



Smooth Luffa



Angled Luffa/Sinqua



Hairy/Long Melon

## Asian Melons

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**Name:** Asian Melons: smooth Luffa (*Luffa aegyptiaca*), angled Luffa/Sinqua (*Luffa acutangula*) and Wax Gourd, Hairy/Long Melon or Winter Melon (*Benincasa hispida*).

**Origin:** Asia.

**Distribution:** These vegetables probably originated in Indo-China. They have spread throughout Asia and are now considered pan-tropical.

**Australian Distribution:** These vegetables are grown in the northern tropics but are mainly produced around Darwin in the NT.

**Preferred Climate and Soil Types:** Drier areas of lowland tropics are the preferred planting location. They have low frost tolerance and also suffer from water logging. The best soils have good organic content with a neutral pH and are free draining.

**Description:** These are all climbing annual herbs with long, thick, hairy stems and large simple-lobed leaves. The stems of the luffas are acutely angled while the winter melon's stem is smooth but furrowed. The fruit of the smooth luffa is mainly cylindrical in shape with smooth or slightly ribbed skin while the angled Luffa has club-shaped fruit that are angled with highly ribbed skin.

The wax gourds are thin light green, cylindrical fruit of varying length that can have a waxy surface. Hairy melons are 20-25 cm long cylindrical fruit which have a rind covered in fine hairs. Winter melon has large globuse/oblong shaped fruit that are covered with an easily removed layer of white wax.

**Varieties:** There are many varieties of both types of luffas. Some of these varieties are recognised sub-species that have developed in the wild. Luffa breeding has been conducted around the world to produce varieties that are suitable for eating and varieties that are suitable for sponge manufacture.

The wax gourd, hairy melon and winter melon are all varieties of one species that can almost be called sub-species but are not, even though their fruit look markedly different. There are a number of varieties of winter melon available with most countries developing their own lines.

**Culture:** Winter melons are grown from seed. They can be grown either at high densities on trellising or prostrate on the ground at lower densities. Winter melons need lots of organic matter and some NPK fertiliser at planting plus some side-banded nitrogen until flowering. While winter melons are drought tolerant, maximum production is achieved with irrigation in regions with low rainfall.

The Luffas are sown as seed into mounds of soil. Smooth Luffa can be planted in a rectangular system 100 cm by 100 cm while angled Luffa can be planted up to 20 cm closer. Both crops are best grown on trellising though angled luffa can be grown prostrate. Luffas need lots of NPK plus side banding of nitrogen up to flowering. However it should be noted that too much nitrogen in combination with high temperatures encourages excess male flowers thus reducing yields. Luffas are not drought tolerant and need irrigation in dry periods.

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**Pests and Diseases:** Both luffas and winter melons are relatively insensitive to most pests and diseases. However powdery mildew and downy mildew can cause problems if left uncontrolled. The major insect pests are fruit flies and aphids.

**Fruiting Season:** Luffas and winter melons perform best during the dry season. However production during the wet season is possible.

Winter melons have a long growing season with flowering occurring 50-80 days after planting. The fruit can be harvested anytime from one week after anthesis (for immature fruit for drying or pickling) with fruit maturity occurring by two months. Fruit can be left on the vine for up to two months after maturity.

Luffas also have a long growing season with flowering starting 6-10 weeks after planting and full fruit maturity occurring 4-5 months after that. However, fruit may be harvested a month after flowering especially as yields decline after 2-3 months of flowering.

**Harvesting:** If luffas are grown for eating then they can be harvested 12-15 days after fruit set. However for best yields the fruit should be left on the vine until half the size of a fully mature fruit (ie: 9-13 weeks after fruit set). If the luffas are being grown for sponges then they should be left on the vine until the base and apex start yellowing but the fruit is still green (i.e. 4-5 months after fruit set).

Winter melon has no distinctive indicator of maturity. It can be harvested anytime from one week after fruit set until eight weeks after fruit set.

**Storage Conditions:** Winter melon if picked early needs to be used quickly. However if the winter melon is picked when fully mature it has a long storage life at 13-15°C in a dry atmosphere. If picked for eating a luffa needs to be handled gently. It can be stored for 2-3 weeks at 12-16°C.

**Culinary Use:** When picked early luffa fruits are usually cooked or fried and used in soups or sliced and dried for later use. Very small fruits can be eaten raw or pickled. Mature fruits of the smooth luffa are washed to remove the rind and remaining flesh. They are then dried and treated to become sponges.

Winter melon can be used green or mature. Young fruit can be used whole especially in curries. The mature fruit can have the skin removed and the flesh used in soups or sugared to become candy. Other recipes call for most of the flesh to be removed from mature fruit and stuffing inserted before being steamed.