

# Bonsai Soil

## Organic vs. Inorganic

Making the best bonsai soil is analogous to having the perfect chili recipe. Some times it is a closely guarded secret and experts can't agree on what is the best recipe. With bonsai soil, it comes down to a matter of horticultural knowledge and experience with plants.

To start with, bonsai soils can be divided into two different groups: Organic and Inorganic. The table below compares the characteristics and features of the two:

<b>Organic</b>	<b>Inorganic</b>
Decays and decomposes	Static
High ionic molecular exchange	Low ionic molecular exchange
High nutrient content but no control	Minimal but controllable nutrient content; requires fertilization
Holds water very well, which lessens the frequency of hot weather waterings	Minimal water content requires more frequent summer time waterings
Loses core spacing and increased difficulty absorbing water	Maintains core spacing easy to water
In tight soil spacing, roots race around edge where there is air. Tend to develop more and thicker leader roots	More fibrous and less leader roots
More plant energy is spent on root development	Less energy wasted on root growth
With slow drainage, limits oxygen being drawn down to the roots	Rapid drainage creates a vacuum effect that oxygenates roots
Denser soil equals more and thicker roots and is more difficult to repot	Porous soil encourages fibrous roots and makes repotting easier

## Boon's Inorganic Soil

Boon Maniditviphart is the creator of a popular inorganic soil. The recipe is as follows:

- ✓ 1/3 akadama
- ✓ 1/3 crushed red lava
- ✓ 1/3 pumice
- ✓ Hand full of agricultural charcoal and crushed granite

## NW Organic Bonsai Soils

Within the realm of organic soils, there is a lot of variety and creativity. There are close to as many different organic bonsai soil recipes as there are serious bonsai artist. Here are some examples of organic soil mixtures.

David DeGroot curator of the Weyerhaeuser Pacific Rim Bonsai Collection uses:

- ✓ 40% bark
- ✓ 20% 1/16" crushed red lava
- ✓ 20% 1/16" crushed fired clay
- ✓ 20% 1/16" crushed sand

Alan Taft of the Bonsai Society of Portland uses:

- ✓ 1/3 crushed red lava
- ✓ 1/3 washed mason sand
- ✓ 1/3 NineB mix made by ProGrow in Wilsonville, OR; This is a mixture of fir bark, pumice & compost

On page 94 of his book *The Bonsai Workshop*, Herb Gustafson has 5 different recipes for bonsai soil. The organic and inorganic ratio of these soil groups varies according to plant species the soil is to be used with.

My generic recipe is:

- ✓ 75% Boon soil
- ✓ 25% Sifted potting soil

## Making Bonsai Soil - Sift the Ingredients

Regardless of the preference of organic or inorganic, when combining soil ingredients, they must be sifted out. The idea is to create a soil that doesn't compact nor contain large bits of bark, rock, or pumice. The object is to create a soil with a uniform consistency that will both hold water and oxygen.

Bonsai sifting screens can be purchased or you can make your own. The idea is to eliminate all dust particles that will drop through a window screen (1/16<sup>th</sup>) and remove bits that won't fit through a 1/4" screen. However, these size parameters are flexible. Large bonsai can handle larger granules and small plants prefer small granules.

## Warning about Nursery and Garden Store Bonsai Soil

If you opt to buy pre-mixed bonsai soil from a nursery or garden store, check the ingredients. If it contains peat moss, *do not buy it*. Peat moss has the unfortunate characteristic of absorbing and holding on to water in wet conditions. This is not desirable in the fall and winter, because it slows down proper drainage and will drown the roots and promote root rot.

Another bad characteristic is peat mosses properties in summer. In the summer time, if the soil becomes too dry, the peat moss will dry and harden and become difficult to re-hydrate. Rather than soaking in, peat moss contributes to water beading up and rolling off the soil surface.