

MAY 2005 SFI E-zine

- 1. Mary Appelhof, the Worm Woman**
- 2. International Conference on Soil and Compost Eco-Biology book has been published**
- 3. Aeration Stones and the Ultimate Tea**
- 4. Federal Scientists For Sale!**
- 5. Recent References for Fluorescent Staining**

Upcoming Events

OPEN HOUSE

Come to an Open House at our New Location at:

728 SW Wake Robin Avenue, Corvallis, Oregon

Friday, May 29, 2005 12-4pm

E-mail us for a map if you need one!

Tour our new Facility!

Microscope demonstration: Learn to recognize your own “bug”

Bring your own 12 oz jug/bottle and take home some Compost Tea from the new Tea Center.

We hope to see you here!

Sustainable Studies Institute offers free classes!!

Class time is 7-9 pm for all classes.

June 16: Rose Care with Janice Dysinger, LifeRoses.com

July 21: Biological Lawn Care with Shepard Smith, Soilsmith, Reece Speas, W & W Lawn Care and Robert Shepard, Soil Foodweb Inc

Aug 18: Backyard Composting: with Joe Richard, NW Vermicompost, Andy Westlund, Harmony J.A.C.K. Farms and Merry Bradley, Grass Roots Gardens

Sept 15: Preparing Plants for Winter: with Dr. Elaine R. Ingham, President of Soil Foodweb Inc and Robert Shepard, Soil Foodweb Inc

Oct 13: Mulching/Leaf Compost: with Jon Rowley, Seattle P.Patch and Harry McCormack, Sunbow Farms

Nov 17: Biological Pest Control Methods: with Joe Whaley, Director of Sustainable Studies Institute

Workshops

SFI Corvallis

Dr. Elaine Ingham teaches three in-depth workshops at the Soil Foodweb, Inc. Laboratory in Corvallis, Oregon. The workshops include classroom instruction, hands-on laboratory work and field demonstrations.

October 15—17, 2005

Introduction to the Soil Food Web

[PDF registration form](#)

October 19—20, 2005

Compost Technology

[PDF registration form](#)

October 20—21, 2005

Compost Tea Technology

[PDF registration form](#)

In-depth [Description of the three workshops](#) are available as a PDF download. For more information contact Twila or Matt at (541) 752-5066 or email info@soilfoodweb.com

Microscope class - June 13, 2005 Register now to secure your place!

Light Microscope Class - SFI Corvallis

[PDF registration form](#)

This class will give you the ability to assess your own compost teas. Discover the difference between fungal hyphae and organic matter; recognize bacteria, protozoa and nematodes.

Cost: \$200 per person (limit 20) all supplies will be provided in the class as part of the fee, as well as the new Microscope Manual, microscopes are an additional cost.

Two scopes have been recommended by Dr. Ingham. Alexis J-model \$400.00 or Leica CME-\$1200.00 (includes case). If you want to bring your own scope please contact us at the lab to discuss the specific requirements and be prepared to “upgrade” if necessary. To register contact Twila or Matt at (541) 752-5066 or email info@soilfoodweb.com

1. Mary Appelhof, the Worm Woman

The day I returned from South Africa, I learned that Mary Appelhof had been very ill for the last month with cancer. She passed away on May 4.

How do I somehow express the loss we all feel at her passing? She was mentor, friend, educator, shoulder-to-cry-on, and well-respected author of the best book on practical worm-composting, “Worms Eat My Garbage”. We have to make sure that book never goes out-of-print.

Mary influenced the world with her efforts. She was a dear friend. She spurred me to greater effort and supported my passion for living soil. We are kindred spirits, soul sisters. Death cannot change that. But I will miss her voice on the phone, and her annual visits to Oregon. Mary understood my requirement to comprehend all that goes on in the soil, the need to measure those processes, and to predict what effect those processes have on plant health.

I hope that Flowerfield Enterprises, the company that Mary started, will put together an educational fund to support student attendance to vermicomposting meetings. This was something very near and dear to Mary’s heart.

Please join me in encouraging formation of this memorial fund.

2. International Conference on Soil and Compost Eco-Biology has been published.

This book presents a broad overview of the world of composting, from legislative concerns to the biology in soil and compost. These were the papers given at a three day event in Leon, Spain, in September, 2004.

Please go to info@soilace.com to order this book. Price is 25 Euros.

This book contains the paper “The Soil Food Web: Soil and Composts as Living Ecosystems.” Ingham, E. I. and M.D. Slaughter. Pages 127 – 139.

The next conference will be held in Europe, 20 – 22, September, 2006. Please check the website, www.soilace.com for more information.

3. Aeration Stones and the Ultimate Tea

All air stones are not equal! ERI

On 4/18/05, Gerry <JoeZodiac@aol.com> wrote:

Hello Elaine;

The Neptune's Harvest fish/seaweed fertilizer had a slight smell to it to begin with.

That same smell grew along with the brewing time. No earthy smell here.

You think I need another air pump? The one I'm using is rated for a 90 gallon fish tank.

I'm only using 4 gallons here to pump. I think maybe reducing the amount of fish fertilizer would be helpful.

With my next batch, I'm going to be using kelp meal instead of the fish/seaweed fertilizer. See what kind of smell I get with that....LOL.

Thanks
Gerry Miller

Response:
Gerry,

I'm also am a home brewer, using a 5 gallon bucket. I now use 2 pumps designed for 60-80 gallon fish tanks after I had a brew go bad using just one pump. Another 60+ gallon pump will only run you another \$10. You don't need to bother with getting the ultra quiet ones for brewing tea.

Also, you need to consider your diffusers. Get good, high flow stones or diffusers. The cheap ones block the airflow. I spent far more on the diffusers than on the pumps.

A pump for a 90 gallon tank should also be able to handle several more stones than you are currently using. Try splitting off another line and seeing if by adding a stone, the apparent flow going to the stones that are already there is reduced. I bet you could add 2 more 6 inch stones without and reduction in flow at the current stones.

As for not having enough tea for your lawn, do you realize that you can dilute it with un-chlorinated water? I generally mix it about 5:1 which gives me around 24 gallons total.

Also, it is good to remember that for most uses, you do not have to try and make the ultimate batch of tea in your homebrew system. If you aren't trying to fight disease, it isn't really necessary, and trying to push the limits often leads to stepping over the limit and making detrimental tea. It is better to underdo it with the additives than to overdo it.

Dave

2. Federal Scientists For Sale!

http://www.ems.org/nws/2005/04/20/federal_scientis

Public Employees for Environmental Responsibility (PEER)
Posted by: Public Employees for Environmental Responsibility - archive
Posted on: Apr 20, 2005 @ 8:22 am[printer-friendly]

Contact: Chas Offutt (202) 265-7337

FEDERAL SCIENTISTS TOLD TO RAISE RESEARCH FUNDING
Each Must Generate \$110,000 a Year to Avoid Bad Performance Rating

Washington, D.C.— Federal scientists working for the U.S. Bureau of Reclamation have been ordered to raise funds to support their research projects or face unfavorable performance evaluations, according to documents released today by Public Employees for Environmental Responsibility (PEER). The scientists are tasked with finding private, state and other federal sponsors to buy the scientists' time.

These scientists are not trained in fundraising nor do their position descriptions include generating financial support. Nonetheless, to achieve a "fully successful" rating the scientists are to find sponsors willing to pay for 70 to 89 percent of their total time (called "billable hours") calculated on the basis of fifty-two 40-hour workweeks. As a result, each Bureau scientist at the GS-11 level or higher, for example, has to solicit between \$712 and \$848 per day to meet acceptable standards.

"These fundraising quotas pressure federal scientists to make their conclusions palatable to potential public and private sponsors," stated PEER Program Director Rebecca Roose. "This policy puts the dollar value above the quality or importance of the scientific work."

The new "Productivity Critical Element" for high-grade scientists set the following fundraising quotas for each "Performance Standard":

Unsatisfactory performance "is less than 50 percent of potential billable hours for the year, which is not adequate for the position. This equates to less than \$110,240";

Minimally Successful performance means “between 50 and 69 percent of potential billable hours for the year. This equates to a range of \$110,20 to \$154,336”;

Fully Successful performance indicates the “employee generates a workload between 70 and 89 percent of potential billable hours for the year. This equates to a range of \$154,336 to \$198,432”;

Superior performance requires the employee to generate a workload “in the target range of \$352,768 to \$529,152”; and

Exceptional performance means generating a workload “resulting in a target amount of greater than \$529,152.”

“Public agency science is not supposed to be a fee-for-service enterprise,” added Roose, noting that affected scientists who get sick or take family leave may fall behind in their “billables” and risk poor ratings. “Prowess in fund raising is how politicians, not scientists, are supposed to be judged.”

These new “marketing performance standards” apply so far to approximately 30 scientists working within the Bureau’s Ecological Planning & Assessment and Ecological Research & Investigations units located in Denver, Colorado. Similar entrepreneurial standards are being proposed for other units in the Bureau of Reclamation as well as other agencies within the Interior Department.

3. Recent References for Fluorescent Staining

Breeuwer P, Drocourt J-L, Rombouts F, Abee T. Energy dependent carrier mediated extrusion of carboxyfluorescein from *Saccharomyces cerevisiae* allows rapid assessment of cell viability by flow cytometry. *Appl. Environ. Microbiol.* 1994, 60(5): 1467-1472

Breeuwer P, Drocourt J-L, Rombouts F, Abee T. rapid assessment of yeast viability by carboxyfluorescein and flow cytometry. *Appl. Environ. Microbiol.* 1994; 60: 1467-1472

Breeuwer P, Drocourt J-L, Bunschoten N, Zwietering M, Rombouts F, Abee T. Characterisation of uptake and hydrolysis of fluorescein diacetate and carboxyfluorescein diacetate by intracellular esterases in *Saccharomyces cerevisiae* which result in accumulation of fluorescent product. *Appl. Environ. Microbiol.* 1995; 61(4): 1614-1619

Breeuwer P, Drocourt J-L, Rombouts F, Abee T. A novel method for continuous determination of the intracellular pH in bacteria with the internally conjugated fluorescent probe 5-carboxyfluorescein succinimydyl ester. *Appl. Environ. Microbiol.* 1996; 62(1):178-183

Catala P, Parthuisot N. Effectiveness of CSE to counterstain particles and dead bacterial cells with permeabilised membranes: application to viability assessment in waters. *FEMS Microbiology Letters.* 1999; 178: 219-226

Chrzanowski T H, Crotty RD, Hubbard J G, Welch R P. Applicability of the fluorescein diacetate method of detecting active bacteria in fresh water. *Microb. Ecol.* 1984; 10: 179-185.

Diaper J P, and Edwards C. The use of fluorogenic esters to detect viable bacteria by flow cytometer. *J. Applied Bacteriology* 1994; 77: 221-228.

Gazenko SV, Reponen TA, Grinshpun SA, Willeke W Analysis of airborne actinomyces spores with fluorogenic substrates. *Appl. Environ. Microbiol.* 1998; 64: 4410-4415

Kepner R L, Pratt J R. Use of fluorochromes for direct enumeration of viable bacteria in environmental samples: past and present. *Microbiological Reviews* 1994; 60(4): 641-696.

Lisle JT, Broadaway, SC, Prescott AM, Pyle BH, Fricker, C, McFeters, GA. Effects of starvation on physiological activity and chlorine disinfection resistance in *Escherichia coli* 0157:H7

McFeters G A, Yu F P, Pyle B H, Stewart P S. Physiological assessment of bacteria using fluorochromes. *J. Microbiol. Methods* 1995; 21: 1-13.

Parthuisot N, Catala P, Lemarchand K, J.Baudart and Lebaron P. Evaluation of ChemChrome V6 for bacterial viability assessment in waters. *Journal of Applied Microbiology* 2000, 89: 370-380

Porter J, Deere D, Pickup R, Edwards C. Fluorescent probes and flow cytometry: New insights into environmental biotechnology. *Cytometry* 1995; 23: 91-96.