

Repotting Methods

By Michael McCluskey 1-14-2010

There are many techniques, methods, activities and factors in the development of a tree into a Bonsai. The single most important activity is repotting because the surface root structure and the base of the tree defines the overall appearance and character of the bonsai, with the health and longevity of the tree depending on the root system.

Maxim: “**As go the roots so goes the bonsai.**”

Generally speaking there are three broad categories of tree types deciduous, evergreens and topical/sub topical. For all types of trees repotting is best done during the time of year when the tree is less active or dormant.

Deciduous trees lose their leaves in an annual cycle the best time to repot them is shortly before the emergence of new leaves (bud break).

Evergreen trees retain their growth of scales or needles the best time to repot them is in the winter months during dormancy.

Tropical & Sub Tropical trees are best repotted when the low temperature is 60 degrees or higher and for some types 70 degrees or higher.

Note: For more detail on the optimum time to repot specific tree types see article [Bonsai Tree Repotting Calendar Houston/Gulf Coast Area](#), under Articles on the Houston Bonsai Society website @ www.HoustonBonsai.com.

There are various methods of repotting from typical, full, partial, up-potting, repotting after field collection and emergency repotting.

Typical repotting is used on healthy bonsai trees where 75% to 100% of the soil is removed along with up to one-third of the root system, then repotted using growth medium. This puts great stress on the tree so no other activity should be attempted until the tree has fully recovered.

Full repotting (bare rooting) is used on healthy trees where all the soil is removed and replaced with new soil or growth medium. Extensive root pruning, root removal and root placement is practiced in this method. The combined activities puts the greatest stress on trees so no other activity should be attempted until the tree has fully recovered.

Partial repotting is used for repotting weak trees, growth control and in the process of root reduction.

Method 1 The first year remove all soil from one side of the root ball leaving the roots intact then repot using new soil or growth medium. The next year do the same thing to the other side.

Method 2 Remove just the soil from the base of the trunk outward 2 to 3 inches leaving the outer perimeter of soil/roots intact, and then repot adding new soil or growth medium. Depending on the health of the tree the outer ring of the root ball can also be reduced.

Method 3 With a saw remove the bottom third of the root ball (soil and roots) next remove 50% to 75% of the remaining old soil exposing the roots, then repot adding new soil or growth medium.

Method 4 With a saw remove the bottom third to one-half of the root ball (soil and roots) leaving the balance of the root ball in tack, then repot using new soil or growth medium.

In Methods 1 through 3 typically no more than one-third of the existing root system is removed.

Up-potting is where the tree is being moved into a larger container; typically the root ball is only minimally disturbed. If the tree is root bound take a razor blade (single edged) and vertically score the outer most roots on the outside of the root ball. Do this in a number of places and then repot adding new soil or growth medium. The scoring will encourage root growth outward into the new soil in the pot.

Potting field-collected tree in this case there are few or no fine roots. Cut the existing roots flat with the bottom of the pot. Coat the cut areas with growth hormone. Place the tree into a container with soil that retains moisture (not your normal bonsai growth medium). Use regular potting soil or a mixture of half medium course sand and half peat moss. Make sure the roots are well below the soil surface to prevent drying out. It is best to water twice a day for the first few months, periodically applying liquid root stimulator. As the tree starts to show signs of growth begin a regimen of organic liquid fertilizers half strength.

Emergency repotting is done at any time that it is obvious that the tree is going to die or circum were taking no action would result in the death of the tree. An inspection of the roots and soil will define what is needed to ensure the survival of the tree, less action being better than too much. This is

a case of due no further harm. A partial repot either Method 1 or Method 2 should be the first consideration.

After repot care involves placing the tree in a shady spot for a week or two and misting the foliage on those trees that retained their leaves. Continue to monitor the trees watering as needed. Do not allow the soil to dry out, keep the soil moist. Hold off on the fertilizers until there are signs of new growth then use liquid organic fertilizers half strength. The frequency will depend on the soil or growth medium that the tree is potted in.

Keep in mind that repotting puts great demands and stress on the tree. So to minimize stress it is important to repot at the correct time, to evaluate the trees health and to determine the appropriate repotting method. Each tree is unique and has special needs so no one method should be applied to all. No matter which repotting method is used typically no more than one-third of the root system is removed.

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