



Ecological Gardens Newsletter

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<http://www.ecologicalgardens.com/>

Soil fertility is the key to growing full-spectrum nutrient-dense foods that nourish the body as well as the soul. Jerry Brunetti, 2004 Acres U.S.A conference.

Food As Medicine

In December I attended an excellent conference “Food As Medicine, Farm As Healer” which examined the social responsibilities of ecological agriculture and the nutritional and medicinal qualities of food. Currently the pharmaceutical industry is spending vast sums of money to research the elements in food that give them their nutritional and medicinal values so they can manufacture drug analogs. The belief is that consumers will be more likely to spend their dollars on an antioxidant drug than on organic, antioxidant blueberries.

Today’s American diet has 5 times less minerals and 10 times less fat-soluble vitamins than the diet of the 1950s. This is not just a result of changing food preferences. It is also a result of consuming foods with low nutritional density. Since 1950 there have been massive changes in conventional agriculture and a rapid increase in environmental toxins. Heavy use of synthetic fertilizers and pesticides has killed many of the soil organisms that are responsible for making nutrients available to plants. One of the reasons organic foods have higher nutritional density is because they are grown in nutrient-rich soils. Nutritional value has also been lost as we moved animals from pasture to confinement. Vitamin D, a fat-soluble vitamin needed to absorb calcium and minerals, is 500% lower in animals raised in confinement¹ than pasture-raised animals. In this period of nutrient-poor foods and relaxed environmental enforcement, it is up to us, as individuals, to do what we can to eat foods that will strengthen our immune system and minimize the toxins in our bodies. It is in that context that I would like to pass along some of the nutritional information I learned at the conference.

¹ The following websites contain information on where to purchase grain-fed beef and organic products - www.landstewardshipproject.org/foodfarm-main.html and www.thegreenguide.org/article/food/coops.

Foods that Strengthen the Immune System

- Calcium is key to maintaining an optimal acid/alkaline balance and improving nervous system function. Greens (collards, kale) and dairy products are good sources of calcium.
- Phosphorus is key to absorbing glucose. Legumes, nuts, and protein-rich foods are good sources of phosphorus.
- Magnesium is the most common deficiency in the US. It is needed for energy metabolism, protein synthesis, good muscle function, and is frequently tied to infertility problems. Green vegetables, nuts, seeds, and some whole grains are good sources of magnesium.
- The potassium:sodium ratio should be 2:1 in the foods we eat. In the US it is currently 1:5. Potassium works with sodium to maintain the body's water balance. Carrots, celery, greens, apricots, avocados, and banana are good sources of potassium.
- Sulfur is the fire in food. It is a detoxifier, improves joint flexibility, helps regulate glucose absorption, and reduces inflammation. It is found in red hot peppers, garlic, onions, mustard, kale, and arugula.
- Copper is a trace mineral found in all body tissues. It helps absorb iron, regulate and stimulate the brain, and support nervous and glandular function. Copper is found in organ meats, shellfish, legumes, and mushrooms.
- Manganese works with enzymes to regulate metabolism, break down proteins and carbohydrates, and regulate blood sugar. It is found in nuts, whole grains, oats, and black tea.
- Boron reduces the risk of osteoporosis and prostate cancer. It is found in fruits, legumes and nuts.
- Iron is an essential ingredient for the formation of hemoglobin. It is found in organ meats, tuna, broccoli, molasses, and bokchoy.
- Molybdenum is a detoxifier and plays a role in the metabolism of sulfur-containing amino acids. It is found in lentils, spinach, brown rice, cauliflower, and wheat germ.
- Iodine is another important deficiency in the US because it is neutralized by chlorine and fluorine. Iodine helps decontaminate bromine and reduces cancers of the prostate, breast, ovaries, and thyroid. It is found in seafood, sea vegetables, fermented foods, eggs, and free-range chickens.
- Selenium deficiency is a contributor to HIV and brain disorders. Selenium helps decontaminate mercury, lead, aluminum, and cadmium. It is found in seafood, brazil nuts, and garlic.
- Omega 3 fats are important for good hormone and endocrine function. They are found in grass-fed animal products (eggs and meat), coldwater seafood, and flax.
- The potent colors or pigments in fruits are sources of chemicals important to endocrine balance and tissue repair:
 - Grapes contain resveratrol
 - Blueberries contain anthocyanin
 - Blueberries, strawberries, and raspberries contain antioxidants
 - Cranberries contain phenols

- Tomatoes and grapefruit contain lycopene

Foods that Neutralize Toxins and Kill Pathogens

- Fermented vegetables such as cabbage, relish, kimchee, and chutneys contain anti-pathogenic acids that kill pathogens.
- Coconut oil kills pathogens and is good for gastrointestinal health.
- Cloves, cinnamon, ginger and allspice are antibacterial spices.
- Essential oil of basil (found in the leaves) inhibits several species of pathogenic bacteria that have become resistant to commonly used antibiotic drugs. Studies have shown that washing produce in a 1% solution of basil or thyme significantly reduces infectious bacteria.
- Cilantro and coriander help decontaminate mercury. Eat them with seafood.
- Parsley helps clean the blood and rid the body of toxins.

New Landscaping Products for 2005

These products are particularly designed for people who want to jumpstart their edible gardens. The designs are based on summarized knowledge of good plant companions and the ecological needs of plant guilds. If you are interested in more information on these products, call (612.588.3942) or email Ecological Gardens (paula@ecologicalgardens.com).

Herb and Edible Flower Spiral. The herb and edible flower spiral contains 13 different edibles in a 5' wide semi-circle. Herbs are an important part of any garden and any diet – they are aromatic... they impart flavor to foods... they have medicinal qualities... they are good at attracting beneficial insects (natural pest control)... or repelling pests. Edible flowers can be used in lettuce or fruit salads. The planting location should have a minimum of 6 hours sunlight.

Cherry, Apple or Apricot Guild. The fruit tree guilds are designed as sustainable plant communities where, over time, the needs of each plant will be met by other plants in the community. The guild includes nitrogen-fixers, insectories, pest repellents, weed suppressors, and mulch makers. Most of the plants are perennials and have edible fruit, flowers, or shoots. The planting location should have a minimum of 6 hours sunlight and be 8' by 8' for the cherry guild or 16' by 8' for the apricot and apple tree guilds. See www.urbanharvest.org/gardening/designing_garden_guilds.html for background information on guilds.

Keyhole Companion Garden. The keyhole garden is a complex companion garden with 18 different fruits, vegetables, herbs, and edible flowers. A perennial bed is at the center of the keyhole and contains strawberries, bachelor buttons, asparagus, and coreopsis. Radiating out from the center are 6 annual beds of companion plants. The planting location should have a minimum of 6 hours sunlight and be 13' by 9'. See <http://sustainability.wollongong.nsw.gov.au/organic2.htm> for background information.

New Soil Building Products for 2005

Compost Tea. We are thinking of offering a new service this season – organic compost teas to jumpstart soil health. Compost teas are scientifically formulated to inoculate the soil with a full complement of soil organisms. The balance of organisms determines what plants will grow and thrive in a particular soil. A compost tea for lawns will be different than a compost tea for annual gardens or perennial gardens. If you would be interested in using compost tea solutions for your lawn or garden this growing season please let us know. If you would like to learn more about Compost Tea click on this audio link from National Public Radio and listen to a story from Oregon www.npr.org/programs/talkingplants/features/2002/compost/index.html or visit the website www.soilfoodweb.com.

Upcoming Events (not to miss)

- **Feb 21st and 22nd.** “**Minnesota: A History of the Land**”. An epic four-part documentary that brings to life the landscapes of Minnesota’s past and the people who changed them. Showing on Twin Cities Public Television tpt2 Monday and Tuesday, Feb 21 and 22 at 8pm. www.historyoftheland.org
- **April 30th – May 1st, Living Green Expo.** Over 200 Green exhibitors, 100 workshops, food, dance, and song at the Minnesota State Fair Grounds in St Paul on Saturday, April 30th and Sunday May 1st from 10am-6pm. Ecological Gardens is organizing the Yard and Garden exhibitors and workshops for the Expo. For more information visit the website, www.livinggreen.org.
- **May 6th – May 8th, Friends School Plant Sale.** The largest plant sale in the Midwest is a fundraiser for Friends School in St. Paul. It will be held at the Minnesota State Fair Grounds on Friday, May 6th – Sunday, May 8th. On Saturday, Ecological Gardens, will be selling greenhouse plants.

We could use your help in designing more plant communities.

Are there problems in your landscape that you would like to have a plant community designed for?

Are there assets in your landscape - particular trees, water features, etc - that you would like to have a plant community designed for?

Send any suggestions or ideas to: paula@ecologicalgardens.com

Enjoy the rest of the winter!!

For information on upcoming events:

http://www.ecologicalgardens.com/upcoming_events.cfm

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