

March 2006 E-zine

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1. Meetings

a. Upcoming Meetings

June 29-30, 2006: Compost tea workshop and field day in NSW (Australia)

July 3-14, 2006: Soil Foodweb course at Southern Cross University (Australia)

“The Soil Foodweb Institute and the Environmental Analysis Laboratory (EAL) at Southern Cross University are holding a two week course on 'Soil Foodweb Interactions & Benefits to Plant Production' from the 3rd - 14th of July. Soil Foodweb Inc. President and world renowned soil microbiologist, Dr. Elaine Ingham, along with the Director of EAL, Graham Lancaster, will present this course at Southern Cross University in Lismore, New South Wales.

“The course will look at the interactions between soil chemistry and biology, and will examine the functions of major soil organism groups. This course will provide a valuable insight into the role of soil organisms in disease suppression, nutrient retention and cycling, residue decomposition and soil structure which will enable growers to reduce farm inputs whilst maintaining yield and soil fertility.

“There will also be one week's readings before the commencement of the course. A unit outline of the course, a general information brochure, and a registration form are available. The cost of the course (GST inclusive) is \$2200 for non-students or \$1300 for full time students (proof of enrolment required). For further information contact the Soil Foodweb Institute on 02 6622 5150 or email us at soilfoodwebinst@aol.com“

August 21-26: Core Workshops and Microscope Class in Corvallis, Oregon (USA)

b. Australia February 2006

This was a whirlwind trip to Australia, as usual! Working with Gerhard Grasser, in Gibbsland, near Melbourne, two introductory Soil Foodweb workshops of three days length each were done. We all had great fun and learned a great deal too. From dairy to golf, we explored what soil biology, and chemistry, can do, and how to get that biology right in the soil.

Gave a talk for Best Wool, in the DPI, in Bendigo, Victoria. At this 4 hour introductory Soil Foodweb talk, there were remote video sites set up so this first-in-a-series of presentations about topics of interest to growers, could be viewed by people throughout Victoria in Australia.

Next was a talk in Shepperton, sponsored by the IPM Master Class organizer, Darren Cribbes. Darren, a Soil Foodweb advisor, is returning to Australia after having worked in Hong Kong for the past many years.

Returning to Lismore, New South Wales, I gave a talk in Byron Bay, for a company called ASAP, to introduce their new line of properly tested biological amendments and equipment. They make a good compost tea brewer, tested to show that it can indeed extract and grow organisms in well-aerated conditions.

I then trained a new group of Soil Foodweb Advisors for Australia, and the existing advisors, who have been appropriately testing their craft through the last year, met for the annual update.

All in all a great trip. Managed to speak to as many as 500 people during the month I was in Australia this time. I'm looking forward to being there again in July! Sign up for the Southern Cross University course!

2. Notes from Elaine!

a. Testing Needs

An interesting discussion about the need to test equipment, teas, and compost has been going on with the compost tea group at yahoo groups.com. The initial post was from one of the contingent that likes to say that testing is not needed at all. The responses to that post ranged from agreement to accusations of the initial poster being a snake oil salesman.

Clearly I am going to have a problem with people who say testing is not needed. Without testing, you would be taking your life in your hands any time you ate food you had not prepared yourself. Without testing, pharmaceuticals would be too random to be comprehended.

But the other extreme - testing un-necessarily - is fine, as long as it doesn't become expensive. You can never have too much data, as long as the cost isn't unreasonable.

Consider that at Soil Foodweb, we teach people to do their own testing. Learn to use a good quality light microscope to monitor poor/ good/ excellent amounts of bacteria, fungi, protozoa and possibly nematodes, so you can monitor your own biology. If it only takes you five to ten minutes, with no further additional cost, to assess whether you, or

the company delivering the tea, made good tea, why not test every single tea you put out? Every compost could be tested, as well as the effect over time of those teas or composts.

What is the needed testing? With respect to what you need to know about a tea brewing machine, that's what my answer to the following e-mail tried to cover. I hope you find this useful.

Elaine

Jerry Guinn <jguinn@ev1.net> wrote:

I have been reading the post on here for some time now. Everyone talks about testing your tea, but I have not seen where anyone test the soil to see what it really needs. What works in one area may not work in another. We put out about 20,000 gallons a month and very seldom is the batch made the same. Granted, most of ours is going on pasture land and in irrigation systems for sod farms. We do not try to promote one product over another. We use what is best for the particular customer.

We also build compost machines and tea machines, but I don't say mine is the only one that works. There are a lot of good products out there. Although I build this equipment to resell, I also tell a lot of people how to build their own.

My opinion is that if everyone would try to work together to promote sustainable practices we would all be way ahead of the game.

Jerry guinn

In a message dated 3/27/2006 11:04:36 A.M. Pacific Standard Time, soilfoodweb@aol.com writes:

What do you need to know about *a compost tea brewing machine*?

The following information should be available FROM THE MACHINE MAKER. They should have the data from an independent lab, not from "their own lab". The machine maker has a vested interest in "proving" that their machine is great. As a buyer of a machine, you need independent verification.

As a buyer, you need to know that the machine you are buying can actually extract the organisms from the compost AND that the recipe the machine maker tells you works actually works. The machine maker needs to tell you the amount of compost the machine requires to make good tea. The machine manufacturer should provide that data, but the data should be from an independent lab.

If the machine maker doesn't provide that information, why would you buy the machine? Go to a company that does have information they will give you.

If you are confused about what the information means that they give you, give SFI a call and we'll help explain it.

If you still want to buy the machine, but there is no data about the machine, then get a microscope. You will have to do the determination yourself.

If you don't have a microscope, send a sample into a lab that can assess bacteria, fungi, protozoa and nematodes. But please, don't rely on plate counts for this! The information you get from plate methods is very mis-leading.

What to determine: or How to do this:

1. determine the organisms in the compost being used,
2. determine the organisms in the tea after tea brewing is finished.

If you have bacteria, fungi, and protozoa in the compost but none in the tea after brewing, then you know that the machine cannot extract, and you should not have bought that machine.

If you have bacteria, fungi, and protozoa in the compost and only a few bacteria, and a few fungi in the tea after brewing, then you know that the machine is not very good at extracting, and you will always have trouble with making good tea.

If you have bacteria, fungi, and protozoa in the compost you want to see huge numbers of bacteria, fungi and protozoa, possibly nematodes, in the tea. Then you know you have a machine that can extract organisms well, and grow them well.

It would also be a good thing if the machine maker would tell you what happens when temperature increases by ten degrees, or goes down by ten degrees.

Usually, you need to reduce the foods added to the brew when the temperature goes up. But by how much should you reduce the food? The machine maker should tell you that.

You need to increase the foods added as temperature goes down. But by how much?

Again, should the machine maker not tell you this?

When you are armed with this information, you can then start working on modifying your recipe for your own conditions. You have to have a microscope or be willing to send samples into a lab in order to figure out what effect different foods have on the organisms in the tea. There is no other way to figure this out.

We all know how variable the weather can be. It isn't that tea production methods are that variable, but weather is. What is the effect of cool nights and warm days? Cool nights and cool days? High humidity versus low humidity?

What happens when you add more kelp, or less? Change brands of fish? Or humic acids? Or add oatmeal?

Jeff Lowenfels has sent out data showing the effects of some of these things. There was a recent post where someone asked for others to share some of their data showing what different products did. NO ONE REPLIED. Hum, the makers of tea machines who have data don't read the compost tea list serve? No one else is testing? Or the ones testing are so successful, they don't have time to be sharing here.

If your compost tea doesn't seem to be doing much to help against disease or improve soil tilth, then maybe nature is trying to tell you that you don't have the set of organisms in your tea that is needed. The logical conclusion here is to start testing to find out where the problem is.

If you put your teas out and all your plant diseases and insect pest problems go away, soil compaction disappears and you see reduction in the amount of water you need to apply, then most likely you have gotten the biology needed back onto your plant surfaces and into the soil, and that biology is functioning and doing their jobs.

If you aren't seeing these responses, then you have some work to do to figure out what is still wrong.

How can you possibly figure that out in a reasonable period of time if you don't test?

Sure, you could do trial and error to try to figure this out. If you are not financially dependent on the results, you can have fun with the hobby for the rest of your life. But those of us who grow plants in order to make money cannot fool around. We have to know that what we are doing will work.

The only way to know if the tea has what it takes is to determine if the organisms are present in adequate number and diversity. You can't figure that out if you don't do some testing.

Human analogy? How do you figure out if you are running a temperature? Without a thermometer, you can't know for certain until things get really bad. Testing BEFORE things fall apart completely is required. Doesn't have to be difficult or expensive.

And really, the people selling you compost tea brewer machines should be the ones doing the testing and showing the results.

Don't buy any machine if you don't see some solid data about what the machine can do.

You are forced to do your own testing, if you buy an un-tested machine.

In the US, west coast, I have permission to say that the KIS brewer, the Bob-o-laters, the EPM machines, Betsy Ross' machine, Bruce Deuley's, the Natural Earth Solutions extractor, and the Greater Earth Organics machines have been routinely tested and shown to be capable of extracting and making good tea (which means, for the recipe used,

aeration maintained conditions in the aerobic range). Greater Earth Organics has done testing relative to temperature and recipe as well.

East coast USA, please talk to Paul Wagner, director of the SFI lab in New York about other machines they may have tested.

In Australia, the ASAP machine, and another one in Perth have been tested to show the ability to extract and maintain the biology. The person to ask about other machines in Australia would be Merline Olsen, director of the SFI lab in Australia.

Other machines? Please ask the machine maker for their data. I do not believe that I have permission to talk about other results.

Well, enough for now.....

Hope this helps

Elaine

**b. ANNOUNCING COLORADO STATE UNIVERSITY'S
INTERDISCIPLINARY PROGRAM IN ORGANIC AGRICULTURE**

The Department of Horticulture and Landscape Architecture and the Department of Soil and Crop Sciences at Colorado State University are excited to announce "The Interdisciplinary Program in Organic Agriculture". This new IDP is a collaboration amongst these two departments from the College of Agricultural Sciences, Agricultural Experiment Station, and Cooperative Extension. It is set to launch in the FALL of 2006 and is currently accepting students. For more information see <http://organic.colostate.edu> (note that the URL does not have a www prefix).

Please forward this message and/or include it in your upcoming publications.

Thanks,
Adrian

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