

July/August 2005 E-Zine

1. Coming Summer 2005 Program Design by SFI
2. Bill Powers Badger Mountain Interview
3. Harvest Special on Total Foodweb Analysis

Elations from Elaine!

Been working on the compost book, and trying to recover from the trip back from OZ.

Went to a great meeting on Food, Soil, and Human Nutrition, at Ocean Shores just last weekend. What a great group of people, and focused on determining the linkage between human nutrition, health and the environment. Fascinating talks by many, many people.

Next year the meeting will be in Eugene, Oregon, and SFI hopes to have field and lab tours to let people see the linkage between soil health, plant health and human nutrition. Please plan on joining us!

Upcoming Events

Sustainable Studies Institute offers free classes!!

All Classes have been cancelled for 2005.

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

http://www.soilfoodweb.com/04_news/calendar.htm

October 19—20, 2005

Compost Technology

http://www.soilfoodweb.com/04_news/calendar.htm

October 20—21, 2005

Compost Tea Technology

http://www.soilfoodweb.com/04_news/calendar.htm

In-depth description of the three workshops are available as a PDF download.

http://www.soilfoodweb.com/04_news/pdfs/05_SSI_Workshops.pdf

For more information contact Twila at (541) 752-5066 or email info@soilfoodweb.com

Microscope class – September 12, 2005 Register now to secure your place!

Light Microscope Class - SFI Corvallis

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 \$425.00 or Leica CME-\$1400.00 (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 Nedra at (541) 752-5066 or email info@soilfoodweb.com

Start thinking about ACRES this December – Dr. Elaine will be presenting a seminar on soil microbiology, with an expert using EM inoculum to modify the soil. These presentations will go hand-in-hand, as Dr. Elaine explains what bacteria, fungi, protozoa, nematodes and microarthropods do in soil to retain nutrients, suppress diseases, build soil structure and reduce water use. How are these processes altered or enhanced by EM? What specific functions does EM do? A microscope course will be offered as well, but participants must bring their own microscopes, or purchase microscopes that will be made available at the course.

September 5—6, 2005

Texas Organic Farmers & Gardeners Assoc.

Compost Technology Workshop

San Antonio, Texas

Contact: Steve Bridges steve@texasgrown.com

September 7—8, 2005

Texas Organic Farmers & Gardeners Assoc.

Compost Tea Technology Workshop

San Antonio, Texas

Contact: Steve Bridges steve@texasgrown.com

September 9, 2005

Organic Pecan Field Day

Hamilton, Texas

Contact: Steve Bridges steve@texasgrown.com

1. Program Design by SFI Available Now

Soil Foodweb is pleased to announce a new, more in-depth consulting service for our valued clients, aimed at developing detailed management strategies optimized to meet the needs of the individual grower.

Based on information derived from our standard biological soil tests, along with client-provided soil chemistry analysis and management history of the field, we will work up a written step-by-step plan, compatible with the client's available equipment and resources, for improving the soil biology to remediate problems and increase yield and quality of the desired crop(s).

A typical plan will include—but not be limited to—identification and remediation of specific problems with soil chemistry (mineral deficiencies or surpluses) and structure (compaction, saturation), recommendation of nearby sources of quality compost, compost tea and other amendments, and a detailed schedule for application of amendments and follow-up testing. Particular emphasis will be placed on preparing the soil for planting in the Spring, maintaining its fertility through the growing season, and proper mulching or cover-cropping to protect it through the winter.

The yearly registration fee for this program will be \$55.00. Please contact us for more details.

2. Bill Powers Badger Mountain Interview

Organic Grower Profile: Badger Mountain Vineyard

Badger Mountain Vineyard in Kennewick, Washington was established in 1982 and certified organic in 1990. Proprietor Bill Powers bought the land as virgin soil and has since planted wine grapes on 76 acres. The Badger Mountain Winery uses all the grapes produced on this land, and also buys grapes from other vineyards. They produce 25,000 cases of wine per year, and market it in 46 states, the UK, Singapore and Japan. Their wines have won numerous awards over the years, including 1st place for Cabernet at the Los Angeles County Fair (1995) and frequent ribbons at the Eastern and Western Washington State Fairs.

SFI recently interviewed Mr. Powers. He graciously shared his thoughts about organic vineyard management, the unique challenges and advantages of growing wine grapes in a

desert climate, and the growing public interest in organically produced foods. The highlights of this interview follow:

SFI: How does your harvest compare, in both quality and total yield, to conventionally managed vineyards in the Kennewick area?

BP: Yield is the same, because wine growers restrict yield to concentrate the sugars and other flavors in the grapes. We do this by deficit irrigation: we restrict watering to reduce leaf and vine growth, which stresses the vines and makes them produce smaller, sweeter grapes. We get the same number of grapes per cluster, but they're about half the size of juice or table grapes. We harvest about 4 tons per acre, as opposed to 15 tons per acre for juice or table grapes. I personally think the organic grapes taste a little better, but that's hard to quantify. What is easy to quantify, is that wines made without sulfites taste distinctly fresher and better.

SFI: Eastern Washington has a hotter, drier climate than most grape growing regions. What are the drawbacks and advantages of this?

BP: The main advantage is much less fungal disease than in a wetter climate. We only get about 6 inches of rain a year, mostly in the winter, and it usually doesn't rain until late fall, after harvest. So mildew is rarely a big problem. We have warm sunny days and cool nights through the growing season. On an average of every 5 years we have a severe winter freeze, which kills back some vines and reduces the next year's harvest by around 30%.

SFI: What are your basic practices for organic vineyard management?

BP: We use a Weed Badger for weed control. We plant rye and vetch as a cover crop between the rows in summer, and mow it down in late spring. We leave the mowed material on the ground, and don't disc it in because that would produce too much nitrogen and make the vines and leaves grow too fast at the expense of the fruit.

We do a petiole test every spring at bloom time to assess the nutrients in the vine, and add minerals if needed.

Our soil is mostly volcanic ash from when Mt. Mazama (Crater Lake) exploded. All of Eastern Washington is covered with this to a depth of at least 8 inches, and in some of the valleys it's up to 15 feet deep. It's low in organic matter, but high in potassium, phosphorus and other minerals. pH is around 7.9, so we've never had to add lime or gypsum. It has a good texture for root growth. We water the new vines extensively and prune them back to establish deep roots.

We produce about 200 tons of pomace every year from processing 1,500 tons of grapes. We compost this and apply the compost as a ground dressing around the poorer vines, which often gives dramatic improvement.

And of course we use foliar applications of compost tea to control Powdery Mildew and other diseases.

SFI: How effective is the tea?

BP: It's very effective on certain varieties which have a natural resistance, but not as effective on Chardonnay and Riesling. For these I add a biological fungicide called Sonata [a *Bacillus pumilus* culture] which does an excellent job. Once veraison sets in and the grapes start to build sugars, the mildew season is pretty well over and I go back to plain tea.

SFI: How much tea do you have to apply per acre to achieve disease suppression, and how do you apply it to get good coverage?

BP: We use 25 gallons per acre. We use an AgriTech orchard and vineyard sprayer mounted on a tractor and drive between the rows. Early in the season, when there's less foliage, we go 2 miles per hour. Later we slow down to 1 mile per hour. Sometimes the big leaves cover the fruit clusters, so we spray each row from both sides to get as much coverage as possible.

SFI: What benefits, other than disease control, do you see from using the tea?

BP: We get better decomposition of the mowed cover crop. Petiole analysis shows higher sugar content in the sprayed than the unsprayed foliage—6% as opposed to 4%. And the sprayed leaves are big and glossy. Not that the unsprayed leaves are unhealthy, but the ones with tea just look healthier.

SFI: Your teas test out pretty well, with good biomass of beneficial fungi. What brewer are you using, and what recipe, to achieve this?

BP: We have Leon Hussey's improved 500 gallon machine. We use a mix of 50% Leon's fungal woodchip compost, 25% Alaskan Magic and 25% vermicompost. This should give the most variety of microbes. We use Leon's nutrient mix, 1 pound of alfalfa meal and 5 pounds of humic acid.

SFI: What advice would you give to a grower wanting to make the transition to organic management?

BP: I would say go at it wholeheartedly. Buy the best equipment because it's more reliable. Talk to other growers with years of experience. Most are really good people and happy to share their knowledge.

You need a good source of compost, that's been tested and shown to be consistently good. Never use untested compost. If you're going to make your own, shop around for the best food stocks you can get.

SFI: What are your thoughts on the future of organic agriculture?

BP: Public awareness and demand are increasing. Even 5 years ago there were no organic products in most supermarkets. Now every mainstream store has an organic section.

Academia has typically fallen behind growers in acceptance. Probably because so much of their research is funded by chemical companies. When I started out there was nobody at Washington State University could tell me anything. But now they've started their own organic research farm.

3. Harvest Special on Total Foodweb Analysis

If you know what isn't there that should be there, then we can fix it!

Once crops are harvested, it is time to prepare the soil for the next growing season.

To establish what biological amendments are required, at what levels, it is necessary to determine the current condition of the soil biology.

From August 15 through September 15 2005, SFI Oregon will be offering the Total Foodweb assay package at the reduced price of \$200 per sample.

For soil, this includes total and active fungi, total and active bacteria, protozoa, nematodes and mycorrhizal colonization of roots.

For compost and compost tea, the package includes all of the above tests except mycorrhizal colonization, and adds in E. coli and electrical conductivity/ salinity.

This special is being offered only by the Oregon lab, and is limited to readers of this E-zine. Please mention this notice on your sample submission form. The discount applies only to the total package, not to individual assays. Please call us at (541) 752-5066 with any questions you may have about sampling.