

Fertilizing Bonsai

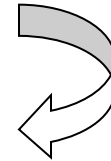
- ✓ Like everything we do in Bonsai, we must ask ourselves: **WHAT AM I TRYING TO ACCOMPLISH?**
- ✓ The BALANCE OF WATER AND OXYGEN IN THE SOIL determines the health of a bonsai. Fertilizer does NOT make a tree healthy.
- ✓ The three MACRONUTRIENTS are Nitrogen, Phosphate and Potassium (N, P, and K). They are necessary for the tree to build specific structures such as leaves and branches etc.
- ✓ In nature, the nitrogen, phosphorous and potassium often come from the decay of plants that have died.
- ✓ Micronutrients like iron, calcium, sulfur, manganese, magnesium, are very seldom deficient and are required in minute quantities. They are seldom deficient in soil but are often included in commercial fertilizers anyway.
- ✓ Our goal with fertilizer depends upon the stage of development of our bonsai: Bonsai in the **Development Stage** require thickening of the trunk or major branches. Thus, rapid growth is desirable. Bonsai in the **Refinement Stage** require slow growth for shorter internodes and more leaf buds.
- ✓ Organic fertilizer (made from dead plants or animals) requires soil bacteria to break down the organic material to release Nitrogen, Phosphate and Potassium.
- ✓ Chemical fertilizers leave salts in the soil after ionic N, P, and K are taken up by the plant and may be detrimental in high concentrations.
- ✓ The numbers on a bag of fertilizer tell you the percentages of available nitrogen, phosphorus and potassium found in the fertilizer. So 6-8-10 fertilizer has 6% nitrogen, 8% phosphorous and 10% potassium.

- ✓ Lower concentrations are ideal for bonsai. Avoid concentrations greater than 10-10-10.
- ✓ Bonsai fertilizer is generally applied as a pelletized form or balls. These are placed in small piles around the periphery of the pot. The piles allow the fertilizer to last longer and allow better percolation through the soil.
- ✓ Some bonsai practitioners put the desired quantity of fertilizer in tea bags. These may be pinned to the soil with toothpicks or simply laid on the surface.
- ✓ Most shohin bonsai should only be fertilized lightly, if at all.

How Much and How Often?

HEAVY? MODERATE? Or LIGHT?

Quantity: 1 ½ TBSP 1 TBSP ½ TBSP



Timing: **Every 4 Weeks** 6 Weeks 8 Weeks

Distributed in piles around the pot between the rim and trunk.

- ✓ Number of locations depends on pot size (3 piles for 12inch pot, 4 piles for 14-inch pot etc.)
- ✓ Leave the first application in place and place new piles evenly distributed between previous piles, after the first round, because Nitrogen in fertilizer is exhausted in 4 weeks, but potassium and phosphate remain 6-8 weeks

- ✓ DO NOT FERTILIZE A TREE THAT HAS BEEN REPOTTED for 4-6 WEEKS and ONLY IF NEW GROWTH IS EVIDENT AND NEVER FERTILIZE A SICK TREE.

Liquid Fertilizer

In our hot, dry Mediterranean Climate, during the driest months, when the fertilizer becomes dry and crusty, the soil bacteria may not be active on the soil surface. ***Some bonsai people combine liquid fertilizer with pellets, or use only liquid fertilizer, during the hottest summer months.*** For bonsai in development, they may apply a dilute solution weekly. For trees in refinement, they may apply it monthly. Dyna Gro Bonsai Pro is a popular brand of liquid concentrate. Note that it should be diluted to $\frac{1}{4}$ tsp per gallon up to $\frac{1}{2}$ tsp per gallon.

When to Start?

It depends:

Japanese Black & Red Pines: March 1st to June 1st (in preparation for June decandling)

Remove fertilizer June 1st and restart August 1 to December 31st

White Pines:

September 1st to December 31st

Deciduous Trees: May 1st to December 1st. Allow Spring growth to harden off and reduces long internodes by delaying until May

All Other Species (Conifer and Broad leaf evergreens): March 1st to December 31st

Do NOT fertilize Black Pines from June 1st to August 1st if they are decandled.

Ultimately, how much and how often to fertilize a particular tree requires observation. It is a subjective decision.

In Summary:

- ✓ “What am I trying to accomplish? What stage of development is my bonsai?”
- ✓ When to start and stop fertilizing depends on the species.
- ✓ Pelletized organic fertilizer with low concentration of N, P and K.
- ✓ Apply dry fertilizer on a regular schedule every 4 to 8 weeks through the growing season. A calendar helps.
- ✓ Do not fertilize recently repotted bonsai until new growth is evident, then lightly.
- ✓ Never fertilize a sick bonsai.

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