ECHO Asia Seed Fact Sheet

Photo: ECHO Asia staff

Scientific name – *Momordica charantia*

English common name – Bitter melon, karalla, balsam pear, and alligator pear

Asian common names –

- Burmese: kyethinkhathee
- Chinese: 苦瓜 ku gua (Cantonese fu gwa, foo gwa, foo kwa)
- Hindi: karela, kerela, tita kerala
- Japanese: ニガウリ niga uri, 苦い瓜 nigai uri
- Khmer: mreah
- Lao: bai maha, haix, s'aix
- Thai: maha, mara, phakha
- Vietnamese: Mướp đắng , Khổqua , la khoqua (leaves)

General description and special characteristics – A slender annual climbing to 3.0 -3.7 m (10-12 ft) tall with edible fruits and young vines that may be prepared in a variety of ways. The fruits are pear-shaped or oblong, growing to 10-15cm (4-6 in) long.

Crop uses (culinary) – The immature gourds and tender vine tips are consumed as cooked vegetables. The fruits are high in folate and vitamin C and the leaves are rich in vitamin A and calcium. They are very versatile in cooking because they can be boiled, fried, curried, pickled or baked. Soaking the peeled fruit in salt water before cooking can reduce bitterness. Tender shoots and leaves are also used as greens.

Crop uses (medicinal) – The medicinal benefits of the gourd are being studied as a treatment for infectious diseases and diabetes.

Seasons of production – In the tropics, bitter gourd can be planted year round, although irrigation may be needed during the dry season. The crop is reportedly day neutral.

Length of production and harvest period – Bitter gourd begins flowering 5-6 weeks after planting with harvest possible three to four months after planting.

Production methods – Since bitter gourd is a very fast growing vine that produces many fruits that will rot in contact with moist soil, trellising will reduce crop loss and make harvesting easier. When the vine reaches the top of its trellis, it is recommended that all lateral branches from the soil up to the 10th node, as well as the growing tip of the vine, be cut off which will stimulate the upper branches to produce a higher yield.

Plant spacing – The seed can be planted directly or transplanted at a spacing of 0.46-0.61 m (1.5-2 ft) within the row and 0.91-1.52 m (3-5 ft) between rows.

Pollination – Bitter melon is open pollinated, therefore isolation (at least 0.4 km or ¼ mile) or hand-pollination is necessary to prevent crossing amongst various bitter gourd varieties. However, bitter gourd does not cross with other Cucurbitaceae species.

Environmental conditions for production – Bitter gourd prefers daytime temperatures between 24-27°C (75-81°F) as well as regular rainfall or irrigation. Although it will tolerate less water, growth will be slower.

Soil requirements – Bitter gourd prefers a well-drained, sandy loam soil but will grow in areas with poorer soils.

Pests and diseases – Like other cucurbits, bitter gourd vines are susceptible to several diseases such as downy mildew (*Pseudoperonospora cubensis)*, anthracnose (*Colletotrichum lagenarium)*, mosaic virus, wilt, and pests like root-knot

nematodes. It is best to plant resistant varieties, mulch to prevent weed competition, and use pesticides as needed to control fungi and diseases that are non-toxic to honeybees.

Seed saving – The Seed Savers' Handbook suggests allowing bitter gourd fruits to ripen until yellow-orange and soft. Very ripe fruit will split open to reveal the shiny blood-red seeds. The seeds should be scooped out and soaked in water for a day to remove the red flesh. The beige, hard-shelled seeds will need to be dried before storage. Under cool, dry conditions, the seeds can be stored for five years.

References –

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