seasons. Plant wild luffa at a distance of 1 m between plants, in rows 2 m apart. Follow fertilizer recommendations for cucumber; luffa will respond well to fertility inputs (e.g., compost or any other available fertilizer) supplying over 100 kg of nitrogen per ha.

Luffa has a growth habit like its relative, the cucumber (*Cucumis sativus*). The plant sends out tendrils, small spiral appendages, that help the vine climb up trellises or other plants. Vines grow up to 9 m in length, so trellis support is important for keeping fruits off the ground and less susceptible to diseases.

Harvesting and Seed Production

Harvest the fruit when brown and dry for the sponge/fiber. Mature seeds will be black and loose in the fruit. Collect the mature seeds for planting.

Pests and Diseases

Pests and diseases are similar to those affecting cucurbits, so watch for pumpkin flies (in Africa and Asia) (*Dacus* spp. [particularly *Dacus ciliatus*]), cucumber beetles (*Chrysomelidae* spp.), and squash bugs (*Anasa tristis*). Downy (*Pseudoperonospora* spp.) and powdery mildew (Erysiphaceae family of fungi), mosaic viruses (etiology undetermined), bacterial spot (*Pseudomonas syringae*), wilt (*Erwinia trichophiles*), and damping off (complex of several diseases) are all common diseases of Cucurbits. Keep foliage dry and maintain spacing to avoid diseases. Aphids (various species of suprafamily Aphidodea) and leaf miners (*Liriomyza sativae*) spread many of the diseases mentioned.

Cooking and Nutrition

Wild luffa is not commonly eaten, with more palatable varieties becoming readily available. Farmers do cultivate it, but eat it only at the

young stage, mostly in Asia and less in the Americas. People eat the young fruits, shoots, and flowers, either pickled, raw, or cook as you would any other vegetable. Luffa fruits are high in vitamins A and C, and in phosphorus and potassium.

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