

# OLIVE CATALOGUE

## Olea Europaea

The olive tree – *Olea europaea* – is a very hardy, long-lived evergreen tree of great value. In addition to its edible fruit and cholesterol free oil, the trees can be used as an attractive garden species, street tree, hedge rows, stock shelter and shade tree. The small green leaves with silvery reverse give the trees a most handsome appearance.



## CLIMATE, SOIL & WATER

Olive trees will thrive in all warm regions of Australia with cool winters, as they require winter chilling for floral initiation and long, hot, dry conditions during the summer months for fruit development and quality.

Olives tolerate a wide range of soil types, provided they are well drained, as they do not tolerate wet feet. They are shallow rooted having few roots deeper than 3 feet. They are far more frost tolerant than citrus, although they can be harmed by extreme prolonged frost periods.

They are also very drought tolerant, needing approximately 9-12 megalitres of water per hectare per annum to remain healthy and sustain a good crop of fruit. They grow well with furrow, overhead sprinklers, low level undertree sprinklers or drip irrigators.

It is essential that the tree receives enough water during the growing period so that sufficient wood can develop to carry fruit in the next season.

## PROPAGATION

Sunraysia Nurseries produces olive trees from cuttings to avoid the need to remove stock suckers annually. Propagation by cuttings also ensures that the characteristics of the selected parent plant are produced in the progeny. The Kalamata variety however, is very difficult to propagate and we must graft this variety onto a rootstock. The variety Volos may also be difficult and need to be grafted.

## CONTAINER SIZE

We grow our olive trees in a 90mm square tube.

## GROWING MEDIA

At Sunraysia Nurseries we take great care with our plants by growing them in pasteurised (aerated-steam treated) media to prevent *Phytophthora* contamination.

## TRAINING & PRUNING

Olives are irregular bearers, tending towards alternate bearing. To minimise this effect heavy pruning and thinning must be carried out. This will assist in the development of an open tree, allowing maximum light penetration, more regular cropping and larger fruit. When used for pickling larger fruits command higher prices thus offsetting smaller returns from reduced total yield.

## TREE SPACING & PLANTING

Until the sixties most trees were planted on a single tree spacing of 9m x 9m – 123 trees per hectare, but in more recent planting's the spacings have been double, 9m x 4.5m – 246 trees per hectare.

The increased production of fruit per hectare from double planting's results in double returns during the early cropping years. This more than compensates for the extra tree costs and planting costs. Should the closer planted trees begin to overcrowd, alternate trees can be cut back within the tree row, or if necessary, removed.

Our planting instructions outline in detail, transplanting techniques for container grown fruit trees. Although container grown fruit trees are transplantable all year round, very young trees may need some protection from severe frosts.

## HARVESTING & FRUIT QUALITY

Fruit is oval in shape being approximately 30mm to 35mm long and 15mm – 20mm in diameter. Olives are harvested at either of two stages of maturity for processing as table olives. They can be harvested from March when the skin is green through to September when the skin is black. All olive varieties will mature fruit to a black colour. Commercial production usually commences in the 8<sup>th</sup> year.

When fruit is harvested for table use, whether green or black, it must be handled carefully to avoid bruising,

which will show up in the finished product and reduce its grade/value or make it unfit for processing. Generally fruit is hand picked to avoid bruising.

Olives for oil production must be fully ripe and black and may be partially shrivelled when harvested. As they are crushed for oil extraction, bruising of the fruit will not reduce the quality of the end product and therefore, can be harvested using a trunk or limb shaker.

Hand harvesting can be accelerated by using a garden type rake with fairly close prongs and a ground sheet to collect the fruit.

### **MARKETING**

The fruit is sold for home processing, commercial pickling and oil production. The Australian olive oil industry is currently undergoing rapid expansion to meet increased domestic demands.

The Australian Olive Association was formed in May 1995 to advance the cause of Australian olive growers and processors.

### **FERTILISERS**

Olive trees need soils of reasonable fertility although they may grow in areas that are not suitable for other horticultural crops. They can fail to produce economical crops because of lack of nutrients, particularly nitrogen. Our fertiliser guide for young trees outlines application times and rates for the first 3 years of growth. (Attached)

### **PESTS & DISEASES**

Australia is singularly free of pests and diseases of the olive with only Brown Olive Scale (*Saissetia oleae*) causing any commercial consequence.

This scale when soft and young can be killed with an application of White Oil. More mature scales may need an insecticide in combination with White Oil.

Birds generally do not favour the fruit because of its bitterness before processing.

### **POLLINATION**

There has been some research that suggest particular varieties can benefit from cross-pollination, however most varieties will still produce a good crop without the need for a second variety.

### **VARIETIES & DESCRIPTIONS**

\* **ARBEQUINA** A popular Spanish oil variety which is an extremely heavy cropper of tiny fruit (1-2gms). This olive produces excellent quality oil. Always has green & black fruit on the tree at the same time.

**BAROUNI** The fruit of this variety is highly sought after for pickling, but the resulting product is not as high in quality as some of the other varieties. Fruit is a good size medium too large, (approx 7.4gms) almost as large as Sevillano, but the flesh to pit ratio is relatively low (6:8:1). They are somewhat spreading and are easy to harvest. Barouni matures after UC13A6 and Sevillano and consistently bears good crops.

\* **FRANTOIO** Medium vigour tree yielding well in adverse conditions. Crops are heavy and regular and fruit is small and oval in shape with an average flesh to pit ratio. The fruit ripens late in the season and has a high oil content, approx 23% , of excellent quality.

**HARDYS MAMMOTH** A hardy, fast growing tree that bears good early crops of large fruit very suitable for pickling. Its oil content is also good at 22-23%.

**HOJIBLANCA** It is dual purpose and is considered highly suitable for processing because of it's firm texture. It has a low oil content, although the oil is highly rated for its quality.

**KALAMATA** A very difficult variety to propagate and thus must be grafted in order to achieve success. Highly prized as a ripe pickling fruit. Medium – large sized fruit.

\* **LECCINO** A tree of medium vigour with a high production rate. Is very easy to grow and adapts well to different climates. Oil content is around 20% and of good quality. This variety is also suitable for the fresh, black olive market.

\* **MANZANILLO** is a consistently high yielding variety. The trees are relatively low spreading and easy to harvest. Fruits of this variety are medium sized, (approx 4.8gms) process easily and have a high flesh to pit ratio. (8:2:1) It is an excellent dual purpose variety as its oil content is sufficiently high to justify use of the crop for oil extraction. Bearing is fairly regular and fruit matures early enough to avoid injury by early frosts.

**MISSION** The fruit of this variety is medium sized (approx 4.1gms) and is easy to process. Its high oil content provides an alternative market. This variety is the most resistant to cold of any commercial variety grown. The fruit is relatively small with low flesh to pit ratio (6:5:1). Mission trees tend to grow tall and unless pruned, become difficult to harvest. They often bear a heavy crop one year and a lighter crop the next.

**\* Asterisked Varieties indicate DNA (RAPD) assayed and matched.**

\* **NEVADILLO (NEVADILLO BLANCO)** Are a heavy early cropper and the most common oil variety in Spain. Fruit weighs between 2-4 gms and the flesh to pit ratio is between 3:8:1 and 6:1. Its quality oil content ranges from 23% to 27%.

**NABTAMRI** This variety originates from North Africa. It has a regular bearing habit of moderate to heavy crops. Fruit size is large (approx 10.5gms). Flesh to pit ratio is quite high (7:8:1).

**PARAGON** Excellent nutty flavoured fruit of small to medium size, 3.2gms, with a high oil content, 23.5%. The oil is highly aromatic and has a pleasant flavour. Vigorous, heavy mid season cropper.

**PENDULINO (PENDULINA)** High quality oil variety with an oil content of 22%. It is a regular cropper of medium sized fruit. Approx 3.6gms. Excellent pollinator.

\* **PICUAL** The variety is known by many other names, principal amongst which are "Marteno" and "Nevadillo". It is highly rated for its early start to bearing, its high productivity and oil content and the ease with which it is grown. The oil it produces is of medium quality but stands out because of its great stability and high oleic acid content.

\* **SEVILLANO (SPANISH QUEEN)** Pickled fruit of this variety is commonly labelled "Spanish Queen". The chief advantage of this variety is its large sized fruit, (approx 13.5gms). It also ranks next to Manzanillo in yield per hectare. The flesh to pit ratio is quite good (7:3:1). The oil content is not high enough to justify extraction in most years. The tree has a spreading habit and thus easy to pick. Fruit set is increased when Sevillano is cross-pollinated with Manzanillo. A planting ratio of 1:9 is recommended. Sevillano matures after UC13A6 and before Barouni.

\* **UC13A6 (CALIFORNIAN QUEEN)** Pickled fruit of this variety is now commonly labelled Californian Queen. A University of California hybrid the fruit of which is very large, (approx 10 gms) almost round in shape, and has an excellent flesh to pit ratio. (7:5:1) UC13A6 matures before Sevillano and Barouni and is extremely popular for pickling.

\* **VERDALE** This is a dual purpose variety, the flavour and texture of which when pickled is very good. The fruit of the South Australian strain is of medium to large size (approx 7-8gms) and the yield moderately heavy in the "on year". The trees are easy to harvest and the flesh to pit ratio is average. Verdale has an excellent quality of oil, albeit a low percentage.

**VoLos** A large Greek variety used for pickling, with an average oil content of 21.5%. A difficult variety to propagate that needs to be grafted.