SEEDS OF CHANGE eNewsletter #63, September 13, 2007
http://www.seedsofchange.com/default.asp
100% Organic Seeds and Food

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IN THIS ISSUE

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DEAR ORGANIC GARDENERS,
http://www.seedsofchange.com/enewsletter/issue_63/dear_gardeners.asp

Harvest time always inspires hope. In spite of the dire environmental news that bombards us daily, sitting down to a meal of freshly harvested food, or simply strolling through the abundance of a late summer garden, seems to restore one's faith in the earth to heal itself and provide for the needs of its creatures. Like the harvest season, this eNewsletter is full of hope (and a little dire news).

Our interview this month is with Alan Kapuler, Ph. D., the former Research Director of Seeds of Change and an exceedingly hopeful individual. Alan has worked for over thirty years to breed robust, nutritious and beautiful cultivars for the public domain. Besides his insights into what it takes to save seeds and breed your own varieties, Alan reports some astonishing new discoveries in microbiology that could revolutionize organic agriculture.

On another hopeful front, Kelle Carter, Seeds of Change Farm Field Manager, reports back on a recent workshop in Agroecology. People from all over the world came together to learn how to design more sustainable, community-based, food systems. In her farm report she describes how some of the techniques she learned are being implemented on the Seeds of Change Research Farm.

In the disease corner this month, Seed Pathologist Emily Gatch provides some important information about Curly Top Virus. And finally, our News and Views section is full of hope and a bit of despair. It lists permaculture workshops that are happening all over the country, including at our own Research Farm, as well as reports on how organic agriculture can feed the world, but is balanced by reports on the connection between childhood disease and environmental pollution, and the gross under-funding of organic agriculture research.

While there is only so much we can do to change the stream of news flowing our way, good or bad, we can grow our gardens and reduce our own ecological footprint in the process. So this year as you are harvesting and enjoying the flavors, scents, and visual beauty of the garden, take pride in the fact that, although our planet faces many challenges, you are part of the solution.

Harvest hope,
Scott Vlaun,
Editor

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AGROECOLOGY CLASS AT UCSC
by Kelle Carter
http://www.seedsofchange.com/enewsletter/issue_63/Agroecology.asp

Last month I was fortunate to join forty people from eleven different countries to attend a class on "Action Education and Training in Agroecology" at the University of California at Santa Cruz. The class was an intensive short course made up of lectures, field trips, and hands-on applications. Stephen R. Gliessman, professor of Agroecology at UCSC and author of Agroecology: The Ecology of Sustainable Food Systems, led the class, along with other visiting professors from the US and parts of Latin America. It was an exciting time to congregate with others interested in the field of sustainable agriculture. People came from all over the world to attend—Japan, South Africa, Samoa, India, Mexico, Canada, and Benin. It was interesting to hear their thoughts and ideas, and to perceive how this movement is shifting farmers' ideologies in other parts of the world.

Agroecology is defined as the application of ecological concepts and principles to the design and management of sustainable agroecosystems. This encompasses the interactions of individual organisms such as plants, animals and microorganisms within an agricultural system. Natural resources such as soil, water, light, the atmosphere, fire and biotic organisms are also considered as factors that combine to form the environmental complex. The human impact on the ecosystem is an extremely important dynamic to be considered within the agroecosytem, one that was an intense focus of the class.

Throughout the two-week class, we examined case studies of the conversion of conventional farming systems to more sustainable approaches to production. One example of this is the work that Steve Gliessman and other researchers and farmer collaborators have been doing over the past 20 years to create the an organic strawberry market in California. Producing conventional strawberries uses an excessive amount of chemical inputs, creating unhealthy work environments for farm laborers, as well as having lasting harmful effects on the local ecology. One of the biggest pest threats on strawberry growers is the lygus bug. This bug essentially sucks out the juices of the berry, creating a "cat face" effect that makes the berry unmarketable. After years of experimentation, Steve and his team have discovered that planting alfalfa within the rows of strawberries attracts insects that prey on the lygus bug. This technique is essential for the organic berry market, and has also recently been adopted by conventional growers to reduce pesticide usage. Click here to read more information on this important research.

Another focus of the class was how to link agroecology with the ecological and social aspects of community to create local food systems that incorporate and preserve traditional cultures. According to Gliessman, "The impersonal global food system has inexorably diminished the role of food as a cohesive force in the creation and maintenance of communities... Restoring the fundamental role of food as a bonding force for community is beneficial not just for communities, but for the food system as well." We spent one day of the class in the Salinas valley visiting the ALBA farm, witnessing how progress is being made tward linking food with community. ALBA, the Agriculture and Land-Based Training Association, has created an educational facility where aspiring farmers can learn all the ins and outs of farming. The ALBA farm provides over 100 farmable acres to people who have completed their training course, at a cost much lower than that of local land leases. They also have a market for the produce grown, called ALBA Organics, that provides organic food to local schools and hospitals. This groundbreaking program is reviving the small-farm movement in central California, and making farming a reality for many families. For more information, check out www.albafarmers.org.

Another learning tool for the class was the 25-acre organic farm on the UCSC campus, operated by the Center for Agroecology and Sustainable Food Systems. This farm is dedicated to increasing ecological justice in the food and agriculture system through research, education and public service. The farm provides an educational opportunity for 40 apprentices who live and learn on-site for six months. All the organic produce from the farm feeds UCSC staff and the general public through a CSA and weekly farmers market. The farm has been in operation for 40 years. For information on the apprentice program or farm tours, visit www.casfs.ucsc.edu.

I left Santa Cruz with a greater understanding of how sustainable farming practices such as no-till farming, bet-

ter soil management, and weed control can be applied to our farm. I also gained an awareness of the theories and practices involved in agroecology, and how these concepts can be incorporated within our research farm. Aside from expanding my experience and knowledge on the subject, I also acquired a new sense of hope and encouragement to continue our work of bringing organic seeds to the market place. Organic sustainable agriculture is an important way to conserve the environment, the health of humans and animals, and preserve our rural communities and cultures. I encourage everyone to work for what you believe in. Every little bit helps to make a big impact.

by Kelle Carter
Farm Field Coordinator

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FARMER INTERVIEW WITH ALAN KAPULER
(third in a series)
by Scott Vlaun
http://www.seedsofchange.com/enewsletter/issue_63/farmer_interview_three.asp

Alan Kapuler is considered by many to be the founding father of the organic seed movement. He was the first Research Director of Seeds of Change and, along with his wife Linda and his three daughters Kusra, Elyria, and Dylana, has been saving seeds and breeding plants for over thirty years. His Peacevine Cherry tomato, Rainbow Inca Corn and other varieties have become known throughout the world and are still mainstays of our seedlist. For fifteen years I've had the pleasure of visiting with Alan on his research plot and having my ideas about gardening, plants, soil and life expanded. The following lively and wide ranging discussion about plant breeding and the latest developments in soil microbiology took place in Alan's seed room on October 13, 2006. S.V.

Scott Vlaun: You've dedicated a large part of your life to breeding flowers and vegetables for the public domain. Can you talk a little bit about how you came to this work?

Alan Kapuler: Why breed for the public domain? Why not just be grateful for the heirlooms that we have and grow abundant, diverse, beautiful gardens?

SV: Obviously there must be a very good reason, or we wouldn't be sitting in a room with...how many accessions of seed are in here?

AK: Ten to fifteen thousand.

SV: That's what I'm guessing just by looking around. It's amazing. There are seeds of every size, color and shape. So why is it relevant?

AK: OK. We've been growing peas for thirty-five years (he throws a handful of pea seed on the table) and breeding peas for fifteen or twenty years. So, Pisum sativum. What got us into pea breeding was not actually a curiosity about peas per se, but that a very good vine snap pea was only available from commercial sources and was not being organically grown. I wanted to grow it and I wanted to offer it in the seed list, so I called up a company who had it and had a patent on it. They said "no, it's our variety and we won't give you permission to grow it organically." That led my daughter and I to make some crosses and develop our own "Sugaree" Snap Pea.

SV: So the impetus here was that there was no good open-pollinated variety of snap pea?

AK: There was no good sugar snap pea that was public domain. There were only privatized varieties and this

is a great crop for the backyard gardener. We're growing food. We're talking about how to improve plants for food. Why plant breeding? A good example in another legume would be a fava bean. The original fava bean was quite small. It got selected and grown up to be big and succulent with big pods that are good to eat, not bitter or toxic.

SV: The pods are good to eat?

AK: Yes, the young pods of fava beans are very good to eat, with olive oil and garlic... very good to eat.

SV: That works for just about anything, doesn't it?

AK: It works for a lot. (laughs) You get them before the seeds are real big and before the fluff is inside when the seeds are coming on.

So one answer to "Why plant breeding" is that you improve plants for human nutrition, for adaptation to your locale, for vigor and for productivity. All those things are directly accessible in food plants, and in flowers you get more beauty and more diversity, and you get things that you wouldn't expect. So every time you walk in the garden, you find things that you didn't know about. If you like to go into the garden and have other things happening, you have to ask them to come to you.

SV: Do you think everyone who gardens should be breeding?

AK: It would help if more people who gardened, first saved seeds, and then bred, because you would encourage more local diversity and more skills to take care of a common resource— because the resource of germplasm is common on the earth. If we find those varieties worthwhile we should maintain them and not expect somebody else to maintain them for us. But if we grow gardens we are maintaining them. It just means saving the seeds and completing the cycle. Breeding then is the next step.

We started growing peas in 1973 and we started breeding peas in 1992 perhaps. By that time we'd grown thirty or forty kinds of peas. That meant we had some perspective of what kind of parents are available. It's not very difficult to make a cross (between two varieties) in breeding. And what takes only a few moments in the first year, when you grow the plants the next year from the cross, and from one flower you may get five seeds in a pod, and if those seeds are fertile you'll get five plants which might give you a hundred or two hundred seeds. To look at the consequence of your cross you may need a thousand or ten thousand seeds. So what took only a moment to make as a cross, the next year will take more time and the years after that take more time and you find yourself in a serious endeavor when you start to look at what it takes to explore the realm of breeding.

SV: But do you think that just by making simple crosses and saving the seeds from your favorite plants every year, the home gardener can make some progress?

AK: I like it that you can take your favorite three beets or five beets and grow them all together, or your favorite kinds of spinach and grow them all together, or your favorite kinds of sweet corn and grow them all together. And every one of those things, you can just grow them together and eat some of it and save the seeds and plant them and you'd have a good time. You wouldn't have to buy any of the seeds again of a whole lot of stuff. You could take your favorite broccolis and do the same thing, but Brassicas are a little more complicated; if you really want broccoli you can't let it cross with kale; if you really want zucchini you can't let it cross with a pumpkin. You've got to know something about who crosses with who in terms of what seeds you save and which ones will make palatable varieties and which ones will make bitter varieties or ones that are not particularly attractive. But it's probably worth exploring...because it's exploration that's accessible to anybody. And in a world that makes it so hard to be empowered to do a whole lot of real things, gardening and growing seeds and doing

breeding is available to anybody.

So the "Sugaree" came from a political response; to say that we can do something about it. It empowers everybody to say that you can make your own varieties. It can be quite simple. For example, sunflowers are outbreeders. You get a mix of sunflowers, you let them grow, and you save the seeds of the ones that you like. Next year they'll be different. And in the process you find new varieties. You can let yourself be involved in this instead of being this abstract uninvolved person.

SV: So anyone who's gardening can easily get started in breeding for themselves?

AK: Some things are more difficult than others. If you like basil you can grow ten kinds of basil, let them flower and cross-pollinate, and you'll have a real mess in the next year. But if you like basil, you'll have a good time, because every basil you get will be somewhat different than its neighbor. So if you are tired of that homogeneity that everybody seems to stress—because when you go to the market everybody wants to make sure all the zukes line up straight and all the carrots are the same size—you can discover things.

My daughter Kusra took humboltii (Lycopersicon humboltii), a tomato which had 30 flowers on a tress and makes orange cherry tomatoes in little clusters, and crossed it to some other tomato plants. When we got some cherry tomatoes with 150 flowers on a tress I realized that I never saw anything like that before. When you begin to realize that the vegetables that you have are not frozen in time, when the heirlooms that you have are not the limiting restriction on your activity, you realize that plant breeding allows you to move into the future of development, rather than saying that "everything was done in the past and I can't do anything." Because in reality, the force of the change of evolution keeps on working. We keep on looking to the past to guide us in the present, but the reality is that the present opens up new things and you don't know the way, you have to explore the way and you're in the unknown. What are we going to do in a world where we're destroying the natural resource base of everybody's life? Some of this is solved by having more food grown locally, in the neighborhood, rather than shipping in food and saying "we've got you covered." That doesn't have you covered. It's the quality of the soil and the attention to varieties that grow where you are that makes a sustainable, healthy food system. If you try to replace that with a marketing system that exploits the people, it's going to fail, eventually.

SV: You mentioned earlier that you have been learning recently about soil micro-organisms, specifically archaea and their role in fixing nitrogen and making it available to plants. Can you talk more about that?

AK: It has been a puzzle for a long time—what nitrogen sources plants use. So a recent observation shows that the vacuoles inside plant cells have a high concentration of nitrate, that is, oxidized nitrogen, that is then reduced to make amino acids, nucleic acids, amino sugars and a whole bunch of compounds that have nitrogen in them in different states of oxidation. So the storage of the nitrogen in the plant is in the vacuole as nitrate and the nitrate comes in from the soil. Now, how it comes in from the soil and what the rhizosphere of the roots are and all that is also an issue, yet the nitrate comes in from the soil and the plant uses it. So it's a question about: you've got nitrogen in the air and you have nitrate at the roots of the plants. So the discovery was really about micro-organisms that fix nitrogen from the air and bring it into the soil. They are distributed among tiny microbes of two major groups. They reduce nitrogen. They take nitrogen and add hydrogen to it. If you split water you get oxygen and hydrogen. So basically what happens is you're adding water to nitrogen. This is what the system is. So if you add hydrogen first you end up with these diazotrophic bacteria that fix hydrogen onto the nitrogen from the air and give ammonia soluble nitrogen. So the question was: how do you get ammonia from reduced nitrogen to nitrate, which is oxidized nitrogen? You have to add oxygen to this. It is done by Crenarcheota, or "crens," part of a group of organisms called archaea, an unknown and unrecognized major group of organisms that are in soil.

SV: Do you think that this recent discovery will revolutionize how we look at soils and how we understand soil

biology and the whole organic fertility system? Is this going to revolutionize organic agriculture?

AK: Well, molecular biology is going to revolutionize organic agriculture just like it's revolutionizing medicine. If we recognize the way that the body is built, we have a better chance of providing medicines that deal with where the problems are. The same is true with the soil if we know what organisms are doing what, and what the major systems are that lead to fertility, or mobilization of phosphate, or translocation of calcium, utilization of iron, all the different parts of the minerals and materials that are used by the plants to photosynthesize, to be able to split water, to make sugar. To develop that whole photosynthetic ability all takes connections of all the resources coming into the plant. By knowing more about how it works, we can make developments in those areas, which means that those microbes that are doing it are providing an industry to the organic movement and providing a way to enhance fertility that is broader and of a much more general scope. And this means growing more organisms. Since organics grows vegetables and plants and biodiversity, it also grows organisms. So we can provide the organic system with the rest of the biosphere that helps with what we do. That's what we're missing.

SV: Do you think this is the only path to truly sustainable agriculture? Do you think there is actually sustainable agriculture at this point?

AK: No, not much.

SV: Because of the external inputs?

AK: Because of mono-cultures.

SV: But there are people growing in some pretty diverse systems. It's the permaculture mantra, to try and emulate natural systems, whether it's the forest or the prairie. Can we utilize genetics to help make these systems function without outside inputs?

AK: Microbes, the fixing of nitrogen, the mobilization of minerals, these are microbial activities. The plants utilize it at different stages. So that's a missing part of it. It's all in the bacteria and fungi in the soil. Those are where the developments are going to come from that are going to reflect in the growing of organic food.

SV: Do you think that plants will be bred to have better relationships with all of these bacteria and fungi?

AK: Yes, there are different ways to approach it. You can work the plants to have a more adapted relationship. But, to me, the primary direction would be to figure out the microbiology that will feed the existing stuff that we've got.

SV: Is this anything like compost tea? Growing microbial activity, then introducing it into your system?

AK: It's very much like a wild fermentation. The issue would be where you take your inoculant from. If it's from worm compost you'll have one inoculant, if you take it from other compost you'll get something else. For twenty or thirty years we didn't understand enough about the combination of organisms. When I can relate to you that precursors to plant hormones made by Azospirillum brazilense stimulate nitrogen fixation and growth, that is science. Does anybody use this stuff to grow crops and develop agriculture? The answer is: it has not happened yet. Until you discover what those relationships are, and which organisms to grow, you'll make compost tea and never know if you are spraying the right thing.

SV: I think that some would argue that there has been too much science in agriculture.

AK: That wasn't science. That was business. The prodigious use of synthetic fertilizers and pesticides in the western world to grow food is not necessary, and is not sustainable. Developing real sustainability in organics is going to mean that we have a lot of different issues to explore and resolve and develop. How can we expect, when there has been no support in this country for organic agriculture research, that we could have this stuff in place to even figure out what needs to be known? Nobody has been willing to support it so far.

If science helped increase the yields of the crops and developed chemical fertilizers and pesticides, then we have a problem because all that is doing is poisoning the water and destroying the soil and poisoning people. That's not science per se. I do like to believe that science is there to serve humanity, not to exploit it, and that's possible.

Take the petroleum economy. Why would we want to grow food far away from us? It doesn't make any sense. The more we grow locally, the more we'll have a secure society.

SV: Could you compare recent advances in microbiology to Newtonian physics in terms of its effect on our understanding? Is this the next revolution in science?

AK: It's the age of biology. It's really coming. Bio-cybernetics, and nanotechnology, they're all converging a billion-fold smaller, the realm of the invisible. It's where the action is that's spilling out into the whole of human society.

SV: Do you think that there is a danger there?

AK: Of course! Ignorance is dangerous. Look what it's doing.

SV: I'd rather not.

AK: I know. I'm glad we can work with seeds, and work with life.

To learn more about seed saving, follow this link to read an excellent article by Jordan Rainwater and Scott Vlaun from our December 2004 eNewsletter.

You may also find Breed Your Own Vegetable Varieties and Seed to Seed helpful resources.

Scott Vlaun
Editor

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DISEASE CORNER
by Emily Gatch
http://www.seedsofchange.com/enewsletter/issue_63/disease_corner.asp

Curly Top is a viral disease that is common in semi-arid areas of the western United States and is an annual presence at the Seeds of Change Research Farm. The causal agent is a virus transmitted exclusively by the beat leafhopper (Circulifer tenellus) in North America. The leafhopper acquires the virus by feeding on host plants, which can include beets, Swiss chard, spinach, beans, and cucurbits, as well as tomatoes and peppers. Curly Top does not seem to exhibit what is known as secondary spread, defined as the expansion of a disease from plant to plant following initial establishment; rather, its occurrence is the result of a "raining" of migratory leafhoppers passing through an area. Since the virus is restricted to the phloem (sap-conducting vessels) of plants, physical handling of plants will not transmit the disease. There are several strains of the virus that vary in virulence—

some plant species are immune to some strains and susceptible to others. The virus is transmitted in a persistent manner, which means that after the leafhopper acquires the virus it remains infective for its lifespan.

Symptoms include leaves that thicken and curl downward, become very brittle, and turn yellowish with purple veins. If plants are infected prior to fruit-set, fruit ripen prematurely and are small and wrinkled. Plants infected in the seedling stage typically die; if infection occurs after fruit-set, the fruit may still develop normally.

At the Seeds of Change farm, we cover our tomatoes with floating row cover until the plants need to be staked. At that point, they have passed the vulnerable seedling stage and are better able to withstand visits from the marauding leafhoppers. Other recommended management practices include controlling weed hosts such as the Russian thistle (Salsola australis), also known as tumbleweed, but reining in this classic western weed that rolls across fields on windy New Mexico days would surely prove to be a quixotic venture.

by Emilly Gatch
Greenhouse and Pathology Coordinator

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NEWS & VIEWS
http://www.seedsofchange.com/enewsletter/issue_63/news.asp

Seeds of Change Research Farm to host Permaculture Design Workshop with renowned permaculturist, Scott Pittman
Dates: October 5th—9th, 2007

Our Research Farm is pleased to be hosting a five-day workshop on permaculture design principles and the creation of sustainable systems, centered around Mr. Pittman's design for our 16-acre certified organic farm.

Tuition: $150 (includes lunch and refreshments, but does not include accommodations)
Location: Seeds of Change Research Farm, north of Espanola, NM
Instructor: Scott Pittman
Contact: Kelle Carter or Emily Skelton, 505-852-1508

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5th Annual Los Angeles Permaculture Event Offers 6 Months of Education on Sustainability
Dates: October '07—March '08, first weekend of every month

Beginning in October, the first weekend of every month through March of 2008 will offer an opportunity to learn about permaculture topics to participants in a southern California program. The 5th Annual Los Angeles Permaculture Design Experience: Creating the Conditions for Sustainability to Happen begins on October 6th and 7th with an introduction to permaculture and natural patterns that stretches into November. In December and January, the focus will shift to designing and building a complete home ecosystem. The program culminates with a look at ecovillage design and the importance of communities in February and March. Program graduates will earn a Design Certificate in Permaculture.

Tuition: $950 for all six weekends (day and weekend rates available, discounts, trades, and payment plans offered)
Location: In and around Los Angeles County
Instructors: Larry Santoyo, Jude Hobbs, Scott Pittman, Toby Hemenway, John Valenzuela and other highly ex-

perienced permaculture designers, educators and recognized leaders in the world-wide sustainability movement.
Contact: EarthFlow Design Works at earthflow.com

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Two-day Course in Keyline Design & Practices in Finger Lakes Region of New York
Dates: September 15th—16th

Australian Darren Doherty, an experienced Keyline Design consultant, will teach a two-day course in Keyline principles targeted at farm land managers. "Keyline" refers to a set of principles, techniques and systems, that form the logical basis for a plan for the sustainable development of landscapes. A topic of primary importance in Keyline design is the development of living soil and its beneficial effect on water retention and distribution, humus creation, and nutrient levels. This course is a shortened version of a six-day Keyline course, and will focus on broadacre applications to pasture, vineyards, and croplands.

Tuition: $250
Location: Community College of the Finger Lakes Campus Lecture Hall, Canandaigua, NY
Instructor: Darren Doherty
Contact: Royal A. Purdy, 315-986-7007, www.permaculture.biz

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Biointensive Agriculture Luminary
to teach Economic Mini-Farming Seminar
Date: Saturday, September 15th

John Jeavons, Executive Director of Ecology Action and author of How To Grow More Vegetables Than You Ever Thought Possible on Less Land Than You Can Imagine, will teach a short seminar on mini-farming in mid-September. Jeavons will explain the ideas, strategies, and crops that allow for successful economic mini-farming, which can begin in a backyard.

Cost: $25
Location: Common Ground Educational Center, Palo Alto, California
Instructor: John Jeavons
Contact: Common Ground Education Center, 650-493-6072, www.commongroundinpaloalto.org

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New Reports Tell How Organic Agriculture Can Help Feed the World

Two recent reports point to the ability of organic farming methods to combat world hunger. University of Michigan researchers arrived at a conclusion similar to that reached by Danish researchers and presented at a recent conference of the UN's Food and Agriculture Organization.

Both parties found that in developing countries the adoption of organic farming methods could help to address hunger by increasing yields. This idea stands in opposition to the commonly held belief that switching from conventional farming to organic farming results in decreased yields. Niels Halberg, the head researcher behind the Danish report, points out that this is not the case in developing nations where farmers contend with less-fertile soil, or where they use far less chemically-based fertilizers and pesticides (which are often unaffordable anyway) than their Western counterparts. In an article in Ode Magazine, Halberg remarked that "When these

farmers learn to use organic methods using locally available resources, their crop yields increase." He also suggested that because organic farming retains soil nutrients and can offer better yields over the long run, Western governments earmark foreign aid contributions for organic farming training for farmers in developing nations.

Michigan researchers reported that adopting organic farming methods could increase crop yields by 200–300% in developing nations. To accomplish this, green manure from cover crops planted between growing seasons would be needed to provide the appropriate soil amendments, namely nitrogen. Ivette Perfecto, a principal researcher in the study, said that the findings refuted the arguments that organic farming results in lower yields, and there is a poverty of acceptable organic nitrogen sources. "Corporate interest in agriculture and the way agriculture research has been conducted in land grant institutions, with a lot of influence by the chemical companies and pesticide companies as well as fertilizer companies—all have been playing an important role in convincing the public that you need to have these inputs to produce food," Perfecto observed. A longer article about the Danish study is available in Ode Magazine. A link to the complete Danish study is available through EcoWiki. The Michigan study was reported on by the University of Michigan News Service.

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New York Times Article Cites Funding Shortage for USDA's National Organic Program

In an article published in the August 19th edition of the New York Times, journalist Andrew Martin called attention to the disparity between the earnings of the organic food sector and the funding for the government agency that oversees it. The USDA's National Organic Program (NOP) regulates the organic industry, with sales in excess of $14 billion, with a staff of nine and a budget of $1.5 million. Martin points out that single farming enterprises have been awarded subsidies that exceed the budget for the NOP, and that although other sectors of the USDA spend a combined $28 million per year on organic research, subsidies for dry pea farmers totaled $37 million in 2005, which gives an impression of how small the resources directed at organics are in the larger context. With little manpower and few dollars to work with, the NOP is in charge of drafting and enacting regulations, accrediting organic certifiers, investigating complaints, and defining new standards for new organic products. The article points a finger at the USDA and the farm-state members of Congress as "reliable cheerleaders for industrialized agriculture," and points out that "Big Ag has often viewed organics with suspicion, if not outright disdain."

The full article is available at the New York Times website (free subscription required).

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WHO Report States 30% of Disease in Children Stems From Environment

On July 27th the Kuwait News Agency reported on new findings published by the World Health Organization which attribute 30% of illness in children globally to environmental factors. The recently published Principles for Evaluating Health Risks in Children Associated with Exposure to Chemicals, part of the WHO's Environmental Health Criteria series, contains the alarming statistic that 13 million children die annually of factors that are preventable with improvements to the environment. According to the report, "Accumulating evidence indicates that children, who comprise over one third of the world's population, are among the most vulnerable of the world's population and that environmental factors can affect children's health quite differently from adults' health." The authors of the report conclude that the developmental stage at which a person is exposed to an environmental toxin may be just as important as the degree of exposure to the toxin. Children may be at increased risk of exposure to environmental chemicals for a number of reasons, including higher inhalation rate, consumption of more food and drink per body weight than adults, and behaviors such as crawling on the ground

and putting their hands in their mouths. Chemicals which were identified as posing a special risk to children include heavy metals, pesticides, and air pollutants.

A longer article was published by the Kuwait News Agency. The complete report is available for download at the WHO website.

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