

## Pomegranate growing

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The pomegranate, *Punica granatum*, is an Old World fruit originating in the Middle East and Orient, where it enjoys popularity to this day. The tree may eventually grow to about 6 m tall and remain productive for many years. Specimen trees over 200 years old are recorded in Europe.

In Australia the pomegranate is commercially insignificant, probably largely due to the availability of a wide range of preferred alternative fruits. Demand is thought likely to be satisfied by a relatively small volume of production.

Supplies from domestic sources appear in Sydney wholesale markets during late summer/autumn.

The market seeks relatively blemish-free, medium to large fruit, with plenty of red colour evident, both externally and in the juicy sub-acid pulp surrounding each seed. Seed should be tender. Good varieties have a large proportion of edible pulp to rind and cell partitions, which are unpalatable and bitter.

The plant may be grown as a multiple-stemmed shrub or a single-stemmed tree. The latter is preferred.

### VARIETIES

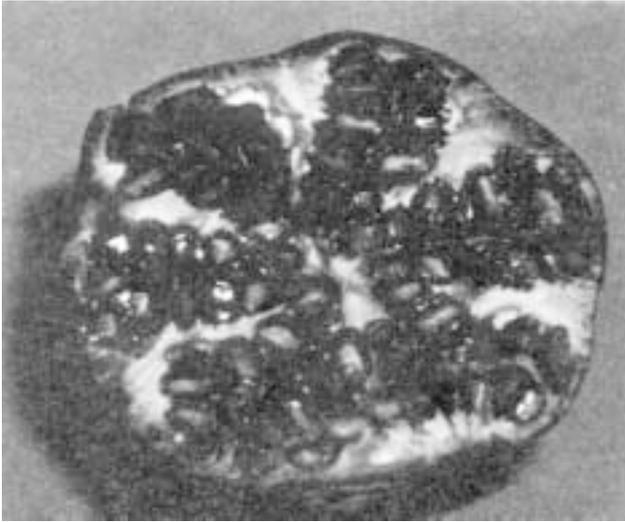
Few varieties suitable for commercial production are available. Considerable diversity in fruit character is evident from observations of fruit grown in gardens. In the garden the pomegranate can be an attractive shrub, with showy flowers and colourful fruit. Some

varieties produce both a dwarf shrub and small fruit but are of value only for ornamental purposes.

However, the variety Wonderful, of longstanding repute in the U.S.A. is being propagated by some nurseries.

**Pomegranates should be fairly large (about 90 mm in diameter) and evenly shaped, with the red colour well developed.—Photo: J. Gasparotto.**





Half section of a pomegranate. A good fruit will have a high proportion of fleshy seeds in edible pulp.—Photo: J. Gasparotto.

## CLIMATE AND SOIL

The pomegranate plant is very adaptable and will grow in regions ranging from temperate to tropical. It is deciduous or semi-deciduous depending on its location. The best prospects for commercial fruit production exist in those parts of the State where the summer is warm to hot and where rainfall is minimal during late summer/autumn. Water should be available for irrigation. If water is kept up to the plant the chances of rainfall splitting the fruit will be reduced. Rainfall, however can cause soft fruit and bring in undesirable diseases. Very hot weather can lead to sunburn injury on fruit.

Deep, loamy, well-drained soils are preferred but the pomegranate has some tolerance to less than ideal drainage and to mild alkaline conditions.

## PROPAGATION

Commercial plantings should not be established from seed, as too much variability in fruit character is likely to occur. Plants can be propagated readily from hardwood cuttings 15 to 20 cm long taken in winter. Leave only the uppermost bud exposed at planting. Remember that the plant and fruit eventually produced from a cutting will be identical with the parent plant and its fruit. Therefore, only use cuttings from recognised, desirable varieties or selections known to have good cropping characteristics.

It is preferable to obtain plants from a commercial nursery ready for planting out.

## PLANTING OUT

After one year in a nursery situation the young plants should be sufficiently developed for orchard planting.

Although adoption of higher density plantings—for example, in hedgerows—has been shown to increase production with many fruit crops, planting at traditional distances so as to maintain separate producing units is preferred for the pomegranate. With crowded growth, fruit colour will be poor, fruit scarring may occur and harvesting and pruning are likely to become a problem. The suggested distance between plants is approximately 5.5 to 6 m.

At the suggested planting distance, an annual production of 40 to 50 kg per tree could be expected; with more widely spaced trees yields would be higher.

## TRAINING AND PRUNING

At planting, reduce each plant to a single stem and shorten this to about 50 cm above ground level. A short stake may be needed for support until the stem becomes rigid and sufficiently strong. Subsequently, select three to five shoots arising from the upper half of the stem to provide the main framework. These will be shortened at each winter pruning to produce a strong compact frame. Several secondary limbs should be allowed to develop from each main limb, but excessive numbers which would lead to overcrowding should be removed, as should any suckers which develop from the base of the tree.

Pruning of the fruiting tree will consist mainly of removal of excessive overcrowded growth, deadwood and suckers. Adequate fruit-bearing wood should be retained. This will be mature growth 2 to 3 years old from which short flower-producing spurs arise.

## IRRIGATION AND NUTRITION

Although the pomegranate tree is very drought-tolerant it needs adequate moisture to produce good crops. Its summer water requirements are considered by some overseas authorities to be almost as great as those of citrus. Adequate soil moisture as fruit approaches maturity is said to reduce the susceptibility of the fruit to splitting.

Overseas experience indicates that fully grown trees will benefit from one or more applications of fertiliser which in total provide 0.25 to 0.5 kg nitrogen annually.



A young pomegranate tree starting to crop.—Photo: J. Gasparotto.

Nitrogen application should be split in lighter soils. Timing of application should be strategic to prevent excessive growth, delayed ripening and poor colouring of the fruit.

Size grading is required to provide a good pack of well-presented fruit. Fruit is usually packed into single layer trays, such as those used for stone fruit.

## **HARVESTING, PACKING AND STORAGE**

Fruiting should commence by the tree's third to fifth year of age.

If there is a large amount of fruit to be handled, harvesting can begin a little before full maturity because ripening will proceed during the postharvest and storage periods. The fruit should, however, be sufficiently coloured and be reasonably sweet. On the other hand, if harvesting is delayed the chance of fruit loss as a result of splitting will increase.

The pomegranate stem is thick and strong and the fruit is best removed by clipping. At least two pickings should be made. Remove only fruit that is adequately sized and coloured at the first pick.

### **DISCLAIMER**

The information contained in this publication is based on knowledge and understanding at the time of review August 2002. However, because of advances in knowledge, users are reminded of the need to ensure that information upon which they rely is up to date and to check currency of the information with the appropriate officer of New South Wales Department of Agriculture or the user's independent adviser.