

## **Eggplant**

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*Ratatouille, moussaka, baba ganoush, melanzana alla parmigiana! French, Greek, Middle Eastern and Italian cultures have embraced the voluptuous aubergine, elevating it to the status of a national dish. Many Australians have yet to develop a passionate love affair with aubergines or eggplants as they are more commonly referred to. In fact, without the influence of European migrants, many of us would still be wondering what on earth to do with these strangely beautiful, purple fruit!*

### **FACT FILE**

**Botanical Name:** *Solanum melongena esculentum*

**Origin:** *India*

**Family:** *Solanaceae (related plants include potatoes, tomatoes and capsicum)*

**Climatic Range:** *Eggplants love warm climates. They can be grown as perennial plants in frost free regions where winter evening temperatures average above 10 degrees Celsius. In colder climates eggplants are grown as annual crops during the warmer months of the year.*

**Planting Season:** *Plants can be established all year round in tropical regions, during spring, summer and early autumn in subtropical climates and during late spring and early summer in cooler climates.*

### **Easy as Aubergines**

Eggplants are short-lived tropical perennials. One of the easiest vegetables to grow, the problem facing most gardeners is not how to grow them, but what to do with the more than 50 fruits that may be produced by each plant in one season!

Fruits have a thin waxy skin that varies in colour from black to purple, green, yellow, and white. Ornamental red and orange skinned varieties are also available. The flesh is white regardless of the colour of the skin. A skirt of green, sepals (often slightly spiny) circle the fruit where it attaches to the stem.

Fruits vary considerably in shape and size. Large European types may grow up to 25cm long with a diameter of 15cm and resemble curvaceous, purple teardrops. In the Middle East and Asia more modest sized, long cylindrical varieties are popular. These fruits grow to around 20cm in length but are just 5cm in diameter. Traditional Indian varieties are plump and egg shaped, reaching the size of an orange.



### **Some Like It Hot**

Eggplants need warm growing conditions to do well preferring growing temperatures of between 21-30 degrees Celsius. Under these conditions, plants grow to 1.5 metres high. In warm climates it is possible for plants to remain productive for several seasons. Light, free draining soil to which considerable organic material has been added produce good growth, but remarkable production can be achieved even under less than ideal conditions of soil fertility. A pH of between 6 and 7 is optimum. Heavy clay or overwet soils predispose plants to root rot disease. Use of organic mulch can help to maintain more constant moisture levels in the soil, but be sure to avoid building this up close to the plant or stems may develop a type of collar rot.

### **Starting from Scratch**

Eggplants are readily available from nurseries in seedling punnets. This is a good way to establish your plants quickly, but your choice of varieties will often be limited to commercial F1 hybrids unsuitable for seed saving. Several seed companies offer a wide selection of non-hybrid varieties that can be easily raised in seed raising mixture or home made compost.

Seeds are usually sown into punnets or pots rather than directly into the soil. Do not be too impatient. Seeds take slighter longer (15-20 days) to germinate than related plants such as tomatoes and



capsicums. Seedlings are often also slightly slower to establish and are usually planted out when 6-10 weeks old by which time they will have grown to 10 – 15 cm in height. Plants should be spaced at 60cm – 1 metre intervals depending on the variety grown.

### **Pick of the Crop**

Plants begin to bear in 12 weeks and continue while the weather remains warm. Regular harvesting promotes continued production. Select young, firm fruit with bright, glossy skin. Larger, more mature fruits will tend to contain well-developed seeds. These fruits will be gritty and more bitter in taste.

### **Turning Up the Heat**

Gardeners in cooler climates can get their eggplants off to an early start by sowing seeds in punnets on a warm windowsill or other protected spot. When planting, select a warm area in the garden, preferably against a north facing wall or where some other reflected or radiated heat may be obtained. Alternatively use wire hoops and clear plastic (recycled bubble wrap provides additional insulation) to create your own mini-glasshouse.

Eggplants need a growing season of around five months, so gardeners in cooler regions will need to select fast maturing varieties and begin planting as soon as temperatures begin to rise in late spring and early summer. Remember that plants will be damaged by frost and cold temperatures and therefore must be treated as annuals in cooler areas.

### **Did You Know?**

*Western Australia and Queensland are the major growing areas in for commercial eggplant production in Australia. Eggplants do not store for long period. For this reason production is consumed on the local market rather than exported.*

### **Bowled Over**

While most eggplants are borne on sturdy plants, the sheer weight of the fruit produced can cause some plants to topple over. Fruits that come in contact with the ground are subject to fungal rots and will act as a magnet to snails. Winds conditions will tend to break branches and cause scarring on surface of developing fruit. Low wind breaks, shade cloth screens or protective cloches may be used to protect plants during windy conditions.

### **Know Your Enemy**

Being members of the Solanaceae family, eggplants are subject to many of the same pest and disease problems common to their related cousins, tomato and capsicums. Where plants collapse unexplainably part way through the growing season, suspect viral wilt disease, root rot or root knot nematodes.

### **The Dreaded Droop**

Wilt disease is transferred from one plant to another via sucking insects such as aphids. Seed saved from affected plants will carry the disease, transferring it to new plants and often cutting them down just as they reach optimum production. If you suspect wilt disease is affecting your plants, sacrifice one plant by cutting through the stem. Brown discoloration in the conductive tissue inside the stem will confirm your suspicion. There is no cure. Dispose of infected plants, preferably by burning. Source a clean supply of seed for next year's planting.

### **Absolute Rot!**

If no stem discoloration is detected, dig the entire plant from the ground roots and all. Undeveloped, brown, soft or odorous smelling roots indicate the presence of root rotting fungi. This is generally an indication of overwet, acidic or clay soil. Build up your garden beds to improve the drainage, add a liming agent (wood ash or dolomite) and plenty of organic material. Alternatively, try growing your plants in pots.

Some European gardeners overcome the tendency of eggplants to fall victim to root rot disease and root knot nematodes by grafting them on to related solanaceous species. Wild tobacco (*Solanum mauritianum*) and Giant Devil's Fig (*Solanum hispidum*) are popular choices for rootstocks. Plants are best grafted during spring and early summer.

### **Bitter and Twisted**

Where roots show contorted, knobby growth, root knot nematodes are probably to blame. Plants affected by nematodes have difficulty taking in water and dissolved nutrients efficiently. Plants will often look drought stressed and wilted in warm weather, even though regular watering is carried out.

Crop rotation should be practiced to lower the incidence of root nematode infestation. Remember that populations of root known nematodes will be high where tomatoes, potatoes, capsicums, tobacco or eggplants have been grown in the garden in past seasons. Attempt to grow non-solanaceous crops for at least three seasons before replanting eggplants again. Incorporating large amounts of organic matter into the soil will provide an inoculant of beneficial nematodes and fungal species that help to keep destructive species in check.

### **Bait the Trap**

Fruit fly may also affect maturing eggplant fruits. While larvae rarely develop within the fruit, stinging of the fruit surface will be apparent. Place baits and traps to lure fruit fly away from crops or use a clothes peg and paper bag to protect individual fruit. Pick fruits when young, before the fruit fly has a chance to strike.

Caterpillars can occasionally attack plants boring holes under the green sepals and into the fruit. Dusting with derris or use of repellent molasses sprays will control the problem.

### **Seed Saving**

Eggplants are generally self-pollinating, but you may want to protect flowering plants from the antics of promiscuous insects if you are growing more than one variety. Simply place a paper bag or net bag over the flowers of plants from which you wish to save seed. Once the flower has pollinated itself (evidenced by the formation of a small fruit) the bag can be removed.

Mature fruits develop small seeds that look very similar, but are slightly smaller than tomato and capsicum seeds. Remove the skin and excess flesh, cutting the flesh encased seed into cubes. Mash the cubes in water or pulp in blender on low speed. Wash the flesh through a sieve, until only the small, hard seeds remain. Allow the seed to dry before storing for planting the following season.

### **Try Before You Plant**

If you have never tasted the fruit of an eggplant, perhaps you should purchase some from your local organic supplier before planting up your entire garden. Avoid fruits that show blemishes or any wrinkling of the skin, as this tends to indicate that the fruit has been stored for a considerable period. The flavour and texture will be inferior.

Eggplants generally need pre-treatment before cooking. This is done by charring the fruit under a grill or over a naked flame to remove the skin or by slicing and sprinkling the surface with coarse salt. Salted sections should be left to rest for 10-15 minutes before being rinsed and carefully dried.

The fruit of the eggplant itself is fairly bland but the flesh soaks in the flavours of accompanying foods and tends to absorb oil. Rich tomato sauces, spicy, pungent and acidic combinations compliment the succulent eggplant. This versatile fruit can be eaten stuffed, steamed, made into curries or eaten as a main course.

### **Ornamental and Culinary Varieties**

Eggplants are quite decorative with some selections grown purely for their ornamental value. The fruits of ornamental varieties are generally smaller and while they may be eaten, the flavour tends to be inferior and more bitter than popular eating varieties. Turkish Orange is an ornamental variety of *Solanum integrifolium*, while some small egg sized white fruited varieties often sold as novelty potted plants are selections of *Solanum ovigerum*. The fruit of these varieties is snowy white when immature but turn yellow when ripe.

<b><u>Varieties</u></b>	<b><u>Characteristics</u></b>
Burpee's Black Beauty	This heirloom variety remain popular today due to its rich flavour and drought tolerance. Fruits are purple skinned, rounded to egg shaped growing to around 15cm across and 20cm long.
Early Long Purple	This purple skinned variety produces fruit to 25cm in length and 8cm wide. Quick maturing, it is suitable for cooler regions where the growing season is short.
Florence Round Purple	This traditional Italian variety produces rounded fruits with lavender skin decorated with creamy white stripes.
Italian Heirlooms Mixed	This mix contains an interesting selection of lavender, rose coloured and striped heirloom varieties.
White Eggplant	These sturdy upright plants grow to one metre in height producing large white-skinned elongated fruit. This variety lacks the bitterness found in some other varieties and appears to be more resistant to root rot disease.

*Seeds of these varieties may be sourced from Eden Seeds (Qld), Green Harvest (Mail Order), Brisbane Organic Growers (Qld), The Diggers Club (Vic) Phoenix Seeds (Tas) and Greenpatch Organic Seeds (NSW).*