Environment

PASA hosts expert on global food issues

by Heather Simmons

"The weird paradox is that 40 million people went hungry in the United States in 2008," Raj Patel, author of Stuffed and Starved told Voices in an interview leading up to this year's Pennsylvania Association for Sustainable Agriculture (PASA) Farming for the Future conference. "So why did this happen in the one of the wealthiest countries?"

"The idea behind *Stuffed and Starved* is that overweight consumers are exploited by the same system that starves others," said Patel. Patel's book is a thought-provoking and eye-opening look at the global food market. He explores the distribution and control of the world's food, and shows how control is concentrated in the hands of a few at the expense of the majority.

For instance, it is difficult for some Americans to conceive of how buying a pound of coffee at the supermarket affects a coffee bean grower somewhere in Africa.

But they do. In his book, Patel recounts the story of a coffee bean farmer in Uganda who sells his coffee for 14 cents a kilo (roughly 2 and a half pounds). This same coffee after being processed and bagged is purchased by Nescafe in London for \$1.64 per kilo and subsequently sold for \$26.40 per kilo. Patel describes how and why this consolidation of power in the food industry is affecting not only the producers of our food but the consumers as well.

"If people are unwilling to look at the suffering that this system causes in other countries," said Patel, "then the place to start is the increase in the prevalence of obesity and weight-related diseases such as diabetes that has been occurring in the last 30 years. There is clearly a dietary component and the question becomes who makes the money off these kind of changes?" The fact that healthy food choices are often available only to the wealthy is another side effect of the global food market that affects producers and consumers alike.

"The U.S. economy is built on low-wage workers who are forced to shop at Wal-Mart," said Patel. "Think about Wal-Mart. It drives local business out thus depriving the local market of income with the result that the lives of the local people are made worse by Wal-Mart."

In his book, Patel discusses how large the

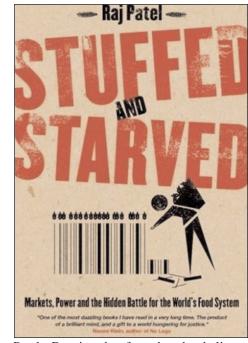
"The U.S. economy is built on low-wage workers who are forced to shop at Wal-Mart...[which] drives local business out thus depriving local markets of income."

--Raj Patel

effect of removing local businesses is on the local economy. Patel said that it is possible for people to "dodge" Wal-Mart by cutting out the middle-men in the food market, so that the consumers and producers interact directly, a proposition many PASA members who will be listening to his talk would be amenable to.

Patel was not optimistic about Barack Obama's pick for secretary of agriculture, Iowa Governor Tom Vilsack.

"The people that Obama has in agriculture are veterans of agribusiness that are along the same lines as Bush, so there is no reason to think that Obama's government will lead to any change in agriculture," said



Patel. Despite the fact that he believes Obama is in with the pocket of agribusiness, Patel said he is very hopeful about the

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Nuclear waste the issue for this generation

by the Peace and Social Action Committee of Friends Meeting

Nuclear energy is being hailed as a viable alternative energy source, but where does the waste from nuclear energy end up?

Nuclear waste management demands scrutiny because of its potentially harmful effects to human and environmental health. Because all nuclear industry activities, whether they be in nuclear medicine or nuclear weapons, produce nuclear waste radioactive waste is produced in hospitals and research labs across the country. The list of objects that have been exposed, and thus have become radioactive, is long and includes items from medical procedures, protective clothing, reactor components and decommissioned nuclear weapons.

Radioactive waste is often defined in terms of the level of radioactivity present in the waste material. High-level waste is produced by nuclear reactors while low-level waste is generated primarily by hospitals and industry. Low-level waste consists of such items as protective clothing, rags, tools, paper, etc. that although they contain low levels of radioactivity, still pose a danger to human health. This is due to the fact that all nuclear waste material includes the same long-lasting deadly radionuclides (radionuclides are the decay products of a nuclear reaction). If radionuclides are released into the environment through accident, poor disposal or other means, they can potentially cause adverse health effects such as cancer and genetic deformations. Essentially, radioactive waste is the lethal byproduct of the nuclear age.

As of Jan. 18, 2007, in Pennsylvania alone, there are nine operating commercial reactors at five sites (Beaver Valley-2, Three Mile Island-1, Peach Bottom-3, Limerick-1, Susquehanna-2) and one operating research reactor at Penn State in State College. More than any other part of the United States, the Northeast is peppered with sites storing nuclear fuel, high-level radioactive waste, and/or surplus plutonium used for making bombs destined for geologic disposition.

Truckloads of this waste material have been shipped to a landfill in rural South Carolina. As of July 2008, South Carolina stopped accepting most radioactive material, with the effect that nuclear waste is now piling up in labs, universities, hospitals, industries and businesses where it is used. State and federal authorities say the waste is being monitored but they acknowledge checks are infrequent, and government documents show that thousands of items have been lost and are feared stolen by terrorists who could turn the radioactive material into dirty bombs.

The biggest problem with nuclear waste is the current lack of a long-term viable solution to storing it safely. All nuclear waste requires time to break down to reduce its radioactivity. Depending on the type of nuclear waste, it may take decades to decompose. For instance, the half-life of uranium-239 is thousands of years, and thus no institution or government can be guaranteed to last the thousands of years required to keep nuclear waste from harming people

and the environment.

Currently, no nation has yet solved the problem of what to do with radioactive waste that must potentially be shielded from the environment for thousands of years. The storage of this waste is perhaps the most controversial aspect of the nuclear power issue. Most long-term waste management consists of treating the waste and then isolating it from the environment. Since the 1950s, geologic disposal sites in the United States have been elusive. This is mostly as a result of popular and political pressure on the Department of Energy (DOE) but has included an abandoned salt formation at Lyons, Ks. and dozens of sites in eastern and western states

Yucca Mountain was selected as a federal geological disposal site because it is in a remote desert area on federal land. Yucca Mountain, which is near Las Vegas and not far from Los Angeles, is immediately next

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A pine siskin invasion can delight bird lovers

by Alice Fuller

It was my husband Ted who first noticed one morning that a portion of our patio was literally carpeted with a host of feathered mites. Then, with a whoosh, they all suddenly took off, leaving the patio bare. Our visitors were pine siskins. In a moment or two, the flock of siskins returned to feed on the seed Ted had scattered under the hanging bird feeders.

Every day since, the siskins have returned to follow the same procedure: here one minute and up and away the next. One morning I counted at least 50 siskins; I suspect, however, that this was a conservative figure, for the birds keep moving from bird feeders back to the patio.

After a week or so, the siskins were still arriving consistently; fortunately, they were even around on the day of the State College Bird Club's annual Audubon Christmas Bird Count. Ted, who stayed at home, was



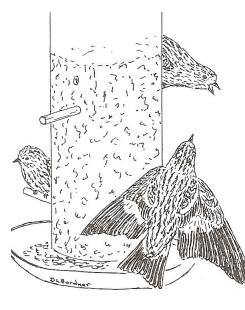
given the task of counting them., but I think he found it to be a difficult assignment. While he was checking the feeders and yard, my daughter Roana and I were with a friend, busy totaling up all the birds we could possibly find in Pine Grove Mills and vicinity.

While I have had pine siskins come to our feeders other winters, never have I seen so many at one time. Although they are the same size and belong to the same genus as goldfinches, the two species are easy to tell apart. Pine siskins have streaks all over their tiny bodies as demonstrated in Bordners's drawing of a siskin. Goldfinches in their winter plumage are brownish or grayish with prominent white wingbars, and their

plumage is not decorated with streaks. Siskins also have touches of yellow on the wings and at the base of the tail. These decorative details usually are not seen until a siskin takes flight or one spreads its wings in an aggressive stance.

Siskins like the same foods as goldfinches, usually sunflower seeds or chips; likewise, both are extremely fond of nyjer seed. They are as capable as goldfinches of using the upside-down nyjer seed feeder. Roana and I were watching the siskins one morning as a continuous battle went on over perches on the upside-down feeder. Ro wondered if any of them ever got to eat any of the seeds.

For such a tiny bird, the pine siskin is a feisty mite. John V. Dennis in his book A Complete Guide to Bird Feeding described the siskin as having a bellicose nature. The author of the siskin life history in the A. C. Bent series described the bird as being pugnacious. Siskins usually manage to hold



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door to Nellis Air Force Base that houses the Nevada nuclear weapons test site and mining operations. Not only is this location vulnerable to crashes or detonations, but Yucca Mountain is also on Western Shoshone Native American land, which raises environmental justice objections to dumping radioactive waste there.

Yucca Mountain is also a major earthquake zone. Dozens of fault lines crisscross this area with two that intersect directly with the proposed dumpsite. Several hundred quakes have struck near Yucca Mountain in recent decades, damaging DOE facilities and derailing trains that would one day be used to haul nuclear

waste. Because seismic activity has fractured and fissured Yucca Mountain's rock creating fast flow pathways for water infiltration, it is possible that water will eventually corrode waste burial containers which will release deadly radioactivity into the underground drinking water supply used by farming communities downstream.

Volcanism also threatens to flood the proposed waste dump with superheated water, and perhaps even lava, that would release massive amounts of deadly radioactivity into the surrounding environment. Because Yucca Mountain's geology is so unsuitable, building a dump there would require total abandonment of the original concept of deep geologic disposal which means that engineered barriers (which may not even be possible to build) will have to provide radiation containment. As a result of its poor geology the Yucca Mountain waste facility has not lived up to previously established federal safety regulations. These regulations have simply been re-written or done away with altogether. In other words, "politics have trumped science."

Another problem with the Yucca Mountain disposal site is that the use of this area as a nuclear waste disposal site would necessitate an unprecedented program of high-level waste transportation, a "mobile Chernobyl"! Many tens of thousands of truck, train and barge shipments on highways, rail lines and waterways would cross 45 states. Not only are the shipping containers not adequately tested for safety, but they are vulnerable to severe accidents and terrorist attacks, risking the release of catastrophic amounts of radioactivity in major population centers along the transportation

What is the solution to the U.S. radioactive waste problem? There is no easy, simple answer. One obvious solution is to simply stop producing it. Or we could at least begin to allocate resources to researching alternative uses for nuclear waste. There are at present a few isotopes such as caesium-137 and strontium-90 that are currently being used in industrial applications. It is a conundrum to say the least! Can our democratic process handle this delicate situation and somehow come up with a solution to keep the radioactive wastes from leaking into our nation's water, soil or air at proposed geologic repositories? Only time will tell.



Watershed Cleanup Day Saturday, April 25, 2009

It's not too early to think spring! We will be cleaning our roadways, waterways, and greenways

in central Pennsylvania's watersheds, and we need your help! Cleanup sites will be available throughout Centre County's watersheds. To register a volunteer team, please contact Brianna at (814) 237-0400 or brianna@clearwaterconservancy.org.

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their own at feeders, even against larger birds. Dennis noted that the siskin can be discreet when around such bigger birds as evening grosbeaks: "Instead of making war, the pine siskin darts in among feeding grosbeaks and seizes whatever particles of food it can." Caution many be the better part of valor when dealing with such large birds as purple finches, house finches, or evening grosbeaks, but Dorothy related once how a pine siskin shoved a grosbeak off her window feeding tray.

Pine siskins also are noted for being tame little birds. A fascinating account from Dennis' book bears repeating: a gentleman from Massachusetts "had been offering food to a flock of siskins and soon found himself besieged by the tiny birds every morning. They got in the habit of entering his bedroom early in the morning through an open window and then to gain his attention would begin tugging his hair and even tweaking his nose with their sharp bills. Needless to say, this was usually enough of a hint to arouse the host into supplying food...." Dennis added that such tameness is exceptional.

During winters when we have an invasion of pine siskins, some of them may remain to nest in Pennsylvania, mainly in the northern or mountainous parts of the state. According to *The Birds of Pennsylvania*, "Siskins are not known to nest regularly anywhere in the state, but suitable habitat exists in Warren and McKean counties, and south in the Laurel Highlands, where many breeding records have been reported."

As its name suggests, the pine siskin most often selects such trees as hemlock, pine, spruce and other conifers for nesting sites. According to the Bent life history account, this species may nest as isolated pairs, but more often than not this gregarious species prefers a colonial affair with nests only yards apart.

In addition to the large numbers of the pine siskins this year, white-winged crossbills have been reported around the area. I have yet to hear reports in our area of some of the other finch clan including red crossbills, pine grosbeaks and evening grosbeaks. Perhaps some of these other species may turn up in our area as winter progresses, but with or without them the representatives of these colorful and erratic birds of the northern forests have already brightened the landscape of an otherwise long winter.

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future and believes that there is a current "trend towards community engagement." Patel believes that a lot of the problems that exist with the global food system are due to the distance that exists between the producers of food, and that control can be regained if local farmers can organize and deal directly with their local municipalities.

"We need profound political change as well as structural change," said Patel. "Social change is community-based so the idea is that people can do more to change the world than just change their shopping habits. Individuals can start organizing as communities; they can build community gardens, support local farmers and support sustainable agriculture." Patel believes that the current global food system is man-made and that as a result it can be undone.

"I have been interested in global far longer than in food, and I became interested in the food element during the World Trade Organization meeting in Seattle in 1999," said Patel. "What we know as globalization was once called imperialism. People often disagree that the free market

should be constrained, but I think that we need to move beyond the free market."

"The current research agenda is driven by what companies want," said Patel. "Universities are bought and paid for by businesses, which is not an intelligent use of public money."

PASA's executive director said the group invited Patel to speak to its annual conference because he can bring the big picture to everyday working farmers.

"He has a global perspective on how food politics affect different people and communities in different foodsheds around the world," explained PASA's Brian Snyder. "And his keynote address will lend an international lens through which to think about issues of food security, agency and control of food options, and health and diet." Patel is scheduled to do a question and answer period and book signing at the conference after his keynote address.

The 18th annual PASA conference, which is being held at the Penn Stater Conference Center from Feb. 5 to 7, is themed "The worldwide search for food Sovereignty: Finding Your Foodshed." For more information or to register go to www.pasafarming.org.





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Easy ways to save money through energy efficiency

by Heather Simmons

Faced with the rising cost of energy and the fact that electricity prices will be deregulated in our region in 2010 the ability to reduce household energy costs becomes increasingly important. Reducing usage will not only decrease monthly bills but is also environmentally friendly. Burning fossils fuels directly contributes to global warming gases, and according to the Environmental Protection Agency (EPA) more than 75 percent of the human-generated greenhouse gas emissions are carbon dioxide emissions from burning fossil fuels, and of this amount 41 percent is due to electricity generation.

Here are a few ways we can save money as well as combat the greenhouse effect by conserving energy.

According to Allegheny Power it costs on average \$28.35 per person per month to run a 40 to 50 gallon water heater. Obviously the easiest way to save energy on your hot water heater is to buy the most efficient model available, however, water heaters can be exorbitantly expensive, so there are a few

Your Green House



ways in which you can reduce the amount of energy in lieu of replacing your heater.

- —Set the water heater to 120 degrees.
- —Insulate the heater and water pipes.
- -Install aerated, low flow faucets and showerheads.
- —Drain water (about a quart) from your water tank every few months to remove the sediment.
- —If you are planning on being gone from your house for more than a couple of days turn the setting down to low.
- -Typically 45 percent of the average utility bill is due to either heating or cooling your home. So, when setting your heater during the winter months bear in mind that every degree above 68 degrees can add 3 percent to the amount of energy used for

The best ways to reduce the amount of energy used to heat your house is to purchase an energy efficient heater, insulate

your home and install double (or triple) pane windows. These measures although initially expensive will reduce your heating costs substantially. There are also other less expensive ways to reduce your heating bill.

- —Clean or replace your furnace filters regularly.
- -Caulk and/or weather-strip leaky windows and doors. Alternatively you can use plastic sheets to cover leaky windows.
- —Keep the fireplace flue tightly closed when not in use.
- —Insulate outlets on exterior walls. Stiff foam insulating that fits inside the outlet is available at home improvement stores.
- —Keep curtains on south-facing walls open on sunny days to capture sunlight.

Another way that you can reduce your electricity bill is by using florescent light bulbs. Although florescent bulbs are more expensive than regular incandescent bulbs they will save you money in the long run because not only do they last 10 times as long (about 10,000 hours) but they use a quarter of the energy. This is due to the fact that 90 percent of the electricity used by regular bulbs is lost as heat. You can also recycle them locally. If you choose not to use florescent lights you can extend the life of regular bulbs as well as saving energy by installing dimmer switches. Contrary to popular belief it does not take more energy to turn lights on and off rather than leaving them on, so if you are going to be gone from a room for more than a few minutes turn the light off.

There are a couple of commons sense ways to reduce the amount of energy that you use in the kitchen:

-To reduce the amount of energy used while cooking make sure that the pot is the same size as the burner and use a lid to lower the cooking temperature.

—Use glass dishes instead of metal for

baking; they transfer heat more efficiently.

- —Use your microwave whenever possible; it uses about half the energy of a con-
- -Only run your dishwasher when it's
- -Let your dishes air dry to reduce the amount of energy used by 20 to 30 percent.
- -If your stove or dishwasher is next to the refridgerator then the heat generated from these appliances will warm the air next to the fridge. If you are unable to move your appliances slide a piece of insulating material between the two.
- —Defrost frozen foods in the refrigerator rather than on the counter to cut down on the amount of electricity used to keep your refrigerator cold.
- -Defrost your freezer whenever the ice is more than ¼ inch thick.

When washing clothes you can reduce the amount of energy you use by only washing clothes when you have a full load, and using the gentle/light cycle with cold water. Make sure that you clean the lint out of the dryer filter after every load.

According to the government's Energy Star program the average household spends approximately \$100 a year on electricity used by devices while they are turned off. The worst culprits are appliances that have a stand by mode such as Tivo, cable boxes, TVs, DVD players, and computers. A study at the University of Berkley estimated that turning off these devices could save the average household between 6 to 20 percent on their electricity bils. So when not in use unplug them, or you can use a power strip so that it is easier to turn off several at a

If you have any other tips/suggestions to help reduce the amount of energy used in the home share them with other Voices readers at www.voicesweb.org.



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Contact Dorothy Blair at ey6@psu.edu