

AMPLAYANG LIGAW



- Scientific Name: *Momordica chuchinensis* Linn.
Common Names: Balsam pear, Wild bitter gourd, Bitter cucumber, Bitter melon
Local Names: *Ampalayang ligaw* (Tagalog), *Paria* (Ilocano), *Palia* (Bisaya), *Amargoso* (Bicolano), *Apalya* (Pampango), *Palya* (Pangasinense)

BOTANICAL DESCRIPTION

Ampalayang ligaw is a monoecious, annual vine having a five-ridged stem and simple tendrils. The leaves are simple, pellucidly dotted, palmately veined; petiole is 1-7 cm long; leaf-blade broadly ovate-reniform or subobicular in outline, leaves obovate and sinuate-lobulate or sinuate-toothed. The flowers are axillary, solitary, about 3 cm in diameter and yellow. The fruits are 3-11 cm x 2-4 cm, irregularly warty, orange dehiscent from apex downwards to the base into three valves. The seeds are 8-16 mm x 4-10 mm x 2.5-3.5 mm, and brown in color.

ADAPTABILITY AND AVAILABILITY

Ampalayang ligaw thrives in any type of soil but yields best in a well-drained loamy soil rich in organic matter. It can be grown throughout the year at a wide range of altitudes.

USES/IMPORTANCE

Fruits, young shoots and flowers are used as flavoring; the leaves as leafy vegetable; and the pulpy arils as sweets. *Ampalayang ligaw* may be canned, pickled or dehydrated. To reduce the bitter taste, the fruits can be blanched or soaked in saltwater before cooking.

Ampalayang ligaw has been recommended by the Department of Health (DOH) as one of the best supplements to prevent liver problems, diabetes and HIV. It is also used to treat skin diseases, and sterility in women, as a parasiticide, antipyretic and purgative. There are also reports that the seed extracts induce abortion.

NUTRIENT VALUE

The edible portion of *ampalayang ligaw* fruits is about 95%. A 100 g edible fruit contains (83-92 g), protein (1.5-2 g), carbohydrates (4-10.5 g), and fiber (0.8-1.7 g). The energy value is 105-250 kJ/100 g. Compared with other cucurbits, it is high in minerals and vitamins including Calcium (20-23 mg), Iron (1.8-2 mg), Phosphorous (38-70 mg), and Vitamin C (88-96 mg). Every 100 g of edible leaves contain water (82-86 g), protein (2.3 g), fat (0.1 g), carbohydrates (17 g), and fiber (0.8 g).

Ampalayang ligaw is thus, an excellent source of iron and calcium and a good source of phosphorous and vitamin B.

PROPAGATION

Ampalayang ligaw is propagated by seed. Direct seeding is most common, but transplanting is normally done in Visayas and Mindanao. The use of pre-germinated seed results in an even growth of plants. Seeds are sown in the field at a spacing of 30-50 cm between hills and 2-3 m between rows. Optimum plant density ranges from 6,500 to 11,000 plants/ha. In some areas, closer spacing of 50 cm – 50 cm is practiced, resulting in 40,000 plants/ha.

CULTURAL PRACTICES

The use of compost at 5-10 tons/ha is recommended. Supplementary, preferably furrow irrigation, is necessary to maintain a good crop during the dry season. Mulching is effective in reducing water loss. *Ampalayang ligaw* is almost always trellised, especially in the wet season, before the vines are one m long.

PEST AND DISEASE MANAGEMENT

Fruit fly is the most destructive pest of *ampalayang ligaw*. Chemical sprays are not effective against the pest. Integrated pest management or IPM practices like bagging or wrapping the fruit with net bag 1-2 days after pollination is more effective to control fruit fly. *Epilachna* beetles, caterpillars, aphids and mites also attack the crop.\

Disease of *ampalayang ligaw* especially *Cercospora* leaf spot and downy mildew, decreases yield.

HARVESTING

Ampalayang ligaw is marketable 15-20 days after fruit set. Delaying harvesting for 3-4 days leads to loss of fruit luster and acceptability. Fruits are best harvested by cutting the fruit stalk with scissors or a sharp knife.

POSTHARVEST HANDLING

Ampalayang ligaw fruit should be marketed immediately after harvest. Fruits arranged in bambobaskets layered with newspapers or banana leaves can be kept for 2-3 days. If stored at 4 °C, *ampalayang ligaw* can be kept for 3 weeks.

PROSPECTS/OPPORTUNITIES

In Southeast Asia, *ampalayang ligaw* will remain important vegetable crop and production is expected to increase because of its medicinal properties. Breeding for less bitterness will increase the crop's popularity as vegetable.