

## Capsicum

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The 1965 edition of the Yates Garden Guide dedicates just twelve lines to the culture of capsicums beginning with the observation, 'This vegetable is becoming more popular as time goes on and palates become more sophisticated.'

Capsicums are such an indispensable ingredient in the kitchen that it is easy to forget that they are relative newcomers in the home vegetable garden. European migrants grew capsicums, eggplants, raddicho and rocket and it was not long before more adventurous gardeners and chefs began to take an interest in these new fruits and vegetables.



### **FACT FILE**

**Botanical Name:** *Capsicum annuum*

**Family:** *Solanaceae*

**Origin:** *Central and South America*

**Climatic Range:** *Capsicums love warm growing conditions. You can grow them year round in frost-free tropical and subtropical regions. Gardeners in temperate regions will achieve success by planting in spring and early summer. Where temperatures are cool, consider starting your plants off in pots within a glasshouse or similar protected environment. Choose a warm microclimate by planting up against a north facing brick wall, so that plants can benefit from radiated heat. Plants should be spaced at 30–60cm intervals or are adaptable to potted culture.*

### **Varieties**

Capsicums are really short-lived perennial plants. They are grown primarily as annuals because production declines as plants age and they are intolerant of cold winters and frost. Plants grow into small bushes bearing fruits that vary in size, shape and colour.

**Target** –commercial variety grown in coastal regions in subtropical climates and forms a large bell-shaped fruit.

**Merlin** –commercial variety grown in drier, inland regions within tropical climates and forms a large bell-shaped fruit.

**Californian Wonder** - formerly commercially grown but now largely replaced by newer selections, this variety is commonly available as seedling in nurseries.

**Yolo Wonder** - popular home garden variety commonly available as seedlings within retail nurseries. It produces a large bell type fruit.

**Sweet Mama** – selected variety released by Bedding Plants Australia for the home garden market.

**Cherrytime** – edible, but also very ornamental, this attractive compact bush produces small, glossy rounded, red fruits. It is ideal for potted culture.

**Hungarian Yellow Wax** - this variety looks more like a large chilli. It produces a thin tapered fruit that matures from pale yellow to orange/red.

**Lipstick** – this variety produces 10cm long, sweet, cone-shaped, thick-fleshed fruits that are very decorative.

**Perennial Capsicum** – popular amongst seed saving groups and home gardens in warmer regions, this plant produces masses of 5-8cm long fruits and bears consistently for three or more years in warm climates.

**In the Sunshine State (Queensland Australia)**

Commercial growers produce more than 24,400 tonnes of capsicums annually with more than 75% of this production taking place Queensland, where the warm growing conditions are conducive to year round culture of the crop. Capsicum prices fluctuate widely according to the time of year and seasonal conditions. The majority of commercially produced crops are consumed as fresh produce. (Source: Australian Bureau of Statistics).

**Sow Easy**

Having trouble finding the varieties of capsicum you see for sale at your local fruit and vegetable retailer available for purchase as seeds or seedlings? As capsicums are typically self-pollinating, so you can simply purchase fresh fruits of the variety you admire, scrape the seeds from the flesh and sow them as you would any other seed. In the home garden insects frequently bring about cross-pollination where different varieties are grown in close together. To ensure seed purity, grow a single variety, plant a tall crop such as corn to separate your capsicums or spread different varieties around the garden to minimize the chances of cross pollination.

**Patience Please**

Like most plants that require warm temperatures to grow and fruit, capsicum seeds require warm conditions to germinate. Seeds are often slow to germinate and may take four to eight weeks to germinate seed and grow seedlings on to a size suitable for transplanting. A further 10 – 12 weeks of growth is required for the development of green fruit, while fruit must remain on the plant for an additional two to three weeks to develop a deep red colour.

**Head Start**

To get your seedlings growing earlier in the season sow seeds into pots or punnets and place them in an environment that provides extra warmth. The hot water system, a sunny window ledge or glasshouse may provide the extra warmth required to achieve early germination. Avoid over watering seedlings as the combination of excess soil moisture and a cool root zone can seriously set back growth.

**Heat Lovers**

Seeds and seedlings can be planted directly into prepared beds at 30 – 60cm intervals when daytime temperatures rise. Choose a warm, sheltered position as mature bushes are brittle and subject to damage in windy conditions. Optimum growth occurs at temperatures above 20 degrees Celsius.

In regions with a short summer growing season consider growing your seedlings on in pots and transferring them out into the garden as semi-mature plants. This will ensure that plants flower and fruit before the onset of the cooler weather. Alternatively, you can grow your plants to maturity in pots, moving them around the garden to take advantage of warm, sunny positions. Just a couple of capsicum plants will generally supply the needs of a family.

Capsicums are particularly sensitive to the cold and growth is significantly reduced when evening temperatures drop below 10°. Plastic igloos, frost cloth or similar protective coverings can provide improved growing conditions in cooler regions and extend the growing season as temperatures start to fall.

**Preparing to Plant**

Ideally capsicums should be planted into perfectly drained soil containing high levels of organic matter. They require high levels of nutrition and incorporating plenty of compost and well-decomposed animal manure prior to planting will help to guard against infestations of root knot nematodes.

A soil pH of 6.0-6.5 is ideal providing it contains sufficient calcium, which is essential in preventing the development of blossom end rot. Where the soil is acidic, garden lime, Dolomite

lime or wood ash may be added to the soil prior to planting. Alternatively gypsum may be added to the soil to provide a source of calcium without changing soil pH.

Using a composted lucerne or similar nutrient rich mulch around capsicums will help to control weeds, retain soil moisture, act as a source of slow release nutrition, increase levels of organic matter and reduce soil temperature fluctuations. Avoid planting capsicums in beds that have previously grown related plants such as potatoes, tomatoes, eggplants or chillies as the soil is likely to have developed a significant population of root knot nematodes.

Capsicums will grow well in no-dig style gardens, but the weight of developing fruit results in the tendency of plants to topple over where the soil depth is shallow. Capsicums will not tolerate saline soils, coastal salt spray or saline irrigation water.

### **Liquid Feed**

Applications of liquid fertilizer made from fish, comfrey or compost tea can boost plant growth, particularly during the early stages. Avoid overuse of liquid nutrients that are high in nitrogen in the latter stages of growth as this can predispose plants to fungal and bacterial leaf diseases, increase the likelihood of aphid infestation and produce leaf growth at the expense of fruit production.

### **Bumper Harvest**

Fruits may be picked at any stage, but sweetness increases with maturity. Regular harvesting encourages further production. Growth and fruiting ceases in cold weather.

Commercially grown crops are harvested six or more times before replanting, but providing the climatic conditions are suitable and plants receive adequate nutrition they will continue to produce successive crops in the home garden over an extended period. The longer individual fruits are left to mature on the plant the more coloured the fruit will become.

### **What Went Wrong?**

Do not be daunted by the following descriptions of the potential pest and disease problems that beset capsicums. Good soil preparation, planting when growing conditions are optimum and a few paper bags are really all you need to avoid or overcome most problems.

### **Poor Growth**

Inadequate levels of organic matter in the soil or failure to rotate related crops can result in the build-up of root knot nematodes in the soil. Poor growth, wilting despite regular watering and knotted, distorted roots on plants once pulled from the ground confirms the presence of these microscopic soil organisms.



### **Spots and Rots**

Blossom end rot disease that affects tomatoes is also prevalent in capsicum crops. Fluctuating soil moisture levels and deficiencies of calcium are commonly associated with this condition. Fruits develop dark, sunken areas at the base of the fruit.

In regions where fruit flies occur, capsicums are likely to be stung during the summer season. Affected fruits develop soft rots, fall prematurely and often contain small, wriggling maggots. Placing paper bags around individual fruits or covering entire plants with a light cotton cloth are the easiest control methods. Attack from fruit fly should not be confused with sunburn. Sunburnt blotches appear as soft, bleached areas on the top or sides of maturing fruit. Avoid wetting fruits during the day and cover plant with protective cloth to prevent sun scorch if necessary.

Several leaf diseases also affect capsicum including powdery mildew and bacterial spot. Powdery mildew is common when conditions are too cool. Bacterial spot is problematic in wet weather or where plants are over watered.

### **Holes and Distortions**

Larvae of several species of moths and butterflies like to lay their eggs on capsicum plants resulting in fruit with holes chewed in them. Molasses sprays or repellent sprays made from chilli can be effective.

Excessively hot (above 32°) or cold conditions (below 15°) can result in poor fruit set or the development misshapen fruit as a result of poor pollination. Low temperatures can also result in fruit splitting. Aphids love to feed on young shoots and developing fruit causing distorted growth. These are quickly and easily dealt with through use of soap sprays or a strong jet of water.

### **Did You Know?**

*Many commercially grown fruit crops are artificially ripened using ethylene gas, but capsicums are not suited to this treatment and must be ripened on the plant to develop a rich red colour.*

*Red capsicums are typically more expensive to purchase than green fruit. Not only do red fruits take longer to mature, the act of leaving the fruits to develop on the plant for a longer period also lowers the overall yield from the plant.*

*Cross-pollination can occur between capsicums and chilli plants grown adjacent to one another. The heat of the chilli may be transferred to the next generation of capsicum plants grown from any saved seed.*