

Jim's Presentation on Fertilizers and Pesticides  
FERTILIZERS

**FIRST:**

**READ THE LABEL - Determine what the product is made for and not made for.**

**SECOND:**

**Always read up on your tree and find out what it likes and doesn't like.**

Sources of Fertilizers:

Natural or Organic: Fish, blood meal, bone meal, chicken manure, seaweed.

Inorganic or artificial: Manufactured chemicals.

Why use fertilizer -

Put into the soil what the tree needs at that moment:

For growth? Or for transplant?

What's in fertilizers: N P K

N - Nitrogen for top growth

P - Phosphorous for root growth

K - Potassium - for plant cell functioning (water transport, heat/cold tolerance, disease resistance), flower and fruit production

**REPOTTING:**

FOUR STEPS: 1-Transplant 2-Root Growth 3-When stable, add nitrogen 4-Style  
Use a rooting concentrate (high phosphorus); after about 3 weeks, can feed the top. If using a non soil medium enhance immediately (chicken manure, and all purpose fertilizers).

\*\*No rooting concentrate (eg Superthrive) in slow growing period (winter).

They are not fertilizers but provide only trace minerals for root growth.

When transplanting from soil (dirt) to bonsai soil, you *must* replace what it lost coming out of the soil:

-duplicate acidity level

-duplicate growing conditions (nutrition, sun exposure)

SECONDARY NUTRIENTS: sulphur, calcium, magnesium.

These can be found in products such as 'chicken poop' and feed the top of the tree and not the roots.

THIRD LEVEL NUTRIENTS: "Trace Minerals"

These can be found in composted material.

Milorganite is composted human waste. <http://en.wikipedia.org/wiki/Milorganite>

**TYPES OF FERTILIZERS:**

Time release: eg Osmocote (hard shell) Dynamite (rubberized), Nutracote.

Liquid: all purpose, acid, blooming.

Teas: made from compost, chicken manure: apply once a month.

## PESTICIDES

### **FIRST:**

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Pesticides are designed to kill so care must be taken when using them.

Pesticides are specific: avicides (birds), miticides, insecticides, fungicides, and more.

Application of the pesticide is kept on long enough to kill the pest but not kill the plant.

Natural pesticides: neem oil, ladybugs, lace wings, onion, garlic, peppers, hot sauce...

All purpose: eg Bayers - don't use repetitively; if not effective, don't try again.

Topical: wash off after an hour

Systemic: saturate, after an hour, flush out.

Malathion - organophosphate poison

Raid House & Garden - all purpose

Sevin -mix

Oil of emulsion - medium used to make the pesticide "stick" to the tree.

Insecticidal soaps - must wash off.

Copper - to get rid of rust