

# February 2004 SFI E-zine

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## 1. Q&A

### Question #1

Dear Dr. E. and staff:

Is it fair to say that in the winter, fungi help move nutrients to dormant/deciduous plants? I'm assuming that dormant plants need at least some food during the winter. Since they don't have leaves they can't do much in the way of photosynthesis. And since bacteria go to sleep when it's cold, it seems to me that the fungi would do the meal service.

I appreciate your thoughts on this.

Thanks,  
Paulette Mouchet  
[geomouchet@Qnet.com](mailto:geomouchet@Qnet.com)

Dear Ms. Mouchet:

Your assumption is correct. The roots remain minimally active through the winter and, as long as the soil is not frozen, the beneficial fungi provide nutrients and shield them against disease-causing fungi.

Yours truly, Brian Pearson

## Question #2

This year all my peach, nectarine and peacherine trees have developed Peach leaf Curl. Is it a virus and how do I treat it organically?

Patrika Salmon

Hi Patrika -

Peach Leaf Curl is a fungal disease caused by the fungus *Taphrina Deformans*. Successful organic control has been achieved with sprays of Lime Sulfur (Polysul or other brands) or Bordeaux Mixture during winter dormancy, or with foliar applications of Soap Shield or CuSO<sub>4</sub> (12# to 100G water) during and after bud break.

While no specific research has been done on this, it stands to reason that good aerobic compost tea--which has proven effective against numerous other fungal diseases--might work in this case. First application at bud break, then every 2 - 3 weeks until leaves are mature. Every 4 - 6 weeks after that unless the disease pressure is on (infection in neighboring orchards) in which case increase the frequency of application.

Yours truly, Brian Pearson

## Question #3

Is there a quality, reasonably priced, compost tea unit available for home use (1/8 acre)?

Warmly  
Hilda Weisberg  
Palo Alto, CA

Dear Ms. Weisberg:

Either Bob Norsen's Bitti model or Leon Hussey's smaller KIS machine should suit your purposes nicely. Both are designed with the backyard gardener in mind.

[www.bobsbnbrew.com](http://www.bobsbnbrew.com)

[www.simplici-tea.com](http://www.simplici-tea.com)

We have tested both these machines extensively and have found both to be capable of making very good aerobic compost tea. If you have any further questions about CT for your specific application, just drop us another email.

Yours truly, Brian Pearson

## 2. Northeast Organic Farmer's Association land care course

The link below provides details on the Northeast Organic Farmers' Associations' organic land care course agenda, instructors, dates, and rates. As I understand it, there are still some places left in the course.

I believe Massachusetts sold out, so if you want to go, I suggest you get in touch with Bill Duesing sooner rather than later. It's a long wait till next winter!

Among the instructors of particular interest to list members: Paul Wagner of SFI - NY will be instructing on the soil food web, Paul Sachs of North Country Organics will be presenting on compost, and Todd Harrington of Harrington's Organicare will present on turf. Todd uses compost tea extensively in his organic lawn care programs; Paul is author of the a book on soil (Edaphos) and a book on organic turf management.

The course, in its third year of existence, targets landscape professionals.

<http://www.organiclandcare.net/docs/OLCBrochure2004.pdf>

Chris Reid

## 3. International Compost Tea Council Seminar

**The International Compost Tea Council** is presenting two conferences this year. The first one will be **March 12th, Friday, at Lake Washington Technical College**. The second one will also be held at Lake Washington Technical College, July 16th and 17th. More details coming soon.

**"ENVIRONMENTALLY-FRIENDLY LANDSCAPE PRACTICES"** March 12, Friday

**Dr. Elaine Ingham** is considered the leading expert on compost tea and soil biology. She is the President and Director of Research for Soil Foodweb, Inc. and Sustainable Studies Institute, Affiliate Faculty of Southern Cross University in Australia and Board member of Oregon Sustainable Agriculture Land Trust. She will lead off the conference with her valuable knowledge and explain the soil foodweb. This information is a key to how we can take part in caring for our environment through sustained organic practices.

**Kelly Slocum** is recognized world wide as an authority on systems utilizing earthworms for waste management and castings production. Since 1996 she has been working with turf managers and fruit producers, aiding in the development of programs designed to replace with chemical fertilizers and pesticides with worm castings and worm castings teas. She will impart her knowledge on the how-to and why of vermiculture.

**Thomas Piatkowski** is the President and CEO of Highlands Soil & Water, a manufacturing, supply and service company specializing in environmentally sensitive programs, products, and services. Thomas is a licensed Agricultural Pest Control Advisor in California and holds a B.A. degree in Biology from Case Western Reserve University and a M.S. degree in Animal Nutrition from The Ohio State University in Columbus, Ohio. He will speak on the options and the integration of current and conventional practices to those that are both environmentally-friendly and economically viable.

**Tom Jaszewski** is the Horticulture Director for The Mirage and Treasure Island Hotel and Casino in Las Vegas, Vice President and Field Technician for Livesoil, LLC, a least toxic tree Recovery Company, a least toxic gardening products representative, C10 Licensed landscape contractor, and an ICTC Standards committee member. He maintains all of the properties utilizing compost tea and other environmentally-friendly practices. He manages a full time staff of 42 horticulture gardeners and a multi-million dollar palm and cycad population

This conference is designed for the professional, although home gardeners will also gain a lot of very useful information. The cost will be:

**Member prices: \$90 before February 28<sup>th</sup>, \$110 after February 28<sup>th</sup>,  
Non-member price: \$130 early registration before February 28<sup>th</sup>, \$145 after  
February 28<sup>th</sup>, Lunch is included in the price.**

Directly following the conference at the restaurant at Lake Washington Technical College, we will have a **networking opportunity**, serving wine, beer and non-alcoholic beverages with appetizers. If you would like to participate in this event, please include a \$5.00 donation that will help with the costs and provide you with two beverage coupons for beer and/or wine. You will have an opportunity to talk informally with the speakers and meet other people who are very active in the compost tea industry.

If you have any further questions, contact Linda Hussey, Secretary, The International Compost Tea Council. 425-558-0990 or 1-866-558-0990.

**Airport:** Seattle (or Seatac)

**Hotel Information:** Please mention Lake Washington Technical College and compare to Corporate rates when making the reservation. Weekend rates (Friday, Saturday, Sunday) may be better.

**Best Western:** 12223 NE 116th, Kirkland, 425-822-2300, \$64/single, \$68/double,

**Motel 6:** 12010-120th Pl. NE, Kirkland, 425-821-5618, \$49.99/single, \$55.99/double

**Silver Cloud:** 12202 NE 124th, Kirkland, 425-821-8300, LWTC \$79 queen bed, ask for weekend rate: \$109 standard rate, corporate rate \$89 (King or double queen), \$10 for extra adult

## **4. NEW STUDY: Traces of GM DNA found in digestive tract**

Traces of GM DNA found in digestive tract

- 21/01/2004 - As fierce opposition to genetically modified plants continues across the globe, findings from a breakthrough study in the UK suggest that foreign DNA can survive to the small intestine, providing fuel to the anti-GMO fire.

The inclusion of genetically modified (GM) plants in the human diet has raised concerns about the possible transfer of transgenes from GM plants to intestinal microflora and enterocytes. But the persistence in the human gut of DNA from dietary GM plants remained an unexplored land.

Scientists led by Harry Gilbert at the university of Newcastle in the UK set out to study the survival of the transgene epsps from GM soya in the small intestine of human ileostomists - people with a colostomy bag.

They found that DNA can survive to the small intestine, and that low frequency gene transfer to the gut microflora of gene fragments may have occurred.

However, the study showed that whole genes were not present in the microflora, and that it was unlikely that there was DNA transfer to the intestinal epithelial cells, and risk to human health was thought to be "highly unlikely".

Reporting their findings in in the 18 January issue of Nature Biotechnology, the scientists write that while the plant DNA was found in the small intestine of ileostomists there was no survival of the DNA in the large intestine of subjects who had not undergone such surgery.

According to the scientists, it appeared that low frequency gene transfer from ingested DNA to the gut microflora had occurred already in 3 of the 7 ileostomists prior to the trial.

The authors of the paper say "it is highly unlikely that the gene transfer events seen in this study would alter gastrointestinal function or pose a risk to human health. Nevertheless, the observed survival of transgenic DNA from a GM plant during passage through the small intestine should be considered in future safety assessments of GM foods."

The paper, "Assessing the survival of transgenic plant DNA in the human gastrointestinal tract," by Trudy Netherwood, Susana M Martín-Orúe, Anthony G O'Donnell, Sally Gockling, Julia Graham, John C Mathers & Harry J Gilbert appears in Nature Biotechnology, 18 January 2004, doi:10.1038/nbt934.

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Sincerely, Lion Kuntz  
Santa Rosa, California, USA

## **5. Sexy Soils Saved My Soul**

Fungi. Bacteria. If you're not "one of us", you're probably running for the Lysol right now. But we-- and we know who "we" are-- know that we're talking about major characters of the soil food web. Dr. Elaine Ingham's presentation called Sexy Soils at Portland Community College on November 22 was so inspirational that I was constantly torn between staying to hear more gems and driving home at ticket-worthy speeds to compost!

Dr. Ingham hooked me in the first minutes with a real life example from a Lake Washington resident in Seattle who resourcefully solved his blackberry problem on the hill sloping steeply down to the lake below his \$5 million dollar home: a clever concoction of diesel oil and Round-Up... Prest-o Change-o! Plant-free property and happy guy. But then, you guessed it. The fall rains fell. Prest-o Change-o! Imminent house-free property and scared guy. Help! A concrete company offered to pour its product down his slope for \$6 million bucks. The homeowner went back to the Yellow Pages and found someone who solved the problem with a two-foot application of compost. The house not slide and neither did the soil because it was teaming with bacteria, fungi, flagellates, amoebae, and ciliates. (You should hear how fast Dr. I. says that tongue twister.) Soon, newly planted nursery stock flourished, and within months Armageddon became Eden. Everyone lived happily ever after.

As she unwound the soil food web, Dr. Ingham joked, danced across the stage, coined new terms, and illustrated her points with colorful, down-to-earth metaphors. Here's a sampling:

1. "Taxi cabs" is her term for the soil organisms that carry the good stuff down into the lower soil levels as well as up onto the leaves of plants spreading their disease protection and nutritional secrets as they go.
2. To understand that compost pile heat is generated from the critters in it milling around and multiplying, she asked us in the audience to picture the heat we might generate if we got up and started doing the same thing...!
3. "Predatode" was her sniglet for predatory nematode.
4. "Flocculate" is a word she toyed with so much that we enjoyed it much more than it deserved since it just means opening up the structure of clay. Not what you were thinking, huh?

With slides from actual work sites and a white board, Dr. Ingham convincingly explained the nutritional and disease prevention attributes of properly made and applied compost and compost tea. Chemistry and biology majors in the audience composed largely of Association of Professional Landscape Designers probably understood more than I did. Being a simple backyard composter, I found her description of the process to make compost tea a bit overwhelming. Dr. Elaine Ingham is the President of Soil Foodweb, Inc., and her company's website at [soilfoodweb.com](http://soilfoodweb.com) offers further advice and services.

Still I encourage you to go hear Dr. Ingham if you get a chance. I felt like I'd been down to the Compost Revival Tent. Her knowledge was inspirational and her enthusiasm was infectious. If winter has got you down, she'll get you up and composting.

## **6. Helping the USDA and FDA**

What good does forbidding GMOs in organic food, if you never check to see if it is there? Dale Wilson, who is the expert in this area and speaks for the biotech cabal, has already told us that there is GMO contamination in organic food and that it doesn't matter to him.

Do you think that the USDA who has done such a horrible job of inspecting our meat supply is doing any better with the GMO crops. How much of the gmo-pharm crops has gotten into the food supply? Who knows where the test sites are?

It wasn't the FDA or USDA that discovered the Starlink in the food supply, it was a private organization that tested and found it and alerted the public. There was too much for it to have simply been an accident.

I doubt that Monsanto, who thought nothing of dumping its chemicals in areas that could harm and kill its neighbors, would worry about releasing all of its test crops into the food supply, with its surrogates running the regulatory agencies that should be watching it.

NO doubt there a lots of good people in the USDA and FDA who would like to do the jobs they were hired to do to protect the public, but aren't in a position to fall on their swords.

If you want to do something to help the USDA and the FDA do their job, THEN DO SOMETHING ABOUT IT!

1. Get everyone you know to demand that their public officials clean out the corporate interests running the USDA and the FDA and give the agencies the funds and tool they need to do the job properly

2. Tell all the candidates running for office that they will not get your vote if they don't support immediate change in our food regulatory agencies and the EPA and then hold them to it.

3. Tell the media, both print and electronic, that you expect them to cover the issue of food safety in depth and that you will not support them if they don't.

4. Tell the food companies and grocery stores that you will not purchase their products if they cannot guarantee that they are safe. Also tell them that you want to know if their products contain GMOs. They don't need the governments permission to say if their products are GMO or GMO-free.

WE ARE NOT POWERLESS IF WE ACT TOGETHER AND DEMAND SAFE FOOD. IF WE WON'T DO IT FOR OURSELVES, THEN DO IT FOR THE CHILDREN WHO DESERVE BETTER FROM US.

Evon Kochey <sydney151@EARTHLINK.NET Mon, 19 Jan 2004 15:58:49 -0500

## **7. Onion Data – an example of improvement in Soil**

I put this data together in response to a query for an example in onions today, and as long as I put the data together, I thought I'd share it. This is not a replicated field study, but shows anecdotal information that might be useful for people wanting to put together a SARE grant.

This was in a field near west of Salem, OR, sorry, but I don't remember the farmer's name.

#### Date

April 4, 1997 Field very muddy, highly compacted soil, heavy soils I recall. Soil cores revealed a compaction layer at 4 to 6 inches and I could not push a soil core through the compaction zone (pressure at 300 psi and no movement through the soil). Strip tillage was to be used to plant, otherwise herbicides, fungicides and fertilizers (super P?) was used.

Initial soil biology (VERY bacterial, too bacterial for good onion growth, needs VAM, needs fungi, very anaerobic)

DW 0.33 (very wet)

AB 0.3 TB 1055 AF 0.0 TF 0.5 F 250 A 13 C 1,200

Nematodes Root-feeders, a few bacterial-feeders

No mycorrhizal colonization in the roots

April 29, 1997

In one small area, VAM and compost were tilled in with strip tillage

Compost contained:

DW 0.47 (drier, but still dense)

AB 5.8 TB 899 AF 4.5 TF 230 F 12,000 A 25,000 C 10

Nematodes were beneficials, but low in number

Don't remember the amount of VAM, I don't think I was ever told.

August 10, 1997

The impact on the soil in three months - basically around harvest, I think - was:

DW 0.92 (whoa! Dry! Which is why activity is low)

AB 1.2 TB 223 AF 0.26 TF 6.1 F 8,500 A 5,600 C 32

Still no VAM. VAM addition was a bust, probably because of high P levels.

Compaction was clearly reduced by this time, I could push the core through the soil to 20 inches without much difficulty. Bacteria definitely helped build some structure, although to keep that structure intact, still need to improve fungi. Adding compost didn't quite do the trick - most likely some fungicides were used despite the compost added.

Given that the top several inches had been tilled, the compaction at 4 to 6 inches was clearly gone in the plus biology treatment, while the compaction zone was still very much present in the conventional system. Roots of plants went much deeper in the plus biology, while roots of the plants were limited to the upper few inches in the conventional system. Litter material left from the previous year had decomposed in the plus biology treatment, but previous year litter was not entirely decomposed in the conventional. Nearly unmistakable rot fungi were growing on the non-decomposed litter material in the conventional area. These fungi were not apparent in the plus biology treatment.

Roots analysis showed less necrosis in the root systems in the plus biology treatment than in the conventional treatment. There was less bulb rot in the treatment with the compost and VAM. Fertilizer applications had been reduced on the field with the biology. By how much, I do not know, nor do I know yield increase between the plus biology and the

conventional field. But there was a clear decrease in root rot diseases in the plus biology treatment

Hope this helps!

Elaine

## **8. Grower Experiences**

Dr. Elaine Ingham:

Thank you for coming down and giving your presentation last summer. Our cranberry crop was excellent. We quickly sold out at farmers markets and had more commitments than berries. So had to buy cranberries, from a friend, for our own consumption by Thanksgiving. The other berries were organic but not of near the flavor, texture, or color as ours were. Big cultural difference was the use of compost tea.

We have not receives any e-zines for many months. We are eagerly waiting for an update on the worm-compost tea status for organic production. Is there any progress?

Cordially yours

David Smith

Hi David –

Most organic certifiers are allowing use of compost tea, as long as all the materials going into the tea are organic. So the compost must be produced according to organic regulations, and all materials going into the tea must be certified or certifiable. In places where certifying agencies are picky, just be careful not to call the compost tea by that name. Call it a liquid biological amendment that you put together, and leave it at that. OK?

Elaine

## **9. Work at Kachana, In the Kimberly's WA, OZ**

Central themes this year:

- The emperor has no clothes...
- It is un-economical to watch natural resources decline...
- Learning more and more about the decline will not stop the decline...

- Before talking about 'sustainability' we first need to define what exactly it is that we wish to sustain...
- Sustaining dysfunctional or degraded resources are not viable options...
- Sustaining seen or unseen undesirable trends spell: d a n g e r
- The real challenge is not 'to do better what we do', but 'to begin doing what we have neglected to do'
- The key to 'building' is to begin with and to maintain sound foundations...
- Stabilising, revitalising and building soil are all about redesigning and strengthening economic foundations
- Successful human economies rely on socially desirable practices that are in tune with 'natural law'
- Any form of Revitalisation is always an exciting and rewarding process
- Revitalising landscapes offers meaningful activity, sound economic growth and prosperity

You are welcome to forward this to friends or to people who make time to keep themselves informed.

**Warm greetings from the heart of the Kimberley: Kachana!**

**Chris (Henggeler)**

***Kachana Pastoral Company promoting environmental literacy and functional science:***  
[www.environmental-literacy.com](http://www.environmental-literacy.com) *(Learning to read what Nature is telling us now.)*

**[So what exactly do we mean by "Environmental Literacy"?](#)**

**The link above takes you to a two-page summary of:**

- What we think it means and what it does not mean**
- How we hope to do our part in meeting the challenges we all face**

To ensure reliable communications please send a Cc. to the Kununurra based address:

[satlink@agn.net.au](mailto:satlink@agn.net.au)

Kachana News: January 2004

### **1. Guest speakers:**

Sam Bingham and Andrew Story have both consented to come and speak at our next Landscape Management Workshop September 2004.

<http://members.westnet.com.au/satlink/KACHANA-WORKSHOP/Next Landscape Management Workshop.htm>

Once again it is an honour for us to be able to host on Kachana, and get to know personally people who have dedicated their working life to the search of the sort of knowledge that we need to survive beyond the 'age of information over-load'.

### **2. Video:**

#### **Kachana Landscape Management Workshop 2003 with Dr. Elaine Ingham:**

Paul Mock has not had an easy task. The workshop was not formatted for the making of a documentary movie, but so that people could have much time to ask questions and benefit from 'one to one' time with Dr Elaine Ingham. Wind in the trees and over the microphone, the rustling of leaves and people moving from place to place are not an excuse, but the reality of being out there in 'nature's classroom'. Paul, who has been here to Kachana several times and has heard Elaine speak on more than one occasion, was in a

good position to piece together the content of the subject matter covered at the workshop. Given both technical and time constraints, I believe this first video to be very good revision-tool for anybody who attended the workshop and for anybody who has heard Elaine speak before. I do not consider it to be suitable for people who have not heard Elaine before, unless they are really interested in the subject matter. (We still have copies of the original films in digital format so one day we may piece together short topic-specific film-segments.)

The approximately four hour video is now available for purchase at Aus \$ 65.00. (\$ 75.00 includes handling and postage within Australia.)

Of that purchase sum:

\$10.00 go towards research conducted by [Soilfoodweb Inc.](#)

\$10.00 go to the [Byrne Terry Ellenbrae Fund](#)

\$10.00 go towards [land-care work conducted on Kachana](#)

### **3. Soil workshops:**

Of the messages that came out of this last Kachana Workshop some stick out:

- Both the supply of agricultural food & fibre as well as the natural purification and supply of our water hinge on healthy soil; How healthy is our soil?  
Are our biological foundations really strong enough to deal with 'change'?
- There seems to be the potential to literally 'super-charge' beneficial effects of both 'above ground macro-herds' as well as 'below ground micro-herds' if our management can re-establish the type of symbiotic relationships that originally helped form the soils that are now eroding all over the planet.
- Nature does not need us humans for it's survival, but we sure depend on nature to function well if we are to survive as a species on this planet.

Dr Elaine Ingham and Dr Arden Anderson are both spreading some vital information. Vital for the quality of life that awaits us in our last few years and vital for those who inherit what we leave behind.

I encourage you to pass on information about soil-workshops:

[http://www.soilfoodweb.com/sfi\\_html/03\\_events/index.html](http://www.soilfoodweb.com/sfi_html/03_events/index.html)