

AVOCADO GROWING IN PERTH

Avocados are attractive evergreen trees which usually grow between 3-6m high x 3-5m wide here in metro Perth. Originating from Central and South America, they are rainforest plants used to fertile soil, warmth and ample water. They are frost sensitive. In order to grow a healthy tree, we need to emulate their favoured conditions as closely as possible. They enjoy similar conditions to citrus. So if you're successfully growing citrus, you're on the way to being able to grow avocados.



The fruit is highly nutritious, tasty and full of anti-oxidants. Avocados are high in vitamin C, excellent for the liver and skin and a good source of mono unsaturated fat. The trees are very generous with their fruit production. Even 2 year old trees, which are usually about 2m high, can provide a yield of up to 40 fruits if planted in a good aspect with well-prepared soil.

Fully grown trees can produce between 500-1000 fruits per year. That's a lot of guacamole! If you have both the room for growing different varieties and the passion for growing them, you could be harvesting the fruit for 9 months of the year.

Seedling trees may take up to 8 years to fruit while grafted trees produce from 2-4 years after planting. We recommend buying grafted varieties, unless you have plenty of room with which to experiment; in which case, go ahead and plant seeds if you want to. They are very easy to grow from seed and many a seedling tree has sprouted from the compost heap.

In Perth, avocados usually flower on new growth in early spring, form the fruit in late spring and are harvested from June until November, depending on the variety.

VARIETIES good for Perth, Adelaide and Melbourne include Hass, Lamb Hass (smaller Hass variety – about 3-4m instead of 5-9m) *Sharwill* and the beautiful dwarf weeper, *Wurtz* 3m. Other varieties include *Feurte*, *Reed* and *Bacon*. Do your research to find the best tree to suit your needs.

POLLINATION:

Don't worry too much about the complexities of pollination. Generally avocados are self-fertile but your yields will increase if you plant an A variety and a B variety to allow pollination overlap. If you have the room to plant 2 avocados, that would ensure plenty of fruit for much of the year. Some gardeners plant 2 trees in the same hole. Allow at least 70cm spacing between each tree if you are doing this to allow for trunk growth.

Another option is to plant one tree in the ground and another in a pot. However, if you ensure that you have plenty of bee fodder, (ie a variety of flowering plants), even with one tree, you should still be harvesting a decent amount of fruit.

SHELTER and POSITIONING

Avocados prefer a sunny position sheltered from hot drying winds, particularly the easterlies. Their root systems are shallow and spreading. A full sized tree needs room. If you are intending to let the tree grow to more than 4m high, do not plant too close to buildings or pathways. Alternatively, prune it, pot it up or plant a dwarf variety.

Avocados need some shade in summer for the first couple of summers or at least until they have grown their full leaf canopy which largely occurs when they are about 2m high. This is usually in 2-3 years time, depending on the size purchased. Even mature trees can show scorched leaves in summer, unless they are a little shaded, as in our hot Perth summers, they will lose more moisture than they can take in. Extra water doesn't often help as the trees can only take up so much at a time.

Burnt avocado leaves aren't the most attractive look in the garden. Mature un-shaded trees may be sprayed with *Yates* Drought Shield from late spring to late summer. This product places a protective layer over the leaves, similar to sunscreen and is used by many tree growers to prevent sunburn. Use monthly if necessary but don't overdo it. Yates claim that their product protects plants from heat, water loss, drying winds, frosts and transplant shock. We have only trialled it on protecting trees from sunburn and have had good results. In Perth, it is currently available at good garden centres and Mitre 10 stores.

PROTECTIVE SHELTER: Directly after planting, create a tree 'cubby' by placing 3 or 4 tall stakes around the tree, being careful not to disturb the roots.

When **summer** is approaching, place some 50% white or green shade cloth over the top and sides of the tree, supported by the stakes. White shade cloth reflects more heat. *Do not* allow the shade cloth to touch the leaves, as on a hot day, the nylon fabric tends to burn the foliage.

Always raise the shelter about 150-200mm above the ground to allow for decent air flow. In **winter**, wrap horticultural plastic around the stakes but open the top to allow rain in. In heavy downpours, you can cover the top as well if you are concerned about root rot.

DESIGN OPTIONS

Avocados are adaptable. They may be espaliered (2.5m apart is ideal, less if dwarf varieties are grown) and the smaller cultivars (Lamb Hass, Wurtz) may be grown in pots. The trees also make a beautiful evergreen tall hedge to 2.5m along a fence (preferably not a steel one). If it's shade you're after and you have the room; plant in the west or south west of your property and allow it to grow into a large and beautiful tree. If you choose to grow yours into a decent sized tree, consider harvesting issues. Take a leaf out of the professional avocado growers' book and prune the tree when young to create a low branching structure which is easy to climb on to collect your fruit. Alternatively, use a ladder.

POT CULTURE

Rather than go into the details of the best way to grow avocados in pots, we recommend an excellent 3 part YouTube video by WA fruit tree expert, Peter Coppin. <https://www.youtube.com/watch?v=zzPc5DJuGJc>

The information in the videos are not specific to avocados but the same advice applies for all fruit trees. (NB in the video, Peter says that fruit trees are fine with root disturbance. Avocados are the exception to this rule – do be careful to avoid damaging the roots. Do not plant anything else in the pot with the avocado.

Choose a dwarf variety like Lamb Hass or Wurtz. Pot sizes: 500mm+ diameter (90-100L). Half wine barrels, UV stabilised plastic olive barrels, 50-100L bags are fine.

Despite dwarf varieties being touted as ideal for pots, be aware that they are more susceptible to fungal problems in containers if overwatered with impeded drainage. From our experience, they also don't seem to like wicking pots for this very reason.

PLANTING YOUR TREE IN THE GROUND

Plant your avocado in spring when the soil and air temperature has had a chance to warm up. Like other sub-tropical trees, they resent being planted in cold soil.

One of the secrets to growing a healthy avocado tree is excellent drainage. Did you know that if the tree's root system is fully saturated for 48 hours it will die? So if you are in a clay soil area, plant on a decent sized mound (at least 400mm high x 1m wide); or grow the tree in a large pot with lots of drainage holes and place on the ground.

Young trees are nutrient hungry, liking rich organic soils. Apart from growing a healthy tree, good soil nutrition and its accompanying beneficial microbes helps to prevent root rot caused by the fungus *Phytophthora*, to which they are prone. Before planting, check you are not planting next to concrete or limestone walls or foundations as this, along with our alkaline soils; almost guarantees iron deficiency. This presents on younger foliage as a yellowing of the leaf while veins remain green.

PREPARING THE HOLE: Dig a 700mm+ diameter hole which is 50mm deeper than the root ball of the tree. Put the soil in a wheelbarrow. If the tree has come in a bag, prepare the hole and cut the bag gently down the sides to avoid excess root damage. Soak in seaweed liquid while you prepare the hole.

In your wheelbarrow, thoroughly mix together 1/3 soil conditioner* to 2/3 soil. If you have sandy soil, it is important to mix in a small shovelful of clay amendment like Soil Solver or Sand remedy. [Charlie Charcoal](#) is another excellent soil amendment to add which adds nutrient and slightly lowers the soil pH. Add enough water to create the consistency of an uncooked chocolate cake. This is your soil mix.

NOTE: Don't add too much clay as drainage is paramount. Ensure the tree is planted at the same height as it was in the bag or pot. * Quality soil conditioners we have trialed include: *Nutrarich* Mature Compost, *Greenlife Soil* Vegie concentrate, *Baileys* soil improver or well-made homemade compost.

Layer 50mm of your soil mix in the hole. Place tree in middle of the hole, ensuring the top of the root system is level with the ground. Back fill around the tree with your soil mix, using your fingers to push soil against root ball, ensuring good contact between the roots and the soil. This avoids air pockets. Do not use your foot as this will compact the soil.

A NOTE ON pH: The ideal pH for avocados is between 5.5 and 7, although the trees can tolerate slightly more acid or alkaline. pH kits are easy to use and available from garden centres. Test your soil mix and the soil surrounding your planting hole to check it's not too alkaline. If so, widen the planting hole and fill with iron rich compost. Refer to recipe below. Then test pH again.

As mentioned, avocados have a shallow root system and really resent root disturbance so avoid cultivating around the tree if possible.

IRON RICH COMPOST - mix 1 cup of iron sulphate to a 9L bucket of compost or soil conditioner then add 1/3 of this to existing soil, mixing well. Add some clay amendment, water and away you go.

A quick fix which needs redoing every 6-12 months depending on the alkalinity; is to apply iron chelates. Get in the habit of regularly testing your soil pH.

WATERING

Drip line irrigation or bubblers are the way to go for avocados, with some hand watering if necessary in very hot weather. Over irrigating can lead to root rot, the curse of avocados. However you will need to water at least twice a week in summer in hot climates.

TIP: A good way to assist with water penetration when planting any exotic tree is to insert 5 x 300mm vertical pieces of agricultural drainage pipe (65 - 100mm diameter) into the ground. This assists water penetration for the new tree. Dig in the pipes at planting, 100mm away from the root ball, with the top of the pipe just above mulch level. Deep hand water into the pipes 2 x p/week if possible during spring - autumn for the first 1-2 years.

FERTILISING

Feed your young tree every 2 months from spring to autumn (as you would with roses). We like using *Seamungus*, (a chicken manure based pelletised fertiliser) and/or *Eco Prime Garden*, preferably alternating the two for maximum nutrition. Other excellent fertilisers are *Searle's Kickalong Organic Fruit and Flower* or Pure blood and bone (available in Perth from Greenlife Soil company). If using blood and bone, remember to add 10% potash. Mature trees tend to only need a feed in early autumn and a topping of compost in spring underneath the mulch.

Trees will also need trace elements twice a year (autumn and spring). Manufacturers often over-estimate dosages on the packet. According to Peter Coppin, trees only need 20% of the strength recommended. Avocados also may suffer from iron, zinc and boron deficiencies but if you create fertile soil, have the correct pH, apply the trace elements regularly and use mineral rich fertilisers, you shouldn't have this problem.

Avocados also enjoy a few doses of liquid potash and seaweed liquid throughout the growing season. Lack of potash may present as browned off older leaves.

MULCH

Mulch is critical for avocado trees. It retains moisture, slowly feeds the tree, encourages soil biota and protects the soil from extreme temperatures. Ideally, in August, mulch with a thin layer of compost, then a layer of lucerne, and finally, top with aged recycled tree prunings. A depth of 60- 75mm in total for all layers is ideal. This will naturally break down and reduce in depth by winter to allow for rain penetration. *Remember to always mulch away from the trunk.*

PRUNING

Avocados require little or no pruning. However, they may be tip pruned to thicken the canopy OR supple branches may be gently weighed down (eg a light to medium weight fishing blob on the end of a rubber cable tie) to encourage a slightly weeping habit. Weighed down stems take about 6-10 weeks to harden into a more weeping form. This makes it a lot easier to harvest.

Do not hard prune avocados as you will encourage vegetative, non-fruiting growth. Pruning is best done after harvest. Avoid cutting branches in wet weather as this will encourage fungal infections. If you must reduce the height of a large avocado tree, first remove any large vertical or crossed branches. Retain 1-2 central leaders (ie the main branch structure), then cut these back by 1/3.

Immediately after pruning, paint the newly exposed branches and any unshaded areas of the trunk with whitewash.

NON TOXIC WHITEWASH recipe: 500ml water, 1 cup hydrated lime (builders lime), 5ml white oil. Mix to a thin slurry in a bucket and paint on the tree. As this is not a paint, it will gently wear off by the time the canopy returns.

Gently trim back the tips of the side branches of your mature tree in mid-summer to encourage new growth.

POTS: tip prune to shape when young. Once established, remove 20% of the growth after harvest. Remove one major limb every year to allow in more light.

PESTS AND DISEASES

As discussed, avocados are susceptible to root rot such as *Phytophthora*. Correct soil conditioning, microbes and quality mulching will greatly assist with preventing root rot, however trees may also be sprayed preventatively with Yates Anti Rot. Scale, aphids and thrips can also attack avocados. Eco Neem combined with Eco Oil applied to the tree in temperatures less than 32C is very effective. Spray every 10 days for 3 weeks to stop the breeding cycle. Fruit fly is rarely a problem in avocados due to ripening off the tree, though the thinner varieties such as Fuerte may be affected.

Anthracnose is another fungal disease affecting avocados. It appears as small black spots on the foliage which spread out and cover the leaf, drying out the leaf which then falls off. It can also spread to the fruit causing fruit drop. Yates Liquid Copper should be sprayed from end of flowering to harvesting the fruit, every 4 weeks. During periods of heavy rain, spray fortnightly. Remove any affected leaves and fruit immediately.

Leaf browning can be caused by potash deficiency, cold winds in winter as well as extreme heat in summer. Avocados are salt sensitive too, so check the salinity of your tap water and if possible, use rain water if this is the case. Avocados' salinity sensitivity is another reason to give up on chemical salt based fertilisers and use organic ones instead.

HARVESTING

Avocados very conveniently stay on the tree for 3-4 months and don't ripen until off the tree due to a substance in the leaves. Which means it has its own ideal storage system. Perfect! Wait until the first avocado drops onto the ground, bring inside to ripen, about 1-2 weeks. To speed things up, place in a paper bag with a ripe banana to induce the ripening gas, ethylene. Then you can harvest to your heart's content! The best time to pick is when they are almost glossy and the stem is a bit wrinkled.

If all this seems too hard, it's not. Simply weigh it up against the joy of being able to pluck a freshly grown organic avocado at your leisure instead of paying up to \$5 an avocado from the shop!

WHERE TO BUY IN PERTH: Metropolitan area: South Fremantle - Ngoolark Nursery 0420 703 724

Hills: Swan Valley - Tass 1 Trees 0419 988 344

NB - Please support your local garden centre wherever possible. If we do not support these last remaining small businesses, soon we will have no choice but to shop solely at

one mega hardwarestore (we all know who that is (!)). Garden centres are full of qualified and passionate horticulturalists, more than happy to help you with any garden problems.

NB this article is intended for educational purposes only. Garden Deva receives no remuneration for any products mentioned.