

Repotting guide

When spring arrives, there's a rush on repotting, and this seems to start earlier and earlier each year. It is not necessary to repot the same tree every year. Only those that have roots sticking through the drainage holes, or which water clog need repotting. Using a maple as an example, we show how it should be done and give you some hints and tips on the way

Tools you need for the job

A wire cutter — yes, even if you aren't doing any wiring

A root hook, used for untangling a densely rooted root ball. Very handy because it combs out the fine and heavy roots easily without too much damage

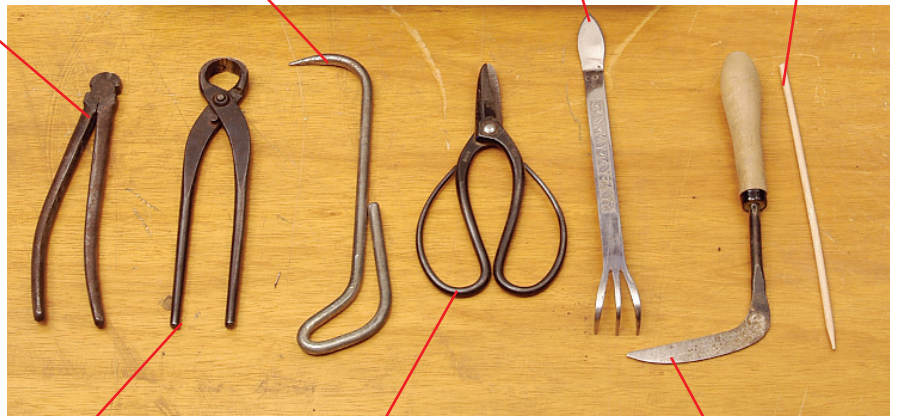
Always handy, a chopstick; a simple multi-functional tool for all kinds of bonsai tasks

For the smaller trees, or for more refined work on roots, you need a root rake

A root cutter for those thick chunky roots growing at the base of the root ball, or to remove the tap-root

Root shears

A potting knife to remove pot bound trees easily. This tool also comes in handy when you have a pot with an inner lip. A root bound tree is almost impossible to remove from such a pot without a knife



Example: how to repot



1) Getting it out of the pot

Use the potting knife to cut the roots loose from the wall of the pot



2) Cut loose the anchor wires and lift the tree from its pot



3) This maple was planted in this pot for almost three years. As you can see, its roots have grown immense. Note how the roots have grown into the drainage mesh



4) **Untangling the roots** Using the hook, I show the thick root that circled the pot — a clear indication that the tree needed repotting



5) Turn the root base on its side and rake loose the vast carpet of roots. Remove the portions of cut-off anchor wire



6) **Trim the roots** Using trimming shears, prune a slice of at least one third off the freshly raked roots

Tips

- Don't repot a maple or any deciduous tree when its leaves have already budded. The same goes for larch
- The best time to repot a deciduous tree is as soon as the buds start to swell
- Disinfect your tools after any job, to prevent diseases spreading through your whole collection.
- Sharpen your root shears before using them; sand or soil mixes blunt shears in no time. Use a sharpening stone
- Don't use too fine a mesh size for covering the pot's drainage holes, because they can easily become clogged up with dust

Soil scoops

Handy for applying soil mix. The large one at the right has a fine mesh sieve to sift out dust from the Akadama — you don't want that in your pot



Sundries

Cut paste stops moisture loss from wounds; it has a Plasticene type of consistency, which can be easily moulded to the cut surface. Surface root wounds are best treated with it, but it isn't necessary to apply to wounds covered by soil.

Rainbow liquid is a vitamin boost for weakened trees after repotting. It helps the tree to recover more quickly.

Tonus 'V', a French product, is a vitamin treatment in liquid form; a good alternative to the famous Superthrive. It helps speed up the recovery of weakened trees and stimulates root development after root pruning.

Rainbow liquid

Tonus 'V'



Cut paste

Soil sieves in several granule sizes are necessary to sieve Akadama, grit or any other soil. The mix for a bonsai soil contains layers of different sized granules. The larger granules are placed at the bottom of the pot, medium-sized granules in the middle and a fine layer of small granules on top. This will promote optimum aeration and the retention of water.

(Below) There are sieves of varying sizes on the market, like the middle-sized sieve (standing) and the small size below it.



Soil sieves

Example for repotting (continued)



7) Remove the top layer The root base is hidden under a layer of soil and fibrous roots. Rake away from the trunk base with a chopstick.



10) The result is a flat, oval-shaped root ball, which can now be planted in a flat bonsai pot. Note the exposed root base.



13) See here how the tree is planted slightly off centre



14) Anchor the tree. Once you are certain you have the tree in the right place, tighten the anchor wires with jin pliers.

Soil mix

You can use any suitable kind of soil mix so long as it provides good aeration and drainage. But it is best to stick to the tried and tested products like Akadama and Kiryu. They are easy to use and many bonsai enthusiasts throughout the country have proved their qualities. You can, if you wish, add some torf (sifted pine bark) as an organic component. In recent research, the importance of clay particles for the growth of fibrous roots was proven. Akadama has this quality and will retain its granular structure.

For the repotting example shown here, we used a soil mix of 6 parts of Akadama - 4 parts Kiryu - 1 part torf (a common mix for deciduous trees).

Torf, or sifted pine bark, can be added to the mix as organic matter

Kiryu is a volcanic sand used for drainage



Akadama: use sifted so dust is removed



8) Adjust the root ball Some fibrous roots are clipped with root shears



9) I next rake some of the soil from the bottom of the root ball, and then clip the protruding roots with the root shears



11) Plant the tree I take the prepared pot (see below for details) and make a mound of soil



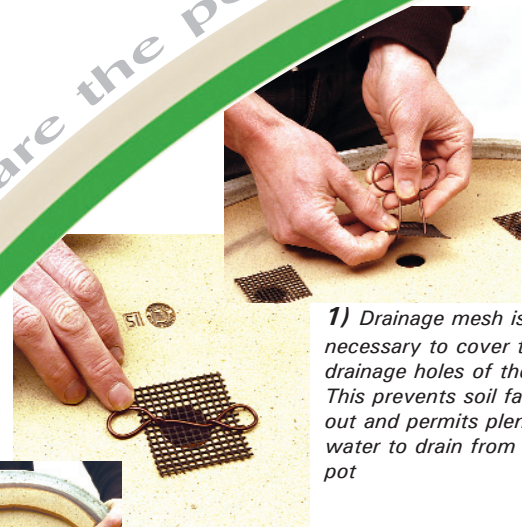
12) The root base of the tree is pressed into the mound and slid into the correct position



15) Then fill up the pot with soil mix



How to prepare the pot



1) Drainage mesh is necessary to cover the drainage holes of the pot. This prevents soil falling out and permits plenty of water to drain from the pot



2) Take a small piece of aluminium wire and make double loops to anchor the mesh to the pot. The loops keep the mesh in place



3) This pot has special holes for anchor wires, but you could lead the anchor wires through the drainage holes instead

This is how a well-prepared pot should look

- Choose a pot with enough drainage holes. Some cheaper pots have only a single drainage hole, which prevents good drainage
- Check that your pot has a flat surface base; if it has concave areas at the edges, water will remain there, causing possible root rot
- Choose your pot according to the tree's stage of development. A tree that still needs to fatten its trunk will not do so if planted in a shallow pot. A well developed tree can be planted in a smaller or shallow pot
- The inside surface should not be glazed. A slightly rough surface is best for roots.
- Glazed pots, or the colour of non glazed pots, will enhance a tree, so take yours along with you when you are on the hunt for a pot. There are no specific rules on colour choice, but if the glaze takes the attention away from the tree, there might be something wrong with your choice.

How to choose a pot

a) This pot (Bryan Albright) has a baroque form, suitable for elegant trees with nice curving trunks like this. The colour of the glaze blends in harmoniously



b) A tokoname unglazed rectangular container does not complement the elegant trunk lines aesthetically, but for training purposes it is suitable



c) A round unglazed pot (Walsall Studio Ceramics) shows a completely different aspect of the tree. It will look more like a literati. and if that's what you want, why not?



d) A green shiny glazed baroque formed pot looks very attractive when you see it without the tree, but with tree in place it looks all wrong. The pot's too bulky for this tree



Extra protection



For extra protection directly after repotting, you can cover parts of the surface with sphagnum moss to prevent it from dehydrating.

Because I had to change the planting angle of the tree slightly towards the front, the section of the root ball at the righthand back corner was too near the surface. As soon as the roots have found their way in the new soil, you can remove the layer of moss. I used sphagnum moss — also suitable for air layering — because it is neutral.



e) Finally, this pot with its light green/blue glaze best suits the size of the bonsai and colour of its bark. The outer lip enhances the tree's elegant style

The best water



It's best to water with rain or well water. If you haven't got that available, a bowl like this can be used to store tap water. After 24 hours it will be suitable for bonsai. Such a bowl is handy anyway, and an attractive item in your bonsai garden



Watering from a hose can be okay so long as you don't have chlorinated water. This spout has a tap and a fine nozzle and can be easily fitted to a hose



A watering can with a fine nozzle gives the best result. The secret lies in the long spout which, when held correctly, builds up good water pressure resulting in a fine spray

How to water

Instead, hold the can high up, almost vertically. The nozzle will give a fine spray, which won't wash away the soil. Water all sides of the pot



Don't hold the watering can like this because it won't give a fine spray of water and might wash off the soil

During the growing season, it is best to water your trees in the morning. After the sun has heated the pot and roots during the day, a sudden dousing with cool water can set back growth. However, if the tree needs a drink, you should go ahead and water anyway.

Don't water all in one go, but pause occasionally while you are doing it to let the water soak in until it flows through the drainage holes. In this example, the pot is quite shallow and will dry faster than a deeper pot. Check daily and water if the top layer has become a lighter colour or feels dry.