

There Is No Soil in Bonsai Soil

The components normally used to create a good bonsai soil mixture do not, in fact, include **soil**. These components are designed to provide an ideal environment for root growth. Most of the components used are **rock** of one kind or another. This means there are, virtually, no nutrients in a properly prepared bonsai potting mix and that the container will hold onto only enough moisture for its immediate needs. Rock is the largest and most critical component and will comprise an average of 65 to 85 percent of the total soil mass, depending on the type of tree. Obviously, this type of 'soil mix' will dry out much quicker than the sticky black potting soil most people are familiar with. The side panel displays several of the most popular ingredients in making a good bonsai soil mix.

A. INORGANIC MATERIALS

1. Turface - Essentially, it is clay that has been heated in a fire until it becomes hard; it will not decompose (turn into mud) with prolonged exposure to water. If you were to take a terra cotta pot and crush it up, you would have essentially the same thing. Each particle is full of tiny holes which absorb water and release it back to the plant slowly. Its pH is relatively neutral. Sifting the turface is essential to remove any dust or fines that would clog the roots of the tree.

2. Lava Sand and **3. Lava Rock** - These are usually available in landscaping supply lots and are red in color. Bonsai people are fond of using lava sand/rock as a finishing dressing on the surface of the pot, but it can also make an excellent primary aggregate component for any mix. Lava sand/rock is full of tiny holes which absorb water and then release it back to the plant slowly. Sifting the rock is essential to remove any dust or fines that would clog the roots of the tree.

4. Fine Poultry Grit and **5. Medium Poultry Grit**. Poultry grit is composed of fragments of crushed granite which farmers feed to their chickens to help them grind up corn. Unlike clay or expanded rock, crushed granite is dense and solid. It absorbs no water, is completely inert, neutral in pH and has sharp edges on each particle which cause fine feeder roots to split and divide when they hit them.

B. ORGANIC MATERIAL

The organic component in an average soil mix is usually about 20 to 30 percent of the total volume. This organic will decompose gradually and, in so doing, release nutrients for the tree's use. In addition, it will retain a bit more moisture than the inert components and will also absorb more fertilizer.

Remember that the organic component is simply a vehicle for dispersing nutrient and moisture and that it should be pH neutral.

6. Kanuma - A processed soil from the Kanuma region in Japan. It is a light tan color, breaks down fairly easily, and is an excellent soil for azalea bonsai. This material is dug out of the ground 10 feet down, allowed to dry, crushed and then sorted as to grain sizes. It is more acidic than Akadama, and therefore, used mainly for Azaleas, Camellias, Gardenias and other acid-loving Bonsai. It is more expensive than other organic materials and breaks down in a relatively short time.

7. Sphagnum Moss - Sphagnum moss is an excellent growing medium for trees with weak roots and '*yamadori*' or collected trees. Sphagnum moss has excellent water-retention properties; it is able to retain its open structure and so is fast draining and well aerated; perfect for growing bonsai. Hence, pure Sphagnum (without the addition of any other organic material) is an ideal medium for re-invigorating weak trees, recently collected trees and trees with root-rot. Small amounts of Sphagnum moss can be added to inorganic soil mixes such as lava sand/rock, chicken grit, or Turface to provide a stable organic ingredient and to add additional color to the foliage of coniferous species such as Junipers and Pines.

8. Fir Bark Mulch - One of the most popular organics because it is inexpensive and easily obtainable in 50-pound bags from local garden centers. One bag yields about 25 pounds of usable material after it has been passed through three sets of screens. Remember that the organic component is simply a vehicle for dispersing nutrient and moisture and that it should be pH neutral.

9. Fine Bonsai Soil Mix- a common mixture of 50 % inorganic material and 50 % bark mulch. This size is used for very small bonsai trees (shohin) because the very fine roots can develop in the spaces between the particles.

10. Medium Bonsai Mix - another example of 50 % inorganic material and 50 % bark mulch. This mixture would be ideal for medium-sized bonsai trees because it allows the larger roots of the larger tree to develop in the spaces between the particles.

11. Large Bonsai Mix - a final example of 50 % inorganic material and 50 % bark mulch. This mixture would be ideal for large bonsai trees 3 or 4 feet tall. Its large particle size allows the larger roots to spread quickly, allowing quick growth to the bonsai tree.