York Bonsai

Basic Re Potting Guide

The Principles

In order to understand why, when and how we repot bonsai trees it is worth understanding what the bonsai tree roots do.

Roots serve a number of functions – they secure the tree so it can grow, allow for nutrient and water to be absorbed and store energy, water and nutrients for the tree. Bear these in mind when you repot and you will quickly be able to understand why you need to do something.

Trees grow in balance so if the roots can't grow due to being pot bound then the upper tree will slow as well. Bonsai trees are kept small more by pruning and shaping rather than allowing to become pot bound. A solid pot bound root ball struggles to absorb moisture and will have poor aeration.

When to Repot

As the roots hold nutrients and water when you repot a tree you remove roots and therefore remove some of the stored nutrients and water so this has an effect on the trees development the next season. The general guide is that you re pot in spring just as the new buds start top swell as this means the roots have let go of their stored nutrients.

Trees can be repotted at all times of year but they need more came when they are actively growing and summer is best avoided unless it is absolutely necessary. Indoor trees do not have such a significant dormant period of outdoor trees so are more tolerant of repotting at most of the year.

After repotting the roots need time to recover and heal so it is important that they are kept away from late frosts. Also as the tree will need a bit of time to re establish its fine feeding roots the trees are best kept out of direct sun and slightly wetter for a couple of weeks as water absorption is also affected.

Before You Start

Make sure you have everything you need to finish the repotting – including time! Roots quickly dry when they are exposed to the air so you should ensure that you can finish what you have started the same day.

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What You Might Need

If you are increasing pot size or moving it into a new one then make sure you have the correct pot before start.

A root hook to loosen the root ball and ease out the old soil

Wire to secure the tree back into its pot so the fine roots can establish

Drainage mesh to cover the drainage holes

Mycorrhizal Fungi to help reduce potting stress and aid recovery (not suitable for ericaceous trees)

A chop stick to work in the new soil

New soil and enough time!

How to Repot

What you are aiming to do is remove enough roots to allow the tree to grow, reduce the heavy stabilising and tap roots and re introduce new fresh soil to allow the roots to be oxygenated.

With the tree out of its pot (be aware that the securing wires will need to be cut before you start to remove the tree) start to work around the root ball from the tops, side and bottom in towards the trunk of the tree with a root hook or similar. It is worth taking your time to limit unnecessary tearing and damage to the roots although some is not avoidable. If you have trouble removing the tree from the pot a root scythe or knife can be run around the edge to help free it.

As you keep moving around the root ball and loosening the root they will slowly comb out and release the old soil – keep at it as even heavily pot bound trees will separate their roots eventually.

If the roots start to show signs of drying out keep them damp with a hose pipe or bucket of water.

Thinning the Root Ball

With the roots nicely loosened remove a few but not all of the heavy tap root or thick stabilising roots but beware that they are connected to some of the feeder roots so do not aim to remove them all first time. It is good practise to seal the cut mark with Kiyonal to prevent infection and increasing healing on large roots.

The thinner feeder roots should be reduced by around a third and at least so it will fit back in its pot.

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Prepare the Pot

On warm or windy days, when the air is drier, it is worth soaking the pot if it is new so that is does not suddenly try and absorb a lot of water from the tree.

As the tree will lose its grip on the pot it needs securing into with wires over the root ball to stop it rocking. If this is not done then you risk the now top heavy tree blowing out of the pot and also fine feeder roots will not establish in unstable conditions. Most post have wiring holes so thread a wire that is twice as long as the pot is wide and fold out so they do not get in the way.

Drainage mesh placed over the drainage holes in cheap and invaluable, preventing soil loss and also discouraging insects from getting into the soil from the base of the pot.

Re Introduce the Tree to the pot

Apart from in drum pots trees look better slightly off set from centre.

Place a mound of the new soil under when the middle of the rots are and settle the tree down onto it so it is the correct high from the rim of the new bonsai pot. With this done lay the wires over the root ball and twist together to tighten. If the wire runs over the nebari (exposed roots) and risk damaging them then simply place a small piece of drainage mesh or rubber under the wire before tightening. It is very important that the tree is secure.

If you are introducing Mycorrhizal fungi then it should be added at this stage as it needs to be in direct contact with the roots.

Now, working from the edges, slowing work the new soil into the roots with a chop stick or similar. You are aiming to reduce any air pockets in the soil without compacting it tightly into the new roots. Keep working around the tree until enough soil is in place.

After Care

In a lot of cases it is not the repotting that causes problems for the tree it is the care after it has been repotted. As we have mentioned the tree will now have reduced ability to absorb water so it need to be kept out of direct sunlight and must not be allowed to dry out. As the new soil and roots and less compact the soil will drain very readily so it is okay to slightly over water for a few weeks.

It is also good practise to shelter the newly repotted tree from string winds for a month and they must be kept away from frost.

Chemical based fertilisers should not be used for three to four weeks after repotting as these can cause root burn and damage. Organic feeds do not have this effect.

On average and based on moderate temperatures it takes about 3 weeks for a tree to recover after repotting.

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Hopefully this basic repotting guide has helped you understand why you need to repot and also gives you some confidence to do it. It is a necessary task with bonsai trees to keep them healthy and growing so be brave if you have never repotted a tree before.

Our contact details are available on line at www.yorkbonsai.co.uk should you need any advice or assistance.

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