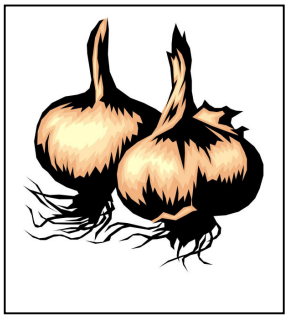


# NOTES From GARLIC WORKSHOP I

## 28th March 2010

Once March Equinox has passed, the garlic cloves are triggered by the declining length of days to begin developing a green shoot within each clove. This is the time to plan and prepare to plant garlic.

## WORKSHOP I - SOIL AND BED PREPARATION

Never has soil preparation seemed so fascinating given the array of organic matter used by the presenters at Garlic Workshop I – Bed and Soil Preparation, the first of a series of three on garlic growing at the Tucker Garden Patch. Nineteen of us were shown 3 different ways of preparing soil by Jan Goroncy, Ueli Beer and Marianne Johnson as well as a demonstration of John Paskin's compost tea making equipment. Underlying all the presentations was the emphasis on building and maintaining soil microbiology to ensure that the soil would contain the essential humic acids needed for balanced plant growth. The talks and practical demonstrations on three Tucker Patch beds provided many invaluable insights.

## JAN GORONCY AND UELI BEER

Jan first talked about the two primary organic mechanisms necessary for soil fertility: the decomposition of organic material and the chelation of soil elements (See pdf – ***Jan Goroncy Notes on Soil*** on Tips and Facts Page). The method that Jan and Ueli use at Barrington River Organic Farm to grow garlic using biodynamic practices, utilises inputs which stimulate the soil micro-organisms and recognise the importance of protein as well as carbohydrates in producing humic acid.

A soil pH of 6-7 was considered best. If soil is too acidic there is no transfer of minerals to plants. Jan suggests soil tests from a suitable organisation like SWEP Labs in Melbourne gives some indications on pH and soil deficiencies up front. Marianne rarely tests the pH of soil before she starts to improve the soil but uses a pH meter later in the process.

A row bed which had been sheet mulched in August 2009 with vegetative matter, newspaper and hay, was used to demonstrate the Barrington method. The bed was forked and mounded bed up to 8" depth. Note that garlic should never be planted in the same bed each year.

Two weeks before planting the following inputs are added:

- Wood ash
- Blood and Bone
- Crushed oyster shell

- Other inputs may be added from year to year depending on a physical examination of the soil in the beds and reviewing the previous year's crop as to quality and size.
- Garlic is a heavy feeder. At the Tucker Garden Patch, because no soil history was available, the following inputs were added in excess of the normal Barrington River Organic Farm protocol.
- Crumbled aged cow manure (use very sparingly)
- Crusher dust (no bigger than 5mm)
- Fine compost (left over from last year's compost heap – included hay; manure; dead cow; BD compost preparations)
- Crushed egg shells
- Molasses diluted in water (adding molasses, honey or sugar to soil encourages microbes.)
- Sea water diluted 40:1 (Soil needs colloidal minerals (out of shale and brown coal) – available from health food shops. An alternative is sea water. Sea water has every element in it – can be added to soil (diluted 40 water : 1 sea water/10lts:250ml) without concentrating salt.)

These inputs were enthusiastically spread on the bed by workshop participants, raked in and watered well. This will left for a couple of weeks for sun and air to aerate and energise the soil. Depending on weather conditions, after a week, the moisture level of soil can be tested and rewatered if needed. Cover with mulch if there is a need to conserve moisture.

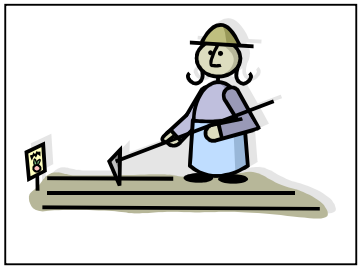
**MARIANNE JOHNSON**

Marianne reiterated the importance of soil preparation to encourage the growth of micro-organisms and chelation processes and provided extensive notes (See pdf file "***Garlic–Soilpreparation***" on Tips and Facts Page). She then proceeded to show some of the many ways this can be achieved.

Using one of two raised beds which had been sheet mulched with horse manure, bladey grass and cardboard then heavily mulched for 3 months the following inputs were added:

**Bed A**

- Bokashi which is commonly used kitchen compost systems. Bokashi contains EMs (Effective Micro-organisms).
- Worm castings. You can't overuse worm castings – they are a great soil improver. You can put them in compost teas – dissolve in water, leave 1 week and use as a foliar spray.



- Fish emulsion which gives uric acid (also urine)
- Tree Tonic from Matt Kilby can also be used to introduce bacteria.
- Bio Boost soil improver
- Seaweed concentrate

Once incorporated into the soil and watered in well the bed was mulched again to protect the soil life.

**Bed B**

This raised bed was planted with a green manure crop, a mixture of mustard and coriander seed which also act as bio-fumigants. Once this crop grows to 30 cm it will be slashed and dug in.

**JOHN PASKINS**

Compost teas can be used to encourage the growth of bacteria and fungi in the soil. John uses Elaine Ingram's method of oxygenating compost teas (See www.soilfoodweb.com.) in a food grade stainless steel bowl. An HETO fan blows air into water to aerate a brew for 24 hours. Temperature control is also necessary for effective compost tea.

Many ingredients can be used in making compost tea as a general soil improver or for specific purposes. Some of those mentioned included;

- 50% Silky Oak leaves/50% Bladey grass makes good compost tea to encourage fungal growth
- Casuarina leaves which have more nutrients than Silky Oak leaves.
- Kelp
- Fish Emulsion
- Bran
- Psylium
- Fulvic and Humis Acid (from NTS: www.nutri-tech.com.au )
- Compost

A ready- made form of compost tea is available as Brewster Compost Tea.

Teas need to be sprayed at appropriate times in moist conditions and in late afternoon within a short time period after are ready.

*Thanks to Terry Hardwick and Leslie Timperley who kindly provided the notes they made during the workshop to assist in the preparation of these notes. Jocelyn Colleran*

Plant garlic corms 2" deep, 8" apart between corms and rows, using Ueli's super-duper measuring tool. Cover bed with 20 cm high mulch. May only need 1 watering during the season.

Measuring tool for planting garlic – 2 tomato stakes bolted together, one marked with 3 or 4 cuts at 8" to go across the bed and one lengthwise stake with a mark 8" from the bolt. Each time you plant a row of corms across the bed, place a peg at the lengthwise 8" mark. When row finished, move the measuring tool up to the peg and plant next row of corms across the bed and mark the lengthwise 8" with the peg. Continue along the bed until planting finished.

http://kerrygalea.com/2010/03/01/march-2010-ancient-moon-gardening-planting-almanac - $40-$45 chart for annual moon phases and activities.