
بسم الله الرحمن الرحيم

Use of Natural stimulants in Fruit Orchards

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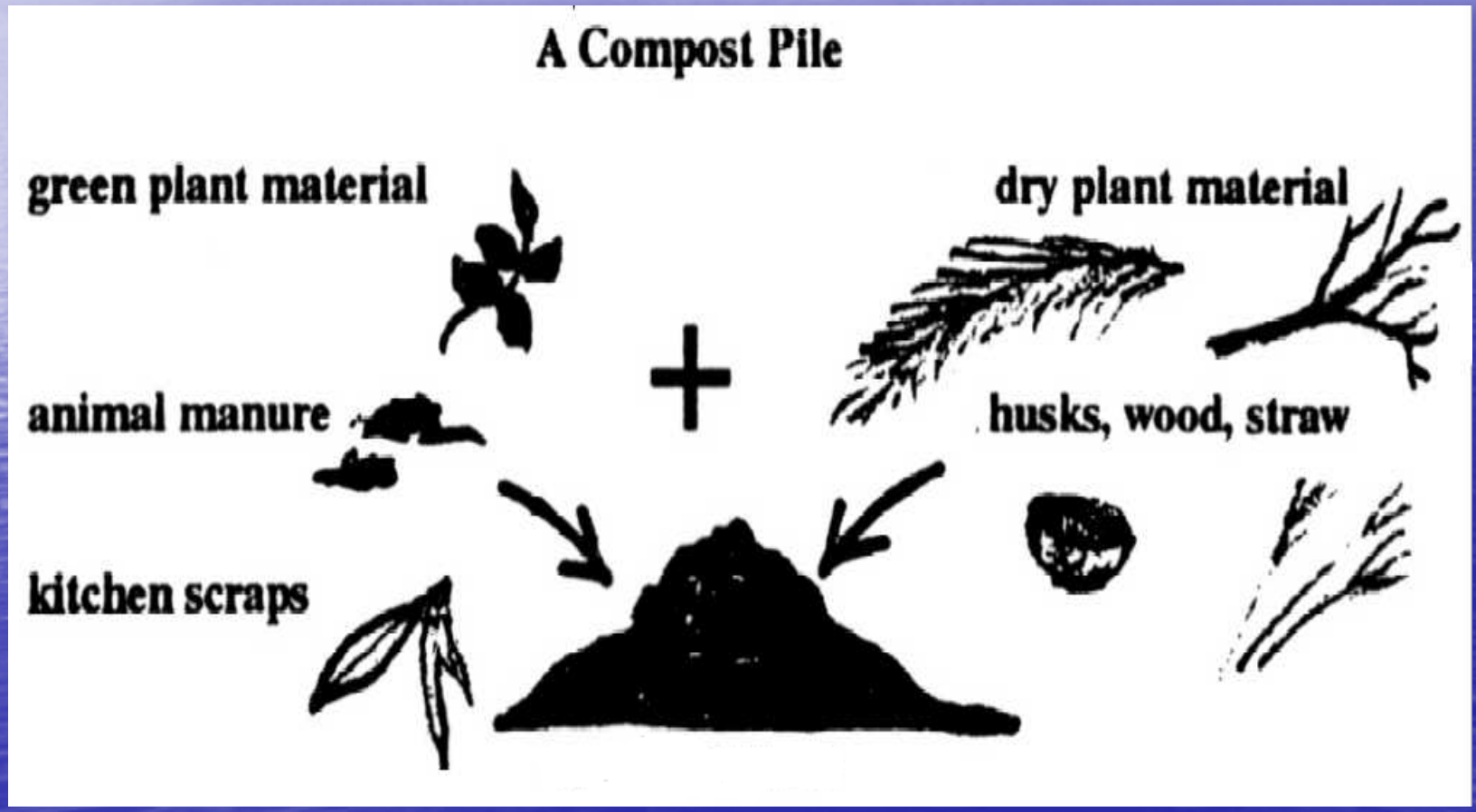
What is Natural Stimulants

- It is a system which uses natural (organic) materials to produce fruit and other crops.
- It does NOT use pesticides, herbicides, and artificial fertilisers.
- It is the system which your grandparents and great grandparents used until the end of World War II.
- So there's nothing new about organic growing.
- It have no adverse effect on the environment and are not harmful to animals, plants and humans.

1. Compost:


A Compost Pile
green plant material
dry plant material
animal manure
husks, wood, straw
kitchen scraps

Some Facts

- Nutrient content is often quite low, often only 1-2 percent by weight.
- Since nutrient content is low, most composts should be considered soil amendments, not fertilizers.
- They have potential for improving some aspects of soil quality when used at high rates over the short term, but do not work well as traditional plant nutrient sources.
- Nutrient release will occur slowly as the compost is further broken down by soil organisms, often over a two or three year period.

- Slow nutrient release is often thought to be an advantage with some crops, but must be approached with care in fruit orchards.
- If you wish to use composts as a nutrient source, they must be incorporated into the soil, and relatively high rates must be applied yearly.
- Composts may maintain an orchard that is presently in good nutrient balance, but may not be suitable for correcting deficiencies.

Determining Compost Quality

- pH: pH is a measure of acidity in the compost. Most finished composts have a pH range of 5.0 to 8.5. A neutral pH (7.0) is desirable for most applications.
- Soluble Salts (SS): High salinity levels can be toxic to plants
- % Organic Matter (OM): An OM content of greater than 60% is recommended for most compost usage.

- % Moisture: A finished compost should have a range of 50-60%. Microorganisms will not be active if the moisture content is too low. If the moisture content is too high, then anaerobic regions within the compost may form which can affect beneficial microorganisms as well as reduce porosity
- % Total Nitrogen (N): In a finished compost, the total N will range from 0.5-2.5% (dry weight basis) in the organic form. Organic N is not immediately available to plants.

- Carbon:Nitrogen Ratio (C:N): For best results your compost pile requires a balance of carbon and nitrogen, with the optimum being 20-25:1.
- Physical Properties: Just looking, touching and smelling a finished compost can tell you a lot. Is it uniform in color and particle size? Is it dry or moist? Does it smell? If the compost has an odor, it probably is becoming anaerobic which is not a desirable trait?

Important information before applying compost

- Not all the nitrogen in the compost becomes available to the trees. About 15% of the total nitrogen in compost is typically available in the first cropping season, 8 % - second year, 4 % - third year, 2 % - fourth year, 1 % -fifth year.
- Most of the potassium in compost becomes available to the plant in the first year.

What is compost tea?

- Compost tea is more or less a liquid version of compost.
- Soak solid compost in water and let the mixture sit around for a few hours or a few days.
- Then pour the liquid through a screen, or through cheesecloth or something similar to strain out the solid material into a bucket.
- Compost tea is great, because it is a very mild, organic liquid fertilizer that provides beneficial live organisms that improve the soil where you use it.
- It doesn't burn plants like elemental fertilizers can.


Thank You