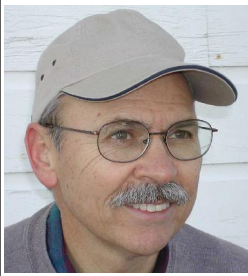


Editor: Christine Buss, christine@cmbuss.com

Field Notes by Steve Tiwald



Soon we will be wrapping up successfully our second vegetable growing season at the Green Earth Institute farm. The final harvest of 2004 will take place

during the last week of October, concluding a cycle that began nearly a year earlier, actually, when we planted garlic bulbs in November of 2003. The planting resumed in February of 2004 and continued into August. A tremendous amount of work has gone into producing this year's crop, and it's nice to hear the enthusiastic response we are getting from the CSA participants week after week during veggie pickup.

Already I am looking forward to the 2005 season. Ideas for enlargement and improvement have been coming to mind for the past few weeks. We will expand our vegetable acreage to over 4 from the current 2.5 acres. We'll introduce at least five additional crops—snap peas, Brussels sprouts, cauliflower, fennel, and tetragonia (New Zealand spinach). Improvements will include more sequential planting of salad greens so there's a steady flow through the season.

We are now opening registration for the 2005 CSA program. Capacity is expanding to 130 shares, and with all of the enthusiasm being shown for the freshness, flavor, and high nutritional value of our Green Earth vegetables, I'm sure there will be no problem reaching that number. I encourage you to sign up early, using the form in the yellow brochure included with this newsletter mailing, or printed from our website, www.GreenEarthInstitute.org, in order to secure your preferred pickup date. The brochure explains how the CSA works. If you have any questions, send a note to csa@GreenEarthInstitute.org or phone 630-664-5681.

Nourish Your Child's Brain by Philippa Norman, MD, MPH

I derive a certain perverse pleasure in sneaking flax oil into ketchup (tee hee, I just made it healthier!) Do my children thank me for helping them maintain healthy brain cell membranes? Not yet, not until they are 40 and sprinkling flax seed on their own kids' cereal, I suppose. Though I give them flax at home, I wonder if they will be able to make the best choices for themselves as they live in this culture that pushes junk food and disregards the needs of a growing child's brain.

Though food processing began as a way to increase availability of foods, it has become a renegade public enemy, with fluorescent green condiments, bits of candy served for breakfast, and snack cakes that won't spoil for years. What has been the impact of poor nutrition on our children's brains? How has it influenced their emotional well-being? In some cities, nearly half of school children (and their parents) are on medication for ADD. Many children are depressed, anxious and tired. Others have behavior problems and seem to lack impulse control. Even if they do not have these problems, they live in a world replete with potential threats to their brain health: pesticides with hormone-like activity, toxins that damage membranes and DNA, and stress levels that throw their brains into a state of unrest, short-circuiting their ability to learn and diverting energy reserves that could be used for creativity and higher level processing. Eating the typical, unconscious American diet certainly takes its toll.

What are the foods needed by the brain? What does food have to do with learning? As your child learns, his brain responds by growing and changing physically. When she learns something new, the neuron processes this information and it is retained in the cell. When she connects what she

learns to previous knowledge, she sprouts a dendrite, a tiny cellular arm, connecting that cell to the one that retains the previously learned information. This process of brain growth is dynamic and lifelong, and involves an interplay between the learning environment, the individual child's learning style and the availability of nutrients necessary to form neurotransmitters and cell membranes, and to maintain growth and cell repair. Zinc, a trace mineral found in seeds, nuts and meats, is a key mineral in processing memory and regulating mood. It is also an essential growth regulator for brain cells, balancing the process of growth and pruning of brain cells that occurs as we learn. Essential fatty acids, contained in fish, seeds and nuts are needed to form pliable, healthy brain cell membranes. Cell membranes are needed to form storage packets for molecules of chemical messengers, transport nutrients and water along membranous highways within the cell, and maintain high-speed electrical conduction. Vitamins, minerals and phytonutrients, abundant in whole foods, drive chemical reactions in the brain and protect it from damage. Nourishing your child's brain is truly a powerful way to help him function at his best, maintain a more even mood, think more clearly, and handle stress better.

Here are some basic guidelines for choosing the best foods to nourish your child's brain (and your own):

Eat whole foods. Children can learn to eat food "the way it grows" when they understand what their brain needs to work well. They can be taught that nature makes the best food for them. They can learn that their brain is like a factory that uses ingredients from

(Continued on page 2)

Nourish Your Child's Brain (continued)

(Continued from page 1)

whole foods to make brain chemicals that help them to feel emotions, think, learn, play sports, dance, remember songs, and all of the other things they like to do. A child who eats too many sweets and feels groggy, or who has skipped a meal and feels cranky, has just offered you a wonderful teaching moment.

Eat all color groups every week. Powerful phytonutrients impart the bright colors of red bell peppers, purple grapes, and dark leafy greens. Each group of phytonutrients has specific properties that promote brain health and protect from oxidative stress, a process of cell damage often caused by environmental toxins, that ravages cell membranes like a molecular wildfire that can only be quenched by antioxidants. Living in this world makes an antioxidant-rich diet a necessity, not an option. It is hard to play "catch-up" with oxidative stress. By the time you notice its effects, the process has been extensive. It is far better to have a daily diet rich in phytonutrients.

Balance Intuitively. There are many diets on the market. They may help you and they may not. The only thing for sure is that each of us is unique. From a palette of whole foods, find the mix of grains, protein foods, fruits and vegetables that helps you feel the best. For an alert brain, have a

breakfast that includes protein and slow-burning complex carbohydrates. I often tell students to have split pea soup or chicken and rice for breakfast to generate the most brainpower in the morning.

Check for allergies/intolerance. Common allergic foods include milk, eggs, corn, and wheat. Signs of food allergy or intolerance range from bloating and skin problems to behavior problems, foggy thinking, and depression. To check for food allergies and intolerance, you can eliminate the food for a few weeks and then reintroduce it, checking for changes in how your child feels. You can also work with practitioners who specialize in allergy testing and treatment. Be aware that overuse of antibiotics, some pain medicines, and high sugar diets create an unhealthy "leaky" intestinal tract that may lead to food allergies.

Drink water. Water hydrates brain cells so they can function optimally. Brain cells contain storage packets for water reserves. Your brain really notices when you are dehydrated and you will likely feel groggy or feel you aren't thinking at your best.

In addition to nourishing the brain with food, practice balanced living for a balanced brain. Sleep promotes cell repair and growth. Play creates endorphins and promotes creativity. Sunshine stimulates vitamin D produc-

tion, and helps regulate circadian rhythms that influence our ability to remain alert.

Beyond all the science of food is the matter of being whole and connected with the source of our food. Food is energy. Earth is our home. Our health and well-being depends on making a shift to sustainable, whole living that honors our earth home and trusts what it yields for us, and which we in turn care for. How can children learn this if they think fruit is canned peaches, or peas come in a can? Seeing the universe in action, sprouting seeds that they plant, and then munching on the tasty results of their efforts, helps children to understand and appreciate food and develop a sense of caring for the Earth.

It can be a lot of work to feed your children's brains, and to teach them to make the best choices. Nourishing your child's brain is a lot like growing a garden. It takes daily attention, vision, and loving choices. You will reap what you sow: underlying laws that govern the universe are at the core of all functions in our bodies and minds, as well.

Dr. Norman is a holistic physician who participates in Green Earth Institute activities. She is author of Feed Your Brain: How to Boost Your Brainpower With Food, and works with families and schools to promote nutrition and health. Contact her at (312) 958-4545 or pjnorman4@yahoo.com or visit www.GrowingTreePress.com.

Membership and Contribution Form

I want to help the Green Earth Institute promote nutritional health and ecological sustainability.

Name: _____

Address: _____

City/State/Zip: _____

Email: _____

Phone (Day): _____

Phone (Evening): _____

My contribution is:

- ___ \$35 Individual member
- ___ \$50 Household member
- ___ \$125 Contributing member
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- ___ Other _____

Please clip this form, fill it out, make your donation payable to Green Earth Institute, and return it to:

Green Earth Institute
10 S 404 Knoch Knolls Road
Naperville, IL 60565-5447

- I am interested in learning more about committee activities—
- ___ Nutrition in the Schools
 - ___ Renewable Energy
 - ___ Education

- Add my name to the email list to be informed when there will be volunteer work opportunities at the farm, on:
- ___ Weekdays ___ Saturdays ___ Both



Book Review: Feed Your Brain

by Kris Beckett

We all know we cannot be with our children 24 hours a day. And as they get older, they are exposed to more and more choices that aren't what we would select for them. The book Feed Your Brain by Philippa Norman, MD, MPH (Growing Tree Press, 2004) puts the tools for making brain-healthy choices in the hands of those who will ultimately be making those decisions—our children. Because it is written for the middle grades, this book is a great tool for your children to have in their toolbox as they navigate their way through middle school cafeteria lines and vending machines choices.

The author's style is clear and concise. The book is presented in an interesting and non-threatening manner, at a reading level that encourages reading for fun. This book is meant to be an enjoyable read, not an educational text. There are engaging photos of children and lovely illustrations which serve to break up the written information. There are summaries after every chapter, reemphasizing the important points. Interactive quiz-type pages are included which encourage participation by the reader. I especially liked the periodic questions sprinkled throughout; these serve to get the reader thinking without requiring an immediate answer.

She begins the book with general information on the brain (its functions and its requirements), and how different foods affect the brain's functioning. Dr. Norman's explanation of the Power Group (proteins, complex carbohydrates, good fats, vitamins and minerals) is in easy to understand lan-

guage. She gives several examples of each. She also points out how High Energy Brain Food can be manipulated to become Tired Brain Food (she used the example of vanilla yogurt with fresh fruit vs. blue yogurt with red flavor gel mixed in and sprinkles). I found this to be particularly valuable in helping my children discern the difference between truly healthful food and the packaged imposters.

In another section the reader can "sneak a peak" into the lunchboxes and backpacks of some children and choose good lunches or snacks for them. This section has photos of real children, tells a little bit of their "story" and lets the reader choose the appropriate snack. It's a great opportunity for the kids to show off what they learned, and an excellent reminder of the power of their choices.

There is a chapter entitled "7 Keys to Your Smartbox," which gives students tangible guidance on how to succeed in learning. I love this chapter because it recognizes the different ways in which individuals learn, and suggests ways your children can increase their learning success. The readers can really understand that their choices are influencing how well they learn. They gain an understanding of their responsibility for their own learning. The book empowers them by giving them hints to make positive changes. These are not one-size-fits-all kind of hints either. Dr. Norman understands and appreciates the different ways some children best take in information and she incorporates that knowledge in her hints.

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Nutrition in Schools—Changing the Way Our Children Eat

by Kate Mason

Despite an alarming increase in childhood obesity, many American schools are putting our children's health on the back burner. Seduced by the justification that kids "just don't like healthy food," our children are being offered snacks and lunches that are devoid of nutritious content and contain many ingredients linked to numerous health problems.

We have reached a point in our culture where children have become accustomed to fast food and "lunchables" as meals, and donut holes as snacks, so that they do indeed give a puzzled look to anyone offering them whole wheat bread and carrot sticks. Here's a challenge: Walk down the aisles of most American supermarkets and try to fill your cart with natural wholesome food. This task, even for an adult, can be akin to finding a needle in a haystack.

There are a growing number of parents and policy-makers, however, who are determined to make wholesome food available to children during the day. Many schools across the country are offering innovative alternatives, such as purchasing local foods from small and medium sized farms for school meals and establishing school gardens, as alternatives to the traditional hot lunch program.

The Green Earth Institute's Nutrition in the Schools Committee is a group of individuals committed to promoting healthy eating in schools, families, and in the community. Kim Kroeger is a committee member who has taken action in her

children's school, Prairie School in Naperville, to combine more nutritious food choices with education. Beginning September 22, through an alliance with Angeli's Restaurant Catering division of Naperville, children attending Prairie will have an improved menu on Wednesdays. Prairie students can now dine on corkscrew pasta or macaroni and cheese containing whole wheat semolina; quesadillas made with whole wheat tortillas; salad and fresh seasonal fruit. Parents and students received information noting the removal of high fructose corn syrup, hydrogenated oils, and dyes from the old menu.

Realizing that drastic changes are sometimes hard to accept, Ms. Kroeger has wisely maintained the same types of food selections that children have grown accustomed to while replacing the undesirable ingredients with fresher more natural ones. Like a healthy wolf in sheep's clothing, Ms. Kroeger is contributing to children's health one bite at a time.

The Nutrition in the Schools Committee works with parents, teachers, administrators, health professionals, and students to improve nutrition and nutrition education. If you are interested in participating, contact Sue Gately at 630-653-3171.

—Kate Mason

Kate lives in Naperville with her husband and two daughters, ages 4 and 8.

IN THE NEWS

Environmental Factors the Major Cause of Cancer

BETHESDA, Maryland, June 28, 2004 (ENS) - Most cases of cancer are linked to environmental causes, U.S. government scientists report. Cancer is the second leading cause of death for Americans, after heart disease.

Cancers linked to environmental causes make up at least 80 percent of all cancer cases, according to a new report by the National Cancer Institute, published with the National Institute of Environmental Health Sciences. Environmental causes include exposure to agents in the air and water as well as lifestyle factors such as smoking and diet.

"Most epidemiologists and cancer researchers would agree that the relative contribution from the environment

toward cancer risk is about 80-90 percent," said Aaron Blair, Ph.D., the chief of the Occupational Epidemiology Branch in NCI's Division of Cancer Epidemiology and Genetics. "There is very solid evidence that environmental factors are the major cause of cancer," he said.

"When I use the word environmental, I mean it in a broad sense to include both lifestyle factors such as diet, tobacco, and alcohol, as well as radiation, infectious agents, and substances in the air, water, and soil," said Dr. Blair in the June 17 issue of the NCI publication "Benchmarks."

From The Environment News Service June 28, 2004, www.ens-newswire.com.



Studies Show: Healthy Diets, Healthy Brains

July 22, 2004, as reported by Just-Food.com: Harvard study suggests women who eat green vegetables may reduce their memory loss due to aging.

The study performed at Harvard's Brigham and Women's Hospital found that women in their 60s who ate more cruciferous and green leafy vegetables containing B vitamins and antioxidants such as broccoli, cauliflower and spinach went on to show less overall memory loss in their 70s.



Book Review: Feed Your Brain (continued)

(Continued from page 3)

Her "7 Keys to Unlocking Your Smart Box" are:

- Get Your Brain Ready to Learn (be organized and prepared)
- Fitness
- Study Skills
- Sleep
- Confidence
- Relaxation
- Run a Clean Memory Machine (avoid tobacco, alcohol and drugs)

The appendix discusses goal setting and other steps toward making positive life changes. There are worksheets included, and though I'm sure they are intended for use by the children, they are valuable for anyone who wants to make life changes because they spell out the process in such nice little baby steps. I recommend that you make copies and have enough to have around.

It's great that I like this book, but I am not the intended audience for Dr. Norman's words. Let's hear from someone who is.

Hello! My name is Zoe Beckett and I'm a sixth grader at Madison Junior High. I read this book and it was terrific. What I liked about this book was how they showed different kids and what they should put in their lunchbox or what they should have for a snack. I liked that part because I liked

the pictures and the chance I had to make the choice for the kid. I liked the kids because they looked like me and my classmates and I could imagine them being at my school. I learned that a lot of foods are harmful to your brain, like fried stuff, candy bars and sugary drinks. I also learned why my mom never buys me Cap'n Crunch or Lucky Charms. That stuff makes you get tired easily and it seems to zap your energy so you can't do stuff like play sports, learn piano, or pay attention in class. It's also important for my brain that I get enough sleep and get plenty of exercise. I know if I take care of my brain, other good things will happen with my body, like clearer skin and a good body weight. I've decided to make a positive change in my life by choosing healthy food at lunch time. I am going to make this change so I can pay attention in school and be the best student I can be. I am going to use the goal worksheet to work on this. This book is a fun and interesting way to teach kids why it's important to eat healthy and also it's easy to read, so kids all ages can read it.

Philippa Norman has written an appealing book for middle grade kids. With her writing style and the layout of the book, she clearly knows her audience. Though written for 5-8 graders, the book can be shared with younger children too. I personally plan to share it with my 3rd grader, because the sooner she understands the nutrition-brain function connection, the better!

Nature News from the Farm: Presto-Change-O!

by Judy Fitchett



It only took 22 days for the teeny, tiny caterpillar to change into a beautiful Monarch butterfly. The white, black and yellow striped larva, not much more than 3/8 inch long, fell onto my hand as I weeded the garden. I figured it was Providence since I had been searching fruitlessly among the milkweeds at work for a leaf with an egg that I could watch hatch. I quickly re-located the caterpillar to a cheesecloth covered jar and watched as it turned into a munching machine. Each day for 10 days it ate, and ate, molting its skin, increasing its size to about 2 inches. In human scale, that is like a newborn baby growing to the length of several football fields! One morning the caterpillar was hanging upside down on the cheesecloth in a "J" shape, and began the transition to the pupal stage. Attached by strong "silk" to the cheesecloth, it wiggled in circles as it shed its skin from head to tail. Within thirty minutes, it was a translucent lime green and gold jewel hanging from the top of the jar. Nothing representing the original caterpillar remained. The miracle of metamorphosis was unfolding in the jar.

Inside the chrysalis, or pupal case, big changes took place over the next 10 to 11 days. Strong jaws turned into a long, delicate curled tongue; six stubby front legs lengthened; antennae grew; and 4 large wings developed, folded and crumpled in the chrysalis. The color of the chrysalis changed - areas darkened and the wing pattern became visible. The adult emerged from the chrysalis wet and crumpled. It freed itself from the sac and pumped blood into its wings until they were stiff, then gently fanned the wings until they dried. As I gently placed it on a purple coneflower, the Monarch butterfly's long tongue unfurled and it tasted its first meal of nectar.



Metamorphosis means "change in form." In the case of the Monarch butterfly, this form of metamorphosis is called complete metamorphosis - proceeding from a tubular, crawling, chewing caterpillar (larva) to a chrysalis (pupa), where it rests, and finally to a flying, sipping butterfly (adult). Its immature and adult forms are completely different animals with different needs and habits! Many insects and most amphibians undergo similar dramatic changes in form and function. Metamorphosis time differs with the species and habitat.

So, this fall as we watch the Monarchs gather to migrate, or see the garden toads seeking winter shelter, it is worth it to take a few moments to appreciate the wonders of and complexity of nature.

Judy Fitchett is Director of Education and Outreach for The Conservation Foundation

2005 CSA Shares Available

Signup is now underway for the 2005 season of the Green Earth Institute CSA. Look for the yellow CSA flyer distributed with this newsletter, or print it from our website, www.GreenEarthInstitute.org.

CSA stands for community-supported agriculture, a concept in which consumers are involved directly with food growers, enabling the consumers to know who grows their food and what methods are used. The consumers purchase a share of the harvest, in advance. For Green Earth's CSA, over 40 vegetables and herbs are grown at the Institute's organic farm in south Naperville. CSA "shareholders" come to the farm once a week, at a designated time, to pick up their vegetables. The 20-week harvest season runs from mid-June through the end of October. For the 2005 season, 130 CSA shares will be available, half with a pickup

time of Tuesday between 5:30 and 7:00 p.m., and half with Friday between 3:30 and 5:00 p.m. as their pickup time. The cost is \$530 (\$520 if received by November 30, 2004). An alternate payment plan is available, allowing half of the total to be deferred for three months. Registration is on a first-come first-serve basis. Interested persons should submit their completed form from the CSA flyer, along with payment, as soon as possible in order to assure themselves a share.

Green Earth CSA members are not required to work on the farm, but many shareholders volunteer and enjoy planting, cultivating, harvesting, and other tasks involved in growing their food. If you are interested, indicate in the volunteer section of the signup form. If you have questions, email to CSA@GreenEarthInstitute.org or phone Steve Tiwald at 630-664-5681.

Wish List

To expand the acreage we use, we will need more farm machinery. Donation of a tractor and/or implements, such as seed drill, cultipacker, rototiller, flail mower, stalk chopper, cultivator, and wagons, would be greatly appreciated.

Green Earth Institute is a 501(c)(3) nonprofit organization and donations are tax deductible to the fullest extent of the law.



10 S 404 Knoch Knolls Road
Naperville IL 60565

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Our Mission:

Promote nutritional health and ecological sustainability.
Using our organic farm as a demonstration and learning center, we grow
healthful vegetables in an earth-friendly way and educate about
nature, nutrition, and caring for the earth.



Phone: 630-664-5681
info@GreenEarthInstitute.org
www.GreenEarthInstitute.org

Thank You

On the farm: Tina Arapolu, Caesar Arturo, Kris Beckett, Jen Burak, Clare Butterfield, Susan Camasta, Patsy Carrow, Larry Christensen, Art Cigoy, Jamille Curtis, Nancy Dabrowski, Bill Dawe, Charlene Doland, Daniel Doland, Jeff Duncan, Susan Ernst, Chris Farthing, Scott Farthing, Lauren Fulner, Adrienne Gagnon, Jane Gano, Joe Gano, Sue Gately, Dominic Geraci, Zena Goldenberg, Jennifer Hammer, Hawk Hammer, Clay Hammer, Howard Hammer, Dee Kahn, Jenna Kahn, Janet Knight, Jessie Koltjes, Kim Kroeger, Lorraine Morrall, Sue Okarma, Ginny Pace, Jack Pace, Alison Ritch, Charlie Ritch, Ryan Roth, Ruth Schoenfeld, Brian Starr, Ike Swetlitz, Candy Van Tine, and Karen Woytowich.

Newsletter: Chris Buss, Carole Koch, Linda Baird

Accounting: Jack Pace

Education programs: Judy Fitchett, Sue Okarma

Website: Brian Maggi

Also thanks to Chuck Horvath for donating a used automatic washing machine to aid our lettuce-spinning work, and to Dennis Cherry for donating beef manure for fertilizing our fields.

