The Land Stewardship Letter

LAND STEWARDSHIP PROJECT

Keeping the Land & People Together

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Stephanie Lundeen's devotion to local farms and local food was showcased during the recent Dine Fresh Fine Local event in the St. Croix River Valley (see page 20)**.**

—When You Can't Afford to be Sick—

—Farm Bill: The Next Step—

—Dining at the Market & in the Garden—

—Homegrown Biofuels—

—Nitrogen's Prickly Price—

—Stuffed & Starved—

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Vol. 26, No. 3—Autumn 2008

The Land Stewardship Letter is published by the Land Stewardship Project, a private, nonprofit organization. The mission of the Land Stewardship Project is to foster an ethic of stewardship for farmland, to promote sustainable agriculture and to develop sustainable communities. Members of the Land Stewardship Project receive this publication as a benefit. Annual membership dues are $35

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Commentary !?!?!

A sick health care system

The cost of staying well is crushing farmers

By Paul Sobocinski

Farmers and ranchers, among the most independent of self-employed people, have been struggling along with the rest of our nation's citizens to pay high premiums and out-of-pocket expenses for health care.

A new report—based on a health care survey of farmers and ranchers in Iowa, Minnesota, Missouri, Montana, Nebraska, North Dakota and South Dakota—found that while 90 percent of the more than 2,000 farmers and ranchers surveyed said they had some sort of health coverage, nearly a quarter of them said the cost of health care was causing them financial problems. The farmers reporting financial difficulties spent on average an alarming 42 percent of their income on insurance premiums and out-of-pocket health care costs, according to the report, "2007 Health Insurance Survey of Farm and Ranch Operators." Their health care-related problems included using up their savings, being forced to take off-farm employment, delaying investments in their operations and difficulty paying rent, mortgages and other bills.

The higher costs also affected the way they took care of their families' health. One in six put off needed visits to the doctor because they already owed too much money, could not afford to go to the physician or simply didn't have time off from work. They said that when the deductibles got too high, they didn't go to the doctor as often as they should.

More than a third of the farmers in the survey said they bought their own insurance. These farmers and ranchers are especially vulnerable because they are often forced to buy insurance on the individual, non-group market, where insurance costs more and often covers less. Ten percent had some sort of public insurance such as Medicaid or Medicare. More than half of them said they were getting health care coverage from an off-farm job or through their spouse.

As farmers, finding ways to access and pay for health insurance has a major impact on the choices we make about our careers and our families' economic security. It affects the financial health of our businesses and is having huge impacts on the larger economy.

The lack of affordable health care severely impacts the viability of family farms in many ways. It often forces one or both spouses to obtain off-farm work, which impedes the ability of the family to devote full attention and resources to the farming operation. This can often mean that farm families abandon their livestock operations, for example, because such enterprises require consistent on-the-farm management. As a farmer and rural organizer, I've seen how a lack of viable, family farm-based livestock operations is having negative impacts on our communities' Main Street economies, as well as the environment. The lack of health care also restricts the ability of young people to get started farming and deters people wishing to make a mid-life career change and get back into agriculture.

• • •

The lack of affordable health care…often forces one or both spouses to obtain off-farm work, which impedes the ability of the family to devote full attention and resources to the farming operation.

• • •

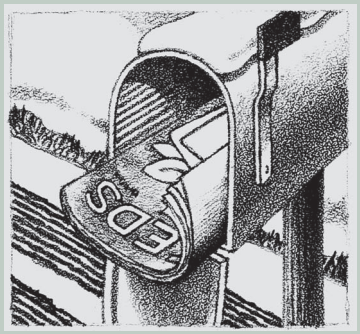
This latest report offers a snapshot of a larger picture of a failed and broken health care system. Whether measured in cost per capita or percentage of gross domestic product, the U.S. market-based and corporate-controlled health care system is by far the most expensive in the world. Shockingly, that expensive and profitable industry delivers poor health care when ranked with other industrialized nations. Among these countries, the highest infant mortality rate is in the U.S., and we rank the lowest in patient safety, access to health care, timeliness of care and life expectancy. And it is getting worse—3.5 million more U.S. children were uninsured in 2006 than were in 2000.

In order to have a sustainable agriculture, family farmers need the peace of mind and financial security that comes with decent health care. That requires major reform to the health care system, and it starts with taking a hard look at the companies that control it. Our communities can no longer afford the high administrative costs and excessive profits of the U.S. health care industry. We as a nation failed to rein in Wall Street's greed, and the result is an economy on life support.

Farmers have a right to decent health care that allows them to stay productive members of the community, rather than debtors staggering under the burden of crushing health care costs. We need to learn from other countries and change our health care system now, so that it is affordable, high quality and available to all. It can be done, but it's up to us. ❒

Land Stewardship Project Policy Program organizer Paul Sobocinski raises crops and livestock in southwestern Minnesota. He can be contacted at 507-342-2323 or sobopaul@redred.com. More information on the "2007 Health Insurance Survey of Farm and Ranch Operators" can be found at www.rwjf.org/about/product.jsp?id=34548.

What's on your mind?



Got an opinion? Comments? Criticisms? Of course you do.

We like to print letters, commentaries, essays, poems, photos and illustrations related to issues we cover. We reserve the right to edit for length and clarity. Commentaries and letters published in the *Land Stewardship Letter* do not necessarily represent the views of the Land Stewardship Project.

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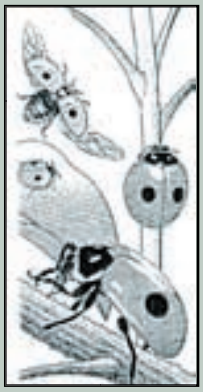
The Blog Barn

The Land Stewardship Project writes weekly on food and sustainable agriculture issues for the Minnesota Environmental Partnership's Loon Commons blog. Below are a few excerpts of recent blogs. To view the blog, go to www.landstewardshipproject.org and click on the **Read This Week's LSP Blog** *link under* **Take Action**.

Kill 'Em All & Let Nature Do the Sorting

I must admit it's hard to argue against such emergency measures when an entire harvest is under threat.



But I can't forget what one farmer said to me as we stood watching a plane misting insecticide down on a creek bottom: "The trouble is, it kills the good bugs too."

That means the lady beetles probably won't be back next year to hunt aphids. And so the planes of August may be called into action again. I smell a vicious cycle in the works. **—Aug. 29, 2008**

Dazed & Confused at Farmfest

Late last Tuesday afternoon I and around a dozen crop farmers emerged from the air-conditioned confines of the "Biofuture" trailer. Like abductees departing an alien mothership, we blinked in the bright hot light of a southwest Minnesota August. I looked around to get reacquainted with my surroundings: big tires, bigger iron, seed plots, debating politicians, a helicopter buzzing overhead. Oh, that's right, I'm in the midst of the 2008 Farmfest, the state's largest agricultural gathering. **— Aug. 8, 2008**

Cargill's Wand Waving

At one point, the *Star Tribune* editorial made a plea to readers on behalf of the big boys when it opined that Cargill would just like the government to "let free markets work their magic."… Here's a hint at the kind of free-market magic Cargill has conjured: It and three other firms now control at least 83 percent, 66 percent and 55 percent, respectively, of the nation's beef, pork and turkey slaughter, according to the University of Missouri's most recent "Concentration of Agricultural Markets" report. When seeking that kind of control, Cargill and its ilk want one kind of magic — a disappearing act on the part of fair competition. **— July 27, 2008**

Pushing Industrial Ag with a Biased Grants Program

Frankly, a grants criteria that sees livestock production in such black and white terms—more animals are "outstanding," fewer are "unsatisfactory"—is steeped in some pretty archaic ideas about profitability and efficiency. Rural economic development studies (and real-world experience) are increasingly showing that more livestock farmers are the key. Simply raising more hogs and cattle on a few concentrated operations may make for some nice gross-number statistics when we compare ourselves to factory farm hotbeds like North Carolina, California and Texas, but they do little to help Main Street economies. **— July 18, 2008**

Why One Pond Does Not Runneth Over

As we could see on this spring day, managed rotational grazing's reliance on perennial plants that cover the land year-round and its ability to put life back into the soil are paying off on the Thicke operation. The steep slopes were covered in a lush, diverse stand of grasses, and the certified organic dairy herd was thriving. Bluebirds, turkeys and other wildlife were making good use of the pastures.

During the field day, Art talked about how rotational grazing has allowed the farm to maintain diversity on the land, and how such a system is good for the soil and the water as well as the Thickes' bottom line and their quality of life…this is all part of a holistic view of agriculture that connects the health of the land with the health of the farm.

"Nature tends toward diversity, why fight it?" Art said while leading a tour of pastures full of an alphabet soup of grasses and forbs. **— June 6. 2008**

Bye-Bye Caddisfly?

Research out of Indiana farm country shows that the caddisfly, a key link in many a freshwater stream food chain, may face a serious threat from genetically engineered corn.

[The researchers] wrote: "…headwater streams in the midwestern United States are already impaired by nutrient enrichment and extensive habitat degradation; Bt crop byproducts could represent an additional stressor to these systems, which has implications for stream restoration and riparian management in agricultural landscapes."

That should make all you trout anglers quake in your waders. It should also worry anyone who cares about the basic building blocks of a healthy stream or river. **— April 25, 2008**

Christmas on Corn Creek

Soil is a creature of its very local environment, not some sort of throw rug you can roll up and toss in the moving van.

Even on a bitter winter day next to a Midwestern creek, soil is a vibrant being festering with life—yet it prefers to execute all that activity while sitting in one place. We move it—either by accident or on purpose—at our own risk. **— Jan. 4, 2008**

Local Food's Toughest Customers

On an overcast fall day, I got a tour of the Meat Center of Appleton (population: 2,871) in the heart of western Minnesota's wild goose and domestic corn country. If an extensive local food system is to take root throughout the Midwest and beyond, its reach can't be limited to hip urban neighborhoods and earnest college campuses. It also has to catch on in places like Appleton. **— Sept. 26, 2008**

Myth Buster Box

An ongoing series on ag myths & ways of deflating them

➔ *Myth*:

Buying locally produced food will automatically reduce your ecological footprint.

➔ *Fact*:

In the ongoing battle to reduce the carbon footprint (the amount of greenhouse gases produced) of each American household, our food system has become a big fat target. No wonder: one estimate is that the food sector—from planting seeds to dumping table scraps—makes up some 25 percent of our negative impact on the environment. And because our food system has become globalized to the point where it travels on average 1,500 miles to get to say, Midwestern supper tables, how those vittles are transported has become a major focus of food's overall ecological impact (between 2007 and 2004, globalization increased by roughly 25 percent the average distance moved by food).

This has promoters of local food systems excited. Now, not only is locally produced and processed food good for the regional economy and better tasting, but it also utilizes less fossil fuels in the transportation process. Consumers are excited about this as well. A 2007 survey of 500 consumers done by the Leopold Center for Sustainable Agriculture found that almost half were willing to pay 10 percent to 30 percent more for food from supply chains that emit half as much greenhouse gas.

However, such a connection between local food, low food miles and lower greenhouse gas emissions is not as automatic as it would appear. Recent studies have taken a close look at the food miles debate and found that how that food is produced and processed often has a bigger impact on the environment than whether it was flown in from South America or trucked in from the next county. For example, last spring the journal *Environmental Science and Technology* reported that transportation as a whole represents only 11 percent of the greenhouse gas emissions produced by our food system. Final delivery from the producer to the retailer accounts for 4 percent of all the greenhouse gas emissions emitted by our food system.

And it must be kept in mind that not all transportation is created equal. It actually may be more efficient to haul a semi-load of tomatoes from California to Minnesota than to rely on dozens of local farmers' pick-up trucks to transport the same amount of produce to customers. And if a lot of fossil fuels were used to cultivate, fertilize and spray that local produce, that can further increase its carbon footprint.

The fact is our globalized food system has evolved to rely on a globalized transportation system. As Land Stewardship Project surveys in southeast and western Minnesota show, it's often easier to get food transported from the other side of the world than from the next county. Intra-regional transportation has been replaced by interstate trucking, barges and intercontinental flights.

This is not to say that we should ignore food miles. After all, as far as greenhouse gas emissions are concerned, for an individual household a completely "localized diet" is like driving 1,000 fewer miles annually, according to the *Environmental Science and Technology* study.

Also, there are plenty of compelling environmental, economic and even social reasons to consume locally produced food. But giving too much weight to the food miles argument may be a mistake. Also, if we always assume local food has lower food miles, no matter what, we may lose the incentive to fix our regional transportation systems.

And all of the other good reasons to support local food systems make it imperative we deal with the issue of transportation. Already, farmers in different parts of the Midwest are pooling resources so that they can move their product to market in larger, fuel-efficient trucks. They're even utilizing communal refrigerated storage, which can use much less energy that dozens of individual on-farm coolers. It turns out even wasted food can be a major producer of greenhouse gases when it produces methane in a festering landfill. Sustainable agriculture and energy experts are increasingly calling for a look at the entire ecological lifespan of food, rather than focusing on just one or two things like food miles.

For example, grass-based beef and dairy farms have a much smaller environmental impact than their grain-based, factory farm counterparts. Organic vegetable operations that utilize conservation tillage are also friendlier to the environment. Eating in season reduces the need for energy-hungry greenhouses and refrigeration. Packaging and processing is also a major issue when it comes to ecological impact, and fresh, local food requires less of both.

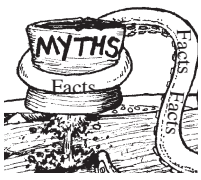
This is a situation where knowledge is power. Better labeling is one way to increase that power. And as any consumer who belongs to a Community Supported Agriculture operation or gets their produce, meat and dairy products at a local farmers' market knows, meeting the faces behind the food is another way to increase one's carbon footprint brain power.

➔ *More information:*

• To read the recent *Environmental Science and Technology* article, "Food-Miles and the Relative Climate Impacts of Food Choices in the United States," see http://pubs.acs.org/cgi-bin/sample.cgi/esthag/2008/42/i10/pdf/es702969f.pdf.

• You can take a personal ecological footprint quiz at www.fooprintnetwork.org/gfn_sub.php?content=myfootprint.

• Check out LSP's "Racking up the Food Miles" fact sheet at www.landstewardshipproject.org/pdf/factsheets/11_food_miles_2008.pdf.



Myth Busters on the Internet

The *Land Stewardship Letter*'s popular *Myth Buster* series is available on our website. You can download pdf versions at www.landstewardshipproject.org/resources-myth.html. For information on obtaining paper copies, contact Brian DeVore at 612-729-6294 or bdevore@landstewardshipproject.org. ❐

LAND STEWARDSHIP PROJECT

LSP News

SE MN summer cookout features local food, fun

Land Stewardship Project members Bonnie and Vance Haugen hosted the Land Stewardship Project's annual "Celebration of Food, Family and Farming" on July 20.

During the event, Bonnie, Vance and their daughter Inga Haugen led tours of their 230-acre grass-based dairy farm near Canton, in southeast Minnesota. The Haugens are widely recognized for their innovative farming methods that allow them to graze a milking herd of 140 mix-breed cows on pastures at least eight months of the year.

During the LSP event, the Haugens led tours of the operation and talked about their milk production system. The farm tours also incorporated updates by LSP staff on the new Farm Bill, results from the southeast Minnesota well water testing project, LSP's new "Affordable Health Care for All" campaign and the organization's food systems work involving the Mayo Clinic and food product transportation.

The hog roast/ potluck featured a hog prepared by chef Justin Scardina of La Rana Bistro in Decorah, Iowa, and raised by LSP members Eric and Lisa Klein. An ice cream social featured Sibby's Homestead Organic Ice Cream, made by owner Sue Huber in a creamery on her family's homestead farm near Viroqua, Wis.

In addition, LSP's Farm Beginnings® program honored recent graduates of the course during a ceremony. These students have spent the past 10 months studying low-cost methods of sustainable farming through classes, farm tours, on-farm skills sessions and mentoring. See page 16 for more on Farm Beginnings. ❒

Bonnie Haugen talked about her farm's history and its plans for bringing in more family members in the future. (*LSP photo*)

Participants in the LSP event had opportunities to take pasture walks on the Haugen farm. During one pasture walk, Bonnie Haugen talked about steps they've taken to prevent soil erosion on their hilly land. (*LSP photo*)

LSP members contributed local dishes to a potluck that was anchored by locally produced pork and ice cream. (*LSP photo*)

Forsell joins LSP's Farm Beginnings

Parker Forsell and **Nick Olson** have joined the Land Stewardship Project staff as organizers for the Farm Beginnings® program.

Forsell has an undergraduate degree in English/creative writing from the University of Wisconsin-La Crosse and a master's degree in environmental studies/agroecology from Prescott College in Arizona. He has also done post-graduate work in sustainable agriculture at Iowa State University.

Forsell has worked on various organic produce operations over the years, serving as a farm manager, greenhouse manager and consultant. He also served as a farm inspector and editor of *Biodynamics* magazine. Most recently, Forsell has been the program director for the Farm Beginnings initiative at Angelic Organics Learning Center in Illinois.

Parker Forsell

At LSP, Forsell will focus on developing the next level of continuing education for Farm Beginnings participants and graduates, and will help design and implement a program that will aid farm families in developing and implementing an individualized learning plan. Forsell is based out of LSP's office in Lewiston, Minn.

Olson has a bachelor's degree in elementary education from Saint John's University in Collegeville, Minn. In May, he obtained a master's degree in environmental education from the University of Minnesota-Duluth.

Olson has been employed as a middle school teacher, naturalist and farm worker. Most recently, he and his wife Joan managed a Community Supported Agriculture (CSA) farm for the Earthrise Foundation in Milan, Minn.

Nick Olson

Olson is based out of LSP's western Minnesota office in Montevideo, and is focusing on planning and facilitating LSP's Farm Beginnings class being held in Paynesville, Minn., this fall and winter. ❒

Schmidt serves LSP internship

Lydia Schmidt served as an intern in the Land Stewardship Project's western Minnesota office this summer.

Schmidt recently obtained a bachelor's of science degree in biology with a chemistry minor from South Dakota State University (SDSU). Schmidt is a member of the Alpha Lambda Delta National Honor Society and while at SDSU helped form a collegiate chapter of the South Dakota Farmers Union. She has worked as a pharmacy technician, food server and sales associate. A native of Marietta, Minn., Schmidt's father, John, is a graduate of LSP's Farm Beginnings program.

Lydia Schmidt

While interning at LSP, Schmidt focused on recruiting participants for the 2008-2009 session of Farm Beginnings. ❒

Rohricht & VanDerPol end LSP Board service

JoAnne Rohricht and Jim **VanDerPol** have retired from the Land Stewardship Project's Board of Directors after each serving two eight-year terms.

Rohricht, who lives in Saint Paul, Minn., has long worked to promote links between local farmers and consumers and is active on social justice issues. She served as the President of LSP's Board, and also chaired the program planning committee. She also served on the membership and fund development committee, as well as the executive committee.

VanDerPol raises livestock in western Minnesota and his family's Pastures A' Plenty pork is well known to consumers around the state. His popular "Conversations with the Land" column appears in *Graze* magazine and the farmer played a key role in increasing alternative swine research and outreach at the University of Minnesota's Western Research and Outreach Center. VanDerPol's farm has hosted numerous tours over the years, including several Farm Beginnings educational events. While serving on LSP's Board, VanDerPol chaired the development fund committee. ❒

Bartmann & Hoffman join LSP Board

Kim Bartmann and **Alan Hoffman** have joined the Land Stewardship Project's Board of Directors.

Bartmann's three restaurants—Bryant Lake Bowl, Café Barbette and Red Stag Supperclub—are well known in the Twin Cities area for serving locally produced food. The Red Stag is Minnesota's first

Kim Bartmann

LEED-certified restaurant. LEED, which stands for "Leadership in Energy and Environmental Design," is a rigorous set of standards for sustainable construction practices.

Hoffman is a longtime member and supporter of LSP. He and his wife Judy serve on the organization's southeast Minnesota steering committee. Hoffman is a pediatric radiologist at the Mayo Clinic in Rochester,

Alan Hoffman

Minn., and has been working closely with LSP staff to get locally-produced foods into the medical institution. Hoffman is interested in how health and food production interact and in 2007 arranged to bring world-renowned pesticide/frog researcher Tyrone Hayes to Mayo to speak (see page 13). ❒

LAND STEWARDSHIP PROJECT

LSP News

Agripreneurs at Farmfest

Sustainable and alternative farming systems had an unprecedented presence at the 2008 edition of Farmfest, Minnesota's largest annual agricultural gathering. Farmfest, which is held each year at the Gilfillan Estate in southwest Minnesota's Redwood County, showcased a special "Agripreneurship Specialty Pavilion." The pavilion featured a tent full of groups and businesses representing alternative energy, conservation development, orchards, alternative livestock production, organics, vineyards and more.

During the Farmfest's run, which was from Aug. 5-7, LSP partnered with MOSES (Midwest Organic and Sustainable Education Service), Niman Ranch and the Animal Welfare Institute to put on an "Entrepreneurial Insights" panel discussion inside the Agripreneurship Specialty Pavilion. The panel featured an informal discussion about the opportunities available in sustainable ag.

"There are tremendous, tremendous opportunities for farmers on moderate and even small farms," said Terry VanDerPol, Director of LSP's Community Based Food and Economic Development Program. She raises grass-fed beef in western Minnesota and works on creating local food systems in rural areas. "There are opportunities besides acquiring ever more acreage and more capital investment."

Farm Beginnings graduate John Schmidt helped host the "Wheel of Opportunity" at the Land Stewardship Project's display during Farmfest. (*LSP photo***)**

Terry VanDerPol, who directs LSP's Community Based Food and Economic Development Program, spoke during the "Entrepreneurial Insights" panel at Farmfest. (*LSP photo***)**

VanDerPol added that as the price of transporting foods long distances grows, locally produced foods will become increasingly attractive economically.

"It's a consumer-driven market," said Harriet Behar of MOSES, referring to the demand for more food produced using environmentally sound methods. "You look at the system and fix the system rather than coming in after there's a problem and using a synthetic solution. Consumers appreciate that. There's a market for food that's not anonymous."

"It's a trend…I don't think it's a fad," said Sarah Willis of the Animal Welfare Institute. Willis raises hogs for Niman Ranch, a natural pork company that's enjoyed tremendous success in recent years. "I've talked to several friends who are going to vote with their fork."

LSP's display at the Agripreneurship Pavilion featured a "Wheel of Opportunity," in which volunteers quizzed Farmfest attendees on myths and realities in farming. ❐

LSP Policy open house

Some 140 people attended the Land Stewardship Project's Policy and Organizing Program annual open house and cookout in June. The event featured an update on LSP's policy and organizing initiatives, including a presentation on issues the organization is currently working on, plans for the future, and how citizens can get involved. A silent auction featured over 40 prizes from area businesses and handmade goods from members of the community.

This was the last public event held by the Policy Program before it moved into LSP's new joint Twin Cities location: 821 East 35th Street, Suite 200, Minneapolis, MN 55407-2102. (*LSP photos*)

Ken Peterson: 1929-2008

Former Land Stewardship Project Board member Ken Peterson died Oct. 16. He was 79. Peterson, who raised beef near Tamarack in northeast Minnesota, helped launch the Sustainable Farming Association's (SFA) Northeast Chapter, now known as the Lake Superior SFA. Earlier this year, he was given the SFA's Sustainable Farmer Emeritus Award.

Peterson was one of the first University of Minnesota Extension educators to promote sustainable farming systems. Peterson helped bring Holistic Management to northeast Minnesota, and he was instrumental in organizing the first Lake Superior Harvest Festival.

Peterson had also served on the Board of the Minnesota Institute For Sustainable Agriculture, among other groups.

LSP sponsors swine meetings

The Land Stewardship Project teamed up with the USDA's Risk Management Agency and Farm Service Agency to sponsor a pair of July workshops on possible options in producing, feeding and marketing hogs.

The workshops, which were held in the Minnesota communities of Redwood Falls and St. Charles, featured the latest research results related to alternative swine production.

Topics covered included alternatives to corn- and soybean-based feeds given the current high input prices hog farmers face, and the economics of natural and organic systems.

Presenters were local farmers utilizing alternative systems and swine researchers from Iowa State University and the University of Minnesota.

For more information, contact LSP's Amy Bacigalupo at 320-269-2105 or amyb@landstewardshipproject.org. ❐

Cooking at the market

Not even rain showers held off the crowd that gathered on Sept. 13 under the green and white awning at the Winona Farmers' Market to watch chefs Lucia Watson (left) and Annette Colon chop, sizzle and share the bounty of the season. Complete with recipes, the pair from Lucia's Restaurant and Wine Bar in Minneapolis talked and tasted their way through corn pancakes, pastas and several coulis toppings made almost solely from ingredients foraged minutes before from vendors at the market.

The event was one of a variety of activities meant to shine a local light on the National Eat Local Challenge. It was organized by staff of the Land Stewardship Project's Community Based Food and Economic Development Program, along with other members of the Winona County Economic Development Authority/Local Foods Committee. (*photo by Caroline van Schaik*)

Dinner in the garden

Land Stewardship Project members Lonny and Sandy Dietz of southeast Minnesota's Whitewater Gardens hosted a 100-person dinner in September to celebrate good food and to put that food to good work.

Proceeds from the "Dinner in the Garden" event, which was held in one of the farm's greenhouses, will jump-start a new program to provide Women Infants and Children (WIC) food vouchers for the Winona Farmers' Market, beginning in 2009. Chefs Lucia Watson and Annette Colon of Lucia's Restaurant and Wine Bar in Minneapolis, prepared an all-locally-sourced luncheon with the help of volunteers, who harvested, chopped, stirred, set tables, served and washed dishes in and around the greenhouse, packing shed, and the farm's "real" kitchen.

Diners included the Dietz's Community Supported Agriculture (CSA) shareholders and others from around the region and the Twin Cities. Garden and prairie trails were open before and after the meal. Staff of LSP's Community Based Food and Economic Development Program, as well as other members of the Winona County Economic Development Authority/Local Foods Committee, helped to organize this event.

For more information on LSP's work related to local food systems in southeast Minnesota, call 507-523-3366. ❒

Sandy and Lonny Dietz hosted the "Dinner in the Garden" in one of their greenhouses. (*photo by Caroline van Schaik*)

LSP field day showcases stewardship farming

Some 40 people hopped onto a hay wagon Sept. 15 to see and hear firsthand the environmental and economic benefits of the grass-based organic dairy of Land Stewardship Project members Laverne and Arlene (pictured at right) Nelson.

The Nelsons farm near Altura in southeast Minnesota. Representatives of county and state natural resource and agriculture agencies, along with elected officials, political candidates, the local food cooperative and neighboring farmers attended the LSP field day.

Members of the Nelson family covered the farm's history from its days as a conventional operation, the family's reasons for converting to a certified organic operation, and a variety of production decisions. There were presentations on, among other things, soil biology and the correlation between organic farming standards and agency-held goals for habitat and biodiversity. The farm largely supports the Nelsons along with their son, Ross, his wife Tiffany and their children. (*photo by Caroline van Schaik*)

10,000 Villages to 'benefit' LSP Dec. 2

For over six decades, Ten Thousand Villages has been proving wrong a basic axiom of economics: paying a fair price isn't good business.

Since the Fair Trade retail outlet was founded in the 1940s by the Mennonite Central Committee, it has stayed true to its original mission of paying artisans in the developing world good prices for their work, says Kathy McGinley, who manages the Ten Thousand Villages store in Saint Paul, Minn.

"Our mission is to alleviate poverty through beautiful work," she says. "What I appreciate about it most is it's not charity. We provide North American residents a good product while giving our artisan partners a profitable export market."

That business model has proven to be good for the artisans—they represent 36 countries—as well as Ten Thousand Villages, whose retail operation has grown from humble beginnings to over 160 outlets in North America. Some of those outlets, such as the one in Saint Paul, go under the Ten Thousand Villages name, while others are known under different monikers. The Ten Thousand Villages parent organization is a nonprofit, while the stores are franchises.

McGinley says a key business practice that sets Ten Thousand Villages apart from other import stores is its payment model: it pays artisans 50 percent of the price up front, and the balance once the product leaves the country. Ten Thousand Villages also takes on the responsibility of getting the products transported, a major risk in developing countries. Because it does not use middlemen, Ten Thousand Villages is able to keep its prices relatively low.

The company directly monitors if the artisans are being paid fair prices, as well as whether they are involved in production systems that utilize safe working conditions, sustainable procurement of materials and no forced child labor.

"The first commitment is to the artisan partners," says McGinley.

Although Fair Trade principals related to food are starting to catch on in North America, it's been a tougher sale when it comes to non-food items like crafts, says McGinley. But the idea is taking hold, and Ten Thousand Villages has been able to prove that paying artisans a fair price can be good for everyone involved: the store, the crafts people and even the community. It's that latter entity the Saint Paul outlet is reaching out to when it holds its special "Benefit Shopping Nights" periodically. During these events, the store donates 20 percent of its proceeds to local groups. In 2007, the Land Stewardship Project was a recipient of a Benefit Shopping Night at the store. LSP will be the focus of the initiative again on Dec. 2 (see sidebar below).

McGinley says these events help customers see that improving the community is not just a local or international endeavor, it's a global initiative that connects all of us.

"These Benefit Shopping Nights bring in new customers and highlight the work of these local nonprofits," she says. "It just seems like such a win-win." ❐

Benefit Shopping Night

You can support stewardship and Fair Trade this holiday season by buying handmade, fair traded gifts at the Saint Paul, Minn., Ten Thousand Villages store (www.tenthousandvillages.com) on Tuesday, Dec. 2. Ten Thousand Villages is donating 20 percent of all sales from 5 p.m. to 8 p.m. that day to support the Land Stewardship Project's work. The store is located at 867 Grand Ave. (Victoria Crossing West).

We are grateful to Ten Thousand Villages for its support and work to advance Fair Trade. Please come out to show your support on Dec. 2. For more information, contact LSP's Mike McMahon at 612-722-6377 or mcmahon@landstewardshipproject.org.

Now comes the hard part…

LSP pushes for full implementation of Farm Bill initiatives

By Adam Warthesen

Passing a Farm Bill is one thing—putting it to work is quite another. As we outlined in the Summer 2008 issue of the *Land Stewardship Letter*, several positive initiatives are part of the new Farm Bill passed earlier this year. But passage of major legislation is only one part of what needs to be done to create positive public policy; effective implementation and good usage of the programs created by the law is the balance of the job.

That's why during the summer of 2008 Land Stewardship Project members and staff worked to make sure positive Farm Bill gains in, for example, the areas of beginning farmers and working lands conservation are on the road to full implementation.

LSP members met with Rep. Collin Peterson at the Bruce and Sherry Plaetz farm to discuss Farm Bill implementation. (*LSP photo*)

CSP & BFRDP

In July LSP participated in a Sustainable Agriculture Coalition fly-in to Washington, D.C. During the fly-in, we met with Arlen Lancaster, chief of the USDA's Natural Resources Conservation Service (NRCS). The NRCS is in charge of implementing the Conservation Security Program (CSP), now known as the Conservation Stewardship Program. CSP is an improved program that pays farmers for producing measurable real conservation benefits on the land. Originally created by the 2002 Farm Bill, CSP has been hampered by lack of funding and an oftentimes-confusing application system. During the meeting with NRCS, we highlighted the important improvements made to the program by the 2008 Farm Bill, such as a simplified sign-up process and a recognition of proven conservation measures like resource conserving crop rotations.

In addition, program access is no longer restricted to certain watersheds each year—all farmers are now able to apply for the program. As in the past, farmers are also encouraged to take on additional conservation practices during the life of the five-year CSP contracts.

New guidelines and CSP rules will be released later this year for comment and a program sign-up is expected in the first part of 2009. We have recently developed a fact sheet (www.landstewardshipproject.org/pdf/CSP09.pdf) on the newly remodeled CSP.

While in D.C., LSP also met with officials at the USDA's Cooperative States Research Education and Extension Service (CSREES). This agency, which will soon be renamed the National Institute for Food and Agriculture, will be implementing another top Farm Bill priority for LSP: the Beginning Farmer and Rancher Development Program (BFRDP). This initiative is a competitive grants program aimed at providing support to community-based beginning farmer and rancher training and assistance efforts. We provided initial recommendations to CSREES on implementing the program and heard from administrator Colien Hefferan that the agency is committed to getting this program up and available during the first quarter of 2009. In October, LSP traveled back to D.C. to provide more detailed comments on how the BFRDP can work for community-based organizations and help new farmers succeed in farming.

Talking BFRDP

Talking with USDA decision makers has only been part of LSP's nationally recognized work on the beginning farmer program. We've also been traveling the country during the past several months to meet with groups from California, Missouri, Washington, Nebraska, Iowa, South Dakota, North Dakota and Massachusetts that have set up or are interested in setting up community-based beginning farmer programs. By meeting with these groups, we are able to strategize how BFRDP can help them create beginning farmer programs and learn what creative methods they are using to get more people on the land.

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"…I see the difference good rotations make in reducing erosion and improving soil quality. Our farm programs have to look at farming as a system for raising food so the next generation can raise food, and not just a commodity system that's moving us toward a monoculture."

—farmer Jim Guetter

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Bringing it back to the farm

Because of LSP's strong membership and longstanding integrity in working on farm and rural issues, we have credibility with lawmakers who championed gains in the 2008 Farm Bill. This summer LSP hosted two lawmakers on members' farms to discuss farm bill usage and implementation.

On Aug. 20, LSP members gathered at the southwest Minnesota dairy farm of Bruce and Sherry Plaetz to meet with U.S. Rep. Collin Peterson, the powerful Chair of the U.S. House Agriculture Committee. And on Aug. 26, members met with House Agriculture Committee member Rep. Tim Walz on the New Ulm, Minn., crop and livestock farm of Carl and Bernie Schwermann.

During the meetings, both Peterson and Walz pledged to push for full implementation and funding of 2008 Farm Bill initiatives related to beginning farmers, livestock issues, conservation and local food systems.

"You've got my support 100 percent,"

Farm Bill, *see page 13…*

…Farm Bill, *from page 12*

Peterson told the crowd of two-dozen farmers who gathered at the Plaetz farm.

During the meetings, participants heard an update on LSP's Farm Beginnings® Program (see page 16).

During the New Ulm meeting with Rep. Walz (he was an original House co-sponsor of beginning farmer measures), Farm Beginnings graduate Karen Schwinghammer spoke about the importance of solid, community-based training programs.

"We found real value in LSP's Farm Beginnings class and especially the trainings that focused on goal setting," she said. "Having Farm Bill support for community organizations that then offer beginning farmer assistance is a smart approach."

Peterson said BFRDP was a priority for him in the 2008 Farm Bill because of all the opportunities he sees in agriculture today in such areas as producing food for local markets.

"…what we were trying to do is for the ones that want to come back [to the farm] give them a tool to help them do that," he said.

During the meeting with Peterson, Wabasso area crop farmer Jim Guetter provided straightforward logic for why programs like CSP are so important at a time when record crop prices make it difficult to stick with or adopt environmentally friendly crop rotations.

Said Rep. Tim Walz to LSP members: "Passage of a Farm Bill is one thing, but how it gets implemented so farmers and others can really use the programs and policies is what's key at this point." (*Photo by Adam Warthesen*)

"We're so tempted to tear out the alfalfa and the trees and plant fencerow to fencerow," Guetter told the Congressman. "But I hate to do that because I see the difference good rotations make in reducing erosion and improving soil quality. Our farm programs have to look at farming as a system for raising food so the next generation can raise food, and not just a commodity system that's moving us toward a monoculture."

In coming months LSP's staff and members will continue making it clear why having a Farm Bill that lives up to its paper promises is so critical. ❒

Adam Warthesen is an LSP Policy Program organizer. He can be reached at 612-722-6377 or adamw@landstewtewardshipproject.org. For more information on LSP's federal policy work, including fact sheets and summaries of the 2008 Farm Bill, see www.landstewardshipproject.org/programs_federal_policy.html.

LSP conducts atrazine survey

The Land Stewardship Project is gathering information on one of the country's most heavily used herbicides. This fall, LSP sent out a survey to its members asking for their input on atrazine.

The popular weed killer, which is used mostly on corn acres, has become very controversial in recent years; in states like Minnesota, it is the most commonly detected pesticide contaminant in surface waters. In fact, a recent Minnesota Pollution Control Agency study found atrazine in nine out of 10 lakes sampled in the state, including the Boundary Waters Canoe Area wilderness. Scientists such as the University of California-Berkeley's Tyrone Hayes have connected atrazine exposure and health problems in frogs. There is mounting evidence that atrazine disrupts hormonal activity in animals, and possibly humans, causing severe problems at extremely low levels.

Atrazine, which is primarily manufactured by agrichemical giant Syngenta, has become a hot button issue in Minnesota. Last year Paul Wotzka, a highly respected hydrologist, was fired by the state of Minnesota soon after he requested permission to testify before a state legislative committee on his atrazine research (see sidebar).

There have been attempts at the Minnesota Legislature to restrict the use of atrazine in watersheds where contamination is shown to be a problem. (Wisconsin has put in place atrazine restrictions in vulnerable watersheds.) Agrichemical companies and the Minnesota Department of Agriculture have resisted such restrictions.

LSP is hoping through its survey and other information gathering to determine the experiences farmers and non-farmers have had with the herbicide, as well as what they believe should be done to make sure it is not harming the natural or human environment.

The results of the survey will be released in coming months, and LSP is in the process of developing a special report on the pesticide and alternatives for farmers. This winter, LSP will hold a series of meetings around Minnesota to discuss atrazine. For more information, contact Bobby King at 612-722-6377 or bking@landstewardshipproject.org (see page 27 for more in this issue). ❒

Paul Wotzka named 'Scholar Under Fire'

Paul Wotzka has been named the Women's Environmental Institute's "2008 Scholar Under Fire." The Institute annually honors the courage and integrity of a researcher and scholar who takes great risks on what they know and what they believe is the public's right to know.

For 16 years, Wotzka was a highly-respected hydrologist working for the state, doing cutting-edge research on pesticides such as atrazine in water. On May 8, 2007, he was fired after he made a request to testify about his research before a committee of the Minnesota Legislature. In the spring of 2007, Wotzka filed a federal whistleblower lawsuit, claiming that his First Amendment right to free speech had been violated. Last fall, Wotzka temporarily dropped his lawsuit, but plans on resurrecting it in the near future.

The Women's Environmental Institute (WEI) hopes to create more public knowledge about Wotzka's research and the perils of atrazine on human and environmental health. For more information on WEI, see www.w-e-i.org, or call 651-583-0705.

Keeping livestock grants fair

By Bobby King & Paul Sobocinski

On July 1, the Minnesota Department of Agriculture (MDA) announced that grants are available to livestock producers who need help improving or expanding their operations. Members and staff of the Land Stewardship Project worked hard during the 2008 session of the Minnesota Legislature to make sure that the "Livestock Investment Grant Program" was family farmer friendly (for a complete summary of the 2008 legislative session, see www.landstewardshipproject.org/pdf/2008_legislative_wrap-up.pdf).

The 2008 grants deadline was Sept. 15, and eventually 600 producers applied for more than $11 million in grants. In theory, any Minnesota livestock producer could apply for money to offset the costs of improving a livestock operation. Producers can be reimbursed 10 percent of the cost of a project, with a minimum expense of $4,000 and a maximum expense of $500,000.

Qualifying projects include:

- The acquisition, construction or improvement of buildings or facilities for the production of livestock or livestock products.

- The development of pasture for use by livestock including, but not limited to, the acquisition, development or improvement of:
  - ➔ Lanes used by livestock that connect pasture to a central location.
  - ➔ Watering systems for livestock on pasture, including water lines and booster pump well installations.
  - ➔ Livestock stream crossing stabilization.
  - ➔ Fences.

- The acquisition of equipment for livestock housing, confinement, feeding and waste management.

As the above list shows, this grants program holds a lot of potential for helping make a wide spectrum of Minnesota livestock producers more competitive.

But the House and Senate Conference Committee for Agriculture inserted a provision into the Livestock Investment Grants Program that gives the Minnesota Commissioner of Agriculture the authority to develop "competitive eligibility criteria" for the applications received. Using this authority, the MDA developed an "evaluation profile" (www.mda.state.mn.us/grants/grants/ligevalprofile.htm) that uses a points system for rating grant applications.

LSP is concerned that the MDA's criteria for evaluating applications are skewed towards larger operators and biased against small- and medium-sized family farms using sustainable production systems to maintain current environmental excellence.

LSP's specific concerns are:

◆ More points are awarded for applications that show the operation will be increasing livestock numbers. For example, if an operation's livestock numbers are to be increased by 20 percent, they are given five points or an "outstanding" rating. A grant application that shows no change in livestock numbers is given one point and considered "unsatisfactory," according to the MDA's evaluation profile. This puts at a disadvantage any farmer using strategies other than expansion to improve an operation. Many farmers who graze livestock, for example, work to increase profitability by lowering inputs and increasing efficiency, not by expanding. Increasing livestock numbers can be the wrong strategy for some farmers and should not be given such a high priority in the scoring.

◆ The more employees an operation adds, the more points it scores. Again, an operation that intends to add six or more employees receives five points and an "outstanding" rating. This also puts small- and medium-sized farmers at a disadvantage. There are other ways of increasing efficiencies and profitability without hiring more employees, but the MDA's evaluation profile does not seem to recognize that.

◆ Five points (again, an "outstanding" rating) are awarded for producing "substantial positive environmental impact." This is presented in a way that suggests there must be measured improvement as opposed to maintaining existing excellence. LSP feels a grant proposal from a farmer who is currently farming in ways that enhance and protect the environment should receive an outstanding rating for improvements necessary to maintain that excellence.

◆ A farm that is implementing an Environmental Quality Assurance plan receives a higher rating under the MDA's evaluation profile. LSP believes that organically certified and Midwest Food Alliance certified farms should also score more points when applying for Livestock Investment Grants. Both certifications have rigorous environmental standards that farmers must meet.

According to the MDA's evaluation profile, operations which expand dramatically may be more likely to receive help through the Livestock Investment Grants program. These proposals will likely be the largest grant requests, thus quickly draining the program's budget. This puts family farmers using innovative, low-cost, low-input systems at a disadvantage. LSP has strived to make sure any Minnesota livestock improvement grant program would not discriminate against small- and moderate-sized family farms, including those that are using sustainable and organic systems. That is why LSP pushed for language in the bill that includes a low minimum investment amount ($4,000), and that recognizes systems such as pasture development as livestock operation improvements eligible for funding.

This summer LSP sent a letter to the chairs of the Minnesota House and Senate Agriculture Policy and Finance committees, as well as to committee members, expressing our concern with the criteria put in place by MDA.

We also urged LSP farmer-members who are interested in improving their operations to apply for the grant and report to us on their experience with the program. We should have a better idea later this year how the MDA implemented this program and whether family-sized operations were discriminated against.

If you applied for a Livestock Investment Grant, you can report your experience with the process to Bobby King at 612-722-6377 (bking@landstewardshipproject.org) or Paul Sobocinski at 507-342-2323 (sobopaul@redred.com). If you didn't apply for a grant this year but would like to in the future, we encourage you to check out www.mda.state.mn.us/livestockinvestmentgrant, or call 651-201-6500.

It is important to monitor how this important grants program is being implemented in the field and whether it is truly benefiting all types of livestock operations. Such monitoring could play a key role in making this program a valuable tool for family farm livestock operations, including those using sustainable and organic methods. ❒

Bobby King and Paul Sobocinski are LSP Policy Program organizers.

A big picture view of science

A call for a new approach to agricultural research

EDITOR'S NOTE: The July/August 2008 issue of the journal *BioScience* featured a commentary calling for a different approach to agricultural research in this country. George Boody, Executive Director of the Land Stewardship Project, co-authored the commentary along with a group of scientists and other experts representing various disciplines from around the country. Boody and his colleagues point out that agriculture is being called upon to meet an unprecedented number of complex goals that go beyond just simple food production. Meeting such demands requires an agricultural research system that takes a systems approach, rather than just focusing on single commodities and goals in isolation, say the authors. Such research systems must also be long-term and be done in a wide variety of geographical locations so the results can be applied on a large scale as well as locally, they say. Boody recently sat down to talk to the *Land Stewardship Letter* about this call for a different approach to agricultural research.

***LSL*:** *In the commentary, you call for an agricultural research program that's different from the current system. What's wrong with the current way we research agriculture?*

Boody: There is too much emphasis on just a few species, breeds and commodities. Most research tends to focus on production at the expense of everything else and does not provide much room for weighing the trade-offs against each other. It's more often reductionist-oriented research that looks at one problem at a time, and tries to hold everything else constant. The trouble is, in the real world a whole number of factors go into making a farming system successful and sustainable.

For example, agronomists have focused for decades on how to increase corn yields, and as a result they've been successful in increasing how many bushels of grain comes off those fields. But because the goal of this research was so narrowly focused on maximizing the number of bushels-per-acre, the researchers missed opportunities to look at options to integrate crops and livestock on the land and the costs of such productivity: water contamination, shuttered Main Streets, less wildlife habitat, lower net profit margins for farmers, for example.

***LSL*:** *And you see a need for research projects that cover a longer period of time than current initiatives.*

Boody: Too often studies are done based on a funding cycle that's only, say, three years long. It's very difficult to get a comprehensive picture of the environmental, economic and social impacts of various farming systems unless you study them for several years in a row, maybe even three or more decades.

A good example is the Morrow Plots in Illinois, a set of research fields that have been around for a century. Because of their longevity, these plots are telling us a lot about the impacts of, for example, pre-nitrogen fertilizer and post-nitrogen fertilizer crop production systems (see the *Myth Buster Box* in the Spring 2008 issue of the *LSL* for more on the Morrow Plots).

We're proposing the creation of a Long-Term Agroecological Research program, LTAR for short. It would be modeled after the National Science Foundation's Long Term Ecological Research Network, which is doing important long-term experiments at various locations around the country.

***LSL*:** *You mention in your commentary the need for an interdisciplinary approach, where scientists and other stakeholders from various disciplines work together not only on researching systems, but on developing the questions that are to be explored in the first place.*

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"You can do 'good' science — that is, use valid methods — on the wrong questions."

—George Boody

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Boody: We have seen the benefits of bringing together people from a wide range of backgrounds to explore important scientific questions. LSP did this when we coordinated the Monitoring Project, which brought together farmers, scientists and government agency staff to study the impacts of sustainable farming methods in southeast Minnesota. On a larger level, we saw how this model could work when LSP, through the Multiple Benefits of Agriculture initiative, brought together researchers from numerous fields and institutions to study the environmental, social and economic impacts of different farming systems on a watershed basis.

We're also seeing the benefits of interdisciplinary research at the land grant level. For example, the University of Minnesota's West Central Research and Outreach Center is attempting to bring together teams of researchers from various backgrounds to look at questions such as how organic livestock production and cropping systems interact.

When you bring together diverse groups of people to create research projects, perhaps the biggest benefit is that the questions being asked become quite creative. The key is to focus on the most helpful and insightful questions. You can do "good" science—that is, use valid methods—on the wrong questions. We've seen that the interdisciplinary setting can really help us ask better questions and interpret the meaning of data from a variety of viewpoints.

***LSL*:** *Who's going to fund this kind of research?*

Boody: We're discussing the possibility of asking for funding of a LTAR program through USDA. A private seed firm, for example, probably isn't going to be interested in research that weighs the pluses and minuses of various production systems against each other over a span of decades. They want to know what can be done to produce higher-yielding seed as quickly as possible.

The kind of research we're advocating is a public good, and therefore would require public funding. And that's a problem, because public funding of agricultural research has been dropping in recent years. That's why more of the research questions being asked at our universities and at government facilities center around the short-term needs of agribusiness, rather than the long-term needs of society at large. ❐

We made a follow-up call to Michael Bowers, the National Program Leader for Natural Resources at the USDA's Cooperative State Research, Education and Extension Service.

He said his agency "recognizes the need for long term studies, especially on issues related to soil processes." Bowers went on to say that soil's ability to produce food and fuel, as well as sequester greenhouse gases, "puts it in the crosshairs of a lot of things" as far as the USDA is concerned.

"But because most of our research projects related to soil are only three to four years long, we don't have as much long-term information as we should on soil processes," he said. "We need research that's decades long—the Morrow Plots in Illinois have shown us the importance of gathering data over the long term."

Farm Beginnings

Sara Martinez & Matt Urch

Coming to an agreement

On this they agreed: both wanted to farm. But while taking the Land Stewardship Project's Farm Beginnings® course, Sara Martinez and Matt Urch realized there was a difference of opinion on just what their dream farm should consist of.

"I was more focused on berries and an orchard," Martinez recalls. And Urch's dream? "I had grandiose illusions of a grass-fed beef farm," he says with a laugh. "She said five acres and I said no, 160."

Farm Beginnings instructors recommended that the married couple sit down and make up a list of 25 criteria they wanted on a farm. So one night Urch and Martinez brainstormed room for compromise on their farming dreams. "We kind of had it out," recalls Urch. One of the things they agreed on was that they did not want to be hobby farmers—the operation needed to earn its way, even if it was just a part-time income.

Martinez and Urch—both are 38—say that coming face-to-face with the reality of a goal can be difficult when it's existed as a dream for so long. For Urch, the draw of farming has been a constant. It was there when he left his family's southeast Minnesota crop and livestock operation in 1989 to study history at Carleton College, even though, "My parents specifically raised me to get off the farm," he says. It became stronger still when he worked as a ranger at Mt. Rainier National Park in Washington. "I was really homesick even though I had the best job in the world," Urch recalls.

Martinez, who met Urch at Carleton College, also had a draw to food production. She grew up in the suburbs of Los Angeles,

Fresh Faces-Fresh Farming

but her grandfather owned a butcher shop, giving her grounding in where food comes from. Martinez, who has a master's degree in occupational health nursing, also saw the negative effects of large-scale industrialized farming while she was at a clinic for farm workers in Washington's Yakima Valley.

So in 1999 they moved back to the Midwest with the intention to farm. To jump-start their agriculture career, Urch and Martinez took the Farm Beginnings course in Plainview, Minn., in 2000-2001. LSP's Farm Beginnings, which began its second decade in 2008, is a program in which established farmers and other ag professionals provide insights into low-cost, sustainable methods of farming. The course provides workshops on goal-setting, financial planning, business plan creation, alternative marketing and innovative production techniques. In addition, class participants have an opportunity to network with established farmers and utilize them as mentors.

Urch says they gained a lot from Farm Beginnings, but in the end the "visioning" session where they actually wrote down what they wanted in a farm was the most valuable. Armed with a clearer idea of what they were seeking as a family, in 2001 the couple bought an 80-acre farm near Viroqua, in southwest Wisconsin. Today Indecision Ridge Farm, as they call their operation, represents their shared vision: over the past four years they've built their brood cow herd of registered Black Galloways from five to 15 head. They are raised on rotationally grazed pastures (Black Galloways do well on grass) on the hilly land that makes up the farm. During the past two summers the couple has also been raising pastured hogs, feeding them culled apples from their orchard, and selling the pork directly. The small apple orchard is established next to the homestead, along with a berry patch.

Urch and Martinez both work off the farm—he's a teacher and she's a nurse—but they are gradually taking steps to make this operation pay its own way. This year for the first time they sold registered heifers and direct-marketed beef. They are excited about the marketing possibilities that are offered by the interest in locally-produced sustainable food. Viroqua has a food co-op and the presence of the Organic Valley Cooperative down the road in La Farge has increased interest in organic and sustainably-produced food in the area. In addition, a controversy surrounding the proposed construction of a large hog confinement facility in the county last year made more people aware of where their food comes from. Urch and Martinez, along with LSP organizers Bobby King and Adam Warthesen, worked with a local environmental group, the Valley Steward-

Fresh Faces, *see page 17…*

Sara Martinez and Matt Urch, with their sons Sam and Henry. *(LSP photo)*

Farm Beginnings profiles on the web

To read other *Fresh Faces-Fresh Farming* profiles of Farm Beginnings graduates, see www.landstewardshipproject.org/fb/graduates.html.

…Fresh Faces, *from page 16*

ship Network, to prevent the building of the confinement facility in an environmentally vulnerable area (that part of Wisconsin is full of sinkholes).

The couple is currently working with Valley Stewardship Network to develop a local food initiative. This summer the group organized a community harvest dinner, which featured locally produced foods, including donated Indecision Ridge beef, and served 250 people. The dinner was held at the Viroqua public school, which is beginning a project to serve local foods in its cafeteria. Urch is also a member of LSP's Federal Farm Policy Committee, which worked extensively to get beginning farmer and local foods initiatives included in the 2008 Farm Bill (see page 12).

Both Martinez and Urch concede they have a long ways to go before they completely make their farming dream a reality, but they say the operation is already producing other benefits for them and their two sons, Sam 7, and Henry 3. For example, Urch, who has a master's degree in resource management, says one of the reasons he left his job as a guardian of a very public resource—a national park—is he wanted to try his hand at protecting and improving resources on his own piece of land.

On a sunny afternoon in early fall, the Urch family provides a quick tour of the fledgling farm. As the Galloways graze on a lush hillside and Sam and Henry try to coax them closer with strands of pulled grass, Matt excitedly describes how their pasture-based system is already proving that farming and stewardship can be a good mix.

"Last summer between two fence posts we had 10 bobolinks—I love those birds," he says. "We have a pair of northern harriers here. We saw 25 meadowlarks in one shot. Farm Beginnings really helped us change our attitudes of what is success on the farm." ❒

Opportunities Resources

Farm Beginnings on the air

Over the past few years, the Land Stewardship Project's *Ear to the Ground* podcast has featured various aspects of the Farm Beginnings program. We now have archived several Farm Beginnings-themed shows that profile graduates of the program, as well as feature excerpts from class sessions.

For information on listening to *Ear to the Ground* podcasts, see page 30.

To listen to a recent Minnesota Public Radio interview with Farm Beginnings presenter and mentor Audrey Arner, visit http://minnesota.publicradio.org/display/web/2008/03/27/midmorning2. ❒

Looking for land to rent or buy

Farm Beginnings graduate Paula Foreman is looking for a few acres of land to rent or possibly buy within commuting distance of the Twin Cities. She would be interested in renting from people who might want to mentor a new farmer. Foreman can be contacted at encorefarm@yahoo.com. ❒

Looking for dairy farm

Farm Beginnings graduates Corey Klehr and Karen Schwinghammer are looking for a farm to rent or rent to own. They would like a farm with a dairy barn for about 30-50 cows, a two- or three-bedroom house and 40 or more acres. They are interested in settling in southeastern Minnesota, western Wisconsin and northeast Iowa, but will consider other locations.

The Schwinghammers can be contacted at 507-766-0015. ❒

Farm Beginnings 2009-2010

Classes for the 2008-2009 edition of the Land Stewardship Project's Minnesota-area Farm Beginnings program are full and underway for the season. However, applications are being accepted for the 2009-2010 course, which will convene classes next fall. For more information on the course, visit www.farmbeginnings.org. You can also get more information by contacting LSP's offices in southeast Minnesota (507-523-3366) or western Minnesota (320-269-2105).

In recent years, Farm Beginnings courses have been launched in Illinois, Nebraska, North Dakota and the Lake Superior region. Check the Farm Beginnings web page for details on these courses.

FB field days in 2009

Beginning next spring, LSP's Farm Beginnings program will be holding a series of public on-farm educational events. Watch future issues of the *Land Stewardship Letter* and the *LIVE-WIRE* electronic newsletter for details on these events.

Organic farm leasing opportunity

An established organic farmer in Prior Lake, Minn., is interested in leasing land and greenhouse space to a beginning sustainable farmer. This is a good opportunity for someone who is looking for a place to start a sustainable greenhouse and field based farming business.

There is up to 20,000 square feet of greenhouse space available and 10-15 acres of tillable land. The site has a good record for roadside sales of a variety of farm goods, especially bedding plants but also vegetables and Christmas trees.

Currently, no housing is available on-site. The owner is hoping to get someone in as soon as possible in order to get things up and running for spring 2009.

For more information, contact LSP's Amy Bacigalupo at 320-269-2105 or amyb@landstewardshipproject.org. ❒

Land available

Vic Cox has approximately 50 acres of land available for rent in the Blaine, Minn., area. In the past, it has been used as grazing land and to produce vegetables for a farmers' market. Some of the land is enrolled in the Conservation Reserve Program, but will be coming out of contract in the next few years.

For more information, call 612-624-2743 or e-mail coxxx002@umn.edu. ❒

Minnesota Cooks 2008

By Jill McLaughlin

The 2008 Minnesota Cooks event at the State Fair marked this program's 6th Anniversary. Food Alliance Midwest again partnered with Minnesota Farmers Union and Renewing the Countryside to design, develop, direct and present this educational program that promotes local and sustainable agriculture and educates fair-goers about our valued Minnesota farms and healthy food production.

As in the past, the 2008 program featured hour-long cooking demonstrations by 18 sustainably-oriented chefs from the Twin Cities and beyond who are dedicated to sustainable practices and sourcing local foods. Also featured were Food Alliance certified growers, influential guest tasters, and knowledgeable host Scott Pampuch for lively, informative, and engaging conversations about the importance of healthy, sustainable foods and supporting local growers. Each grower and chef was provided the opportunity to share information about their operation.

One significant addition to the 2008 Minnesota Cooks event was an early breakfast show. The breakfast chefs, Marshall Paulsen of Birchwood Café and Dick Trotter and Lisa Scribner of Trotter's Café, not only cooked delicious and unique breakfast dishes for their presentations, but provided mini scones and coffee cakes for all to enjoy with their Minnesota Farmers Union coffee.

The popular 16-month Minnesota Cooks calendar, produced by Renewing the Countryside, was yet again a significant draw for fair-goers. Debuting at the event with fresh recipes, professional photography, and new and engaging stories about chef/grower relationships, the 2008-2009 calendar extends the Minnesota Cooks program and mission throughout the year.

Some of the new chefs for 2008 included Jorge Guzman of Tejas in Edina, Jeff Klemetsrud of Savories in Stillwater, Brian Hauke of Red Stag Supperclub in Minneapolis, and Peter Ravinski and Jillian Forte of Chester Creek Café in Duluth.

Several Minnesota Cooks veterans took the stage, including J.D. Fratzke of The Strip Club in St. Paul, Lucia Watson of Lucia's Restaurant, Alex Roberts of Restaurant Alma and Brasa Rotisserie in Minneapolis, and Mike Phillips of The Craftsman in Minneapolis, to name a few.

Joining them on stage were many Food Alliance Midwest certified farmers, who spoke enthusiastically about their sustain-

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Marshall Paulsen of Birchwood Café was one of the chefs who participated in the 2008 Minnesota Cooks event at the State Fair. *(Food Alliance photo)*

What is food Alliance Midwest?

The Food Alliance seal certifies that a farm is producing food using environmentally friendly and socially responsible practices. Food Alliance certification is available for all crop and livestock products, including fruits, vegetables, grains, dairy products and meat products.

Food Alliance Midwest, based in Saint Paul, Minn., was established in 2000 by the Land Stewardship Project and Cooperative Development Services. It is the Midwestern affiliate of the Food Alliance, which is based in Oregon.

Food Alliance certified products are available for sale throughout the U.S. and Canada in natural food co-ops and grocery stores, as well as select restaurants and food service dining halls. For details on Food Alliance Midwest, including a list of stores that carry its products, visit www.landstewardshipproject.org/programs/mwfa.html, or call 651-265-3682.

FA is looking for farmers

Food Alliance Midwest is looking for farmers in the Upper Midwest who produce fruit, vegetables and livestock using sustainable methods and are interested in getting those methods certified. Details on what it takes to get certified by Food Alliance are at www.foodalliance.org/certification/index.html. More information is also available by calling 651-265-3682.

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able and humane production practices and the benefits of this type of agriculture. Growers included but were not limited to Don and Bev Struxness of Double D Natural Meats, Brian and Leslie Axdahl of Axdahl's Farm, Dave and Florence Minar of Cedar Summit Farm, Eric and Lisa Klein of Hidden Stream Farm, and Jim and LeeAnn VanDerPol of Pastures A' Plenty.

Brenda Langton, chef/owner of Café Brenda and Spoonriver in Minneapolis and "godmother of local," is a long-time participant in Minnesota Cooks (she presented at the first event in 2003) and is a dedicated supporter of this program. Because of her enthusiasm and commitment, Minnesota Cooks this year presented Langton a first-time award honoring her loyalty and dedication to local and sustainable agriculture.

As in the past, Le Cordon Bleu Culinary Institute and Southwest Minnesota State University's (SMSU) School of Culinology lent students to assist with this program and help the day run smoothly. This relationship with SMSU was facilitated through the Agricultural Utilization Research Institute (AURI), which is a major sponsor of the Minnesota Cooks program. ❒

Jill McLaughlin is the Assistant Program Manager for Food Alliance Midwest. She can be reached at 651-209-3382 or jill@foodalliance.org. Minnesota Cooks receives major sponsorship from AURI and is co-presented by Minnesota Farmers Union, Food Alliance Midwest and Renewing the Countryside. For more information about Minnesota Cooks, see www.minnesotacooks.org.

Dine Fresh Dine Local highlights local food in St. Croix River Valley

Eighteen restaurants in the St. Croix River Valley took part in a special one-day culinary celebration of good, local food on Sept. 11. During the "Dine Fresh Dine Local" event, Minnesota and Wisconsin eateries along the St. Croix River featured menu items with ingredients sourced from over three-dozen Valley growers and processors. More than 272 people registered for prizes that day at the restaurants.

In 2005, the last time a Dine Fresh Dine Local event was held in the Twin Cities region, 16 restaurants and over 200 dining parties in Minneapolis/Saint Paul participated. The Sept. 11 event gave the St. Croix River Valley a chance to highlight its local food and farming system.

"This event showcased some of the delicious, locally-produced food that's available and called attention to how eaters can support an important part of our local economy," says Land Stewardship Project staffer Dana Jackson, who coordinates the St. Croix Valley chapter of *Buy Fresh Buy Local*, a national initiative that connects local farmers with consumers, restaurants and institutional food service systems. "It was also a way to encourage and support restaurants that have made a commitment to source at least some of their ingredients locally."

During the Sept. 11 event, St. Croix Valley residents and visitors who dined in participating restaurants enjoyed fresh, delicious and healthy vegetables, fruits, meats, fish, dairy products, honey, baked goods and more, produced by regional farms and businesses. Diners also had a chance to register for prizes contributed by Dine Fresh Dine Local restaurants and sponsoring organizations. Some restaurants made special Dine Fresh Dine Local menus and signage promoting the event. One restaurant, Grecco's on the St. Croix in St. Croix Falls, Wis., invited a supplier of vegetables, Valoriea Loresch of Ultimate Gardens, to be in the Bistro on the evening of Sept. 11 and talk to diners.

"Chef Justin Grecco catered to the farmers and invited me to be there to introduce myself and talk about produce on the menu," says Loresch. "It was an awesome event and we now deliver every Wednesday to chef Justin along with providing to our local school and to the other restaurants we have delivered to earlier."

Dine Fresh Dine Local was co-sponsored by the St. Croix River Valley *Buy Fresh Buy Local* chapter (an initiative hosted by LSP), the River Market Community Co-op, Renewing the Countryside and the St. Croix Scenic Byway. To view a list of restaurants that participated in the Dine Fresh Dine Local event, see www.dinefreshdinelocal.com. ❒

BFBL partnership profile

See page 20 for a profile that describes how one St. Croix River Valley *Buy Fresh Buy Local* partner, Café Wren, is working with local farmers.

Gerald Green, the deli manager at River Market in Stillwater, Minn., serves a sandwich made from local trout, vegetables and herbs to Khaiti Kahleck during the Sept. 11 Dine Fresh Dine Local event. (*LSP photo*)

A fresh alternative in bar & grill country

Sometimes it seems like the owner of the Café Wren has a better idea of what's going on in John Adams' vegetable plots than he does.

"I think she has spies in the garden," Adams jokes on a recent August afternoon while checking on his produce operation near Luck, in western Wisconsin's Polk County. "She knows when my stuff is ripening. She knows her stuff about food and promoting local food."

The "she" Adams is talking about is Stephanie Lundeen, who is working diligently to create an oasis of fresh, local sustenance in the land of bar and grill food. She's doing that by teaming up with operations like Adams' The Good Luck Farm and promoting the idea that fresh, local food is key to sustainable economic development, a healthy landscape and community building—even in a rural area far from the glitzy restaurants of the Twin Cities and other metropolitan areas.

"I think there is a real connection between a healthy community and keeping our money in the local economy by supporting local farmers," says Lundeen as she takes a break in the wake of a recent Friday lunch rush.

That's why when she started the Wren in a former bait shop/residence on the edge of Luck in 2003, Lundeen knew she didn't just want to serve coffee and sandwiches. From the start she wanted to operate a business that not only served good food, but was good for the community, supported the arts and featured local music. She's been true to her word. Café Wren hosts performances by local musicians and "open mic" events. It also showcases the work of local artists in its dining room and in the courtyard, as well as hosts two major art sales annually. The café uses solar panels to provide hot water and part of the old bait shop has been made into a community meeting space.

But it's the food that serves as the café's community bonding agent. Lundeen, who has a degree in environmental education and sustainable agriculture from the University of Minnesota, helped launch farmers' markets and a food co-op in the Twin Cities before moving to Luck in 2001. She also worked with immigrant farmers to help them find markets for their products. By the time she opened the Wren, Lundeen was convinced local food production and consumption could help support a community's economy while creating a healthy place for humans and the environment. So she almost immediately began discussions with farmers about what they could raise for her menu.

It hasn't always been easy, especially in a town of just over 1,000 people and in a county hit hard by bad economic times. But over the years Lundeen's 30-seat restaurant has shown that an eatery that emphasizes community involvement can be economically viable. Besides Adams' operation, Lundeen also buys produce from Burning River farm near Frederic. Both Good Luck Farm and Burning River are Community Supported Agriculture (CSA) operations, which means they sell shares to subscribers before the growing season. In return, they provide a weekly delivery of fresh, natural produce. The CSA enterprises use up the bulk of the farms' production, but Café Wren has become an important buyer of excess vegetables. The Wren also gets ground beef from Smokey Meadows livestock farm in rural Luck. Besides carrying Fair Trade coffee and locally produced wine and beer, it procures ingredients such as eggs from the Natural Alternative Food Co-op in Luck.

Stephanie Lundeen, owner of Café Wren. (*LSP photo*)

During the height of the growing season, as much as 40 percent to 50 percent of the Wren's menu is made up of food grown within 10 to 12 miles of the café—a stark contrast to the 1,200 to 1,500 miles food travels on average to get to people's plates in the Midwest. The lunch special one day in early August featured a soup of local carrots, cauliflower and maple syrup. The sandwiches included homegrown cucumbers, salad greens and tomatoes. Perhaps a gallon or two of gas went into getting all those ingredients to the café's kitchen.

Lundeen calls or e-mails farmers on a weekly basis to see what they have available and to let them know what she needs. The farmers then deliver food on a regular basis, sometimes the same day it was harvested.

"Creating that long-term relationship with the farmers is key," Lundeen says while traffic speeds by the front of the restaurant on State Highway 35, and bicyclists on the Gandy Dancer Trail pedal by out back. Rising up from the trail is a pasture full of grazing cattle. "It's very easy to work with the farmers here. You just make the connection, have a conversation about your needs, and then put it into motion."

Lundeen has taken that relationship building to a new level. Last winter Mike Noreen of Burning River worked at Café Wren. "I got to see what food people like," Noreen says of the experience. During the summer, Lundeen returned the favor by working one day a week at Burning River.

"I got the desire to get my hands back in the soil and get more in touch with the source of my food," says Lundeen. "It's been fantastic."

Maybe that explains the insider knowledge she seems to have on the ripening schedules of local produce.

All of that knowledge, communication and partnering is paying off. Café Wren's food and artsy atmosphere has a growing reputation amongst people traveling up Highway 35 to their lake cabins. They stop for coffee, a meal or a snack, pumping a significant amount of money into the local

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…Fresh, *from page 20*

economy. Café Wren fans—clearly identified by the eatery's unique t-shirt design featuring the namesake bird—have even run into each other in other states and as far away as Africa. But during the wintertime, it's the local residents who make up the bulk of the Wren's clientele. Lundeen says these homegrown customers seem to appreciate that there is an alternative to bar food or a sandwich picked up at a convenience store.

"People really appreciate the fresh alternatives they can get here," she says. "They feel like they're getting healthy food, and they feel good when they eat it. They get pretty excited when they realize how fresh the food is, that it was picked as recently as this morning."

The farmers and Lundeen say there are plenty of opportunities for other partnerships between producers and restaurant owners, no matter what a community's size or demographics. Noreen says that the key is for farmers to communicate to restaurateurs why they have a superior product, and then to be prepared to deliver it on a consistent basis.

"You have to be persistent and be willing to prove your stuff is better that what they are going to get from the distributor," he says. "You can't just show up one day and say, 'I have a bunch of cauliflower.' Restaurants plan their menus two weeks out."

Lundeen feels strongly that in order to create a local food-friendly environment in a community, an eatery must promote the region's farmers even when it doesn't benefit the restaurant directly. Much as the restaurant's solar panels pique people's interest in alternative energy, promotion of local farmers helps local residents see these producers as critical parts of the community.

"I throw the words 'local growers' in as much as possible when communicating with the public," Lundeen says.

That's a main reason Café Wren participated in "Dine Fresh Dine Local" on Sept. 11 (see page 19).

Speaking of partnering with farmers, on a recent Friday Lundeen was preparing for an evening event in the Wren's courtyard that was to feature locally produced food as well as music and art. The farmers from Burning River, The Good Luck Farm and Smokey Meadows were to be the guests of honor. Part of Lundeen's future plans for promoting local food as a resource include featuring at the restaurant photos and promotional materials explaining her relationship with farms.

Perhaps the most direct way Café Wren helps create a community buzz around local farmers and the food they produce is by serving as a weekly pick-up site for CSA subscribers to Burning River and The Good Luck Farm. Seeing all those boxes and bags of fresh vegetables lined up each week helps inform people in the community of the local bounty that's available. The presence of fresh, whole food, whether it be in a CSA box or on the plate, sends an important message, says Adams.

"We're showing you can do this in a town of a thousand people—it's not just in Minneapolis or it's not just in any large town that local food is available," he says while standing between lush rows of snap peas. "Local food is out here where the food is actually grown too, and that makes more sense than anything." ❐

Mike Noreen of Burning River. (*LSP photo***)**

John Adams of The Good Luck Farm. (*LSP photo*)

Give it a listen

To listen to a podcast featuring Stephanie Lundeen and John Adams, see www.digitalpodcast.com/detail-LSP_s_Ear_to_the_Ground-8811.html. It's episode 55.

LSP Stewardship Food Directory

The Land Stewardship Project's newly updated *Stewardship Food Directory* (formerly known as the *Stewardship Food Network*) is now available.

This resource lists farmers and retailers who are members of LSP and who provide locally-produced vegetables, fruit, meat, dairy products, grains and other food items to area consumers.

The *Directory* is categorized by region as well as food items. Over 130 farms and 20 retail establishments are listed. Contact information and the various ways food can be obtained (on-farm pick-up, farmers' markets, direct delivery, etc.) are included in the *Stewardship Food Directory*.

The 21-page listing is available at www.landstewardshipproject.org/foodfarm-main.html#sfd, or by contacting one of LSP's offices. ❐

MN Grown Directory

The 2008-2009 edition of the *Minnesota Grown Directory* lists over 670 farms, farmers' markets and garden centers that sell homegrown products to consumers. The directory, which features numerous LSP members, includes fruits, vegetables, meats, dairy products, Christmas trees and specialty products. It lists sources by regions.

A copy is available at www.minnesotagrown.com or by calling 800-657-3878. ❐

Homegrown heat

Can prairies serve as the basis for a local, farm-based energy system?

By Brian DeVore

Third in a series.

On a crackly dry day in early September Eric Kreidermacher drives his four-wheeler into a field, stops, jumps off and stands between two options in his biofuel future: on the left is around 25 acres of an annual forage crop called Sudan grass. It's impressive stalks are waving in the breeze far above his head, a tribute to the sheer productivity of a monocrop. On the right is 20 acres of a diverse planting of grass, forbs and legumes: a native prairie containing seven different perennial species. The prairie, in its second year of growth, is about waist high. Both plant systems are candidates for being processed into pellets and used as heat in Kreidermacher's hog and greenhouse operation.

"The big advantage I see of the prairie over the annual plantings is the long-term viability," Kreidermacher says as he takes a closer look at the prairie on his southeast Minnesota farm. "If we can get it all figured out the beauty of the prairie system is you really aren't on the land very often. Once it's established, at the most you're going to be on the land once a year to harvest it."

But then the southeast Minnesota farmer glances at the Sudan grass and its Amazonian proportions. There's a reason farmers plant annual monocultures like Sudan grass or corn: they just plain yield a whole lot. "The question comes back to making it economically viable," says the farmer.

Kreidermacher has been thinking about economics a lot lately, as he sets in motion a field-to-furnace system for producing, processing and burning his own source of energy. It's a local version of the worldwide drive to switch from fossil fuel to real-time energy.

As the world seeks alternatives to fossil-fuel based energy production, biofuels—energy production from plant-based materials—is generating a lot of excitement. So far, the most commercially viable biofuel system has been based on corn ethanol. But in recent years an increasing amount of attention has been devoted to ways of deriving fuel from the cellulosic materials found in perennial plants such as grass and trees. Cellulose is the most abundant naturally occurring organic molecule on the plant, and figuring out a way for it to generate energy would give a whole new meaning to clean, renewable energy production. But indications are that a commercial-level production and processing infrastructure based on cellulosic energy is years off. That's too bad, because a cellulosic system could go a long ways toward providing economic incentives for getting more perennial plant cover on the land—something that would provide

numerous environmental benefits: improved soil quality, less erosion, cleaner water, more wildlife habitat and sequestered carbon, for example.

So what can be done in the near term to develop a more sustainable biomass-based energy system? Researchers and farmers are beginning to look at how current technology can make use of plants for energy production. For example, we've been burning wood for heat for centuries, so why not tweak that old system a bit and utilize other, faster-growing biomass materials such as grasses?

But one of biomass energy's major shortcomings is transportation: grasses, wood products and other forms of biomass are bulky and inefficient to transport long distances—you can't just pump them through a pipeline like crude oil. That's why an increasing number of experts are excited about the possibilities of regional biomass-energy systems, where, for example, a farm grows and processes its own source of energy, or produces it for the local community.

That's why Eric Kreidermacher's foray into on-farm production, processing and utilization of plant-based biofuels is so interesting.

"When you look at what Eric's doing, that's an ideal project for looking at some of these issues of producing energy locally," says Alan Doering, an associate scientist at Minnesota's Agricultural Utilization and Research Institute (AURI). Doering adds that the farmer's experiment with creating a closed-loop bioenergy system on a farm is pretty unique.

This endeavor offers a glimpse into the challenges of creating a sustainable biomass energy system that balances productivity with environmental sustainability. Kreidermacher's pioneering efforts could be a preview to not only what other farmers might face as they jump into homegrown energy, but also what society at large must grapple with. One of those big picture questions is this: at what point do we decide that despite prairie's shortcomings as a high-yielding biofuel, the other goods it produces makes it worthy of public support?

The need for consistent energy

The Kreidermacher family has never taken the predictable path to making a living on the land. The 160-acre former dairy farm they own is home to a contract pig nursery, but the main income earner is 65,000-square-feet of greenhouse space, which started out as a hobby in the 1980s. Today, "Pork and Plants" produces bedding plants, poinsettias, vegetables, "just about anything you can think of," quips Kreidermacher as he sits outside the greenhouses, customers drifting in and out on a sunny fall day. Besides Eric and his wife Ann, the operation supports his sister Maria and their parents Ed and Joyce.

Pork and Plants, which is near the small community of Altura, pulls in customers from 75 to 100 miles away, and it's a thriving business. But the operation's Achilles heel is heating all that greenhouse space through harsh Minnesota winters; in a typical year the Kreidermachers go through as much as 80,000 to 100,000 gallons of liquid propane. Not only can propane be expensive, but the cyclical nature of its pricing can play havoc with the bookkeeping.

"My goal is to have a consistent, stable fuel source so I can plan my budget for a year," says Kreidermacher. So half-a-dozen years ago he started researching alternative sources of heat for the farm. He looked into wind and geothermal energy. But in the end,

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burning biomass became the most attractive, partly because it has the potential to allow the farm to grow its own energy in a way that's good for the land.

In 2003, the Kreidermachers bought their first stoker boiler furnace to provide radiant heat to the greenhouse. This is no rustic wood burning stove—an auger feeds biomass into the furnace on an ongoing basis, making for an efficient, even production of heat. Pork and Plants now has five such furnaces of varying sizes, which are used to heat not only the greenhouses but the pig nursery and the Kreidermachers' home. The stoker furnaces can burn a variety of biomass, and over the past few years the Kreidermachers have been feeding them shelled corn and pellets made from wood waste. The farmer estimates that using biomass has cut his heating bill by half. Even the shelled corn, which he buys from a local elevator, is, for now, a bargain compared to propane (Kreidermacher estimates corn would have to hit $9 a bushel before it is more expensive than liquid propane to burn).

But he has always wanted to find a more environmentally friendly way to heat the farm. Pork and Plants sits above the Whitewater River Valley, an area that has had a history of erosion and water quality problems brought about by intense row-cropping and deforestation, among other things. Kreidermacher is fascinated by research being done by, among others, the University of Minnesota's David Tilman, showing that diverse prairie systems could serve as a viable source of biofuels. What if highly-erodible corn and soybean ground could be planted to prairies, and those prairies harvested for biofuel? This appeals to the farmer, who talks proudly about the environmental award his greenhouse business recently received for doing things such as using biodegradeable pots and catching rainwater off roofs. Kreidermacher sees a place for corn and soybeans in the region, but also thinks perennial plant systems could help make environmentally vulnerable land pay its own way.

Eric Kreidermacher has established 20 acres of native prairie on his southeast Minnesota farm in hopes of using it as a source of heat for his greenhouses and swine facilities. He's already convinced the prairie is good for the environment, but in the long run it has to pay its own way. "The question comes back to making it economically viable," says the farmer. (*LSP photo*)

"It brings back into the farming scheme the diversity that we used to have that we don't see anymore," he says. "In the area we're in there's lots of land that should be much more productive hopefully in a prairie system versus conventional corn and soybeans. And that's going to have a benefit on the conventional system if we can bring that diversity back into our area."

So two years ago the Kreidermachers planted the 20 acres of prairie on former corn and soybean ground. It won't be fully established until 2009, but already the family has purchased two used pelleting mills to process grass and other biomass into a dense product that will transport, store and burn more efficiently.

Questioning pioneers

A new pole shed up the hill from the greenhouses is home to the equipment for processing the pellets. On one end is a hay grinder that is used to break the plant material down before it's elevatored to the two pellet mills.

Kreidermacher has been doing some test runs—while giving a tour of the processing facility he shows off a tub full of dense pellets made from corn stalks earlier this year. Soon he will make pellets out of baled grass. The electrical board that runs the operation is impressive—Kreidermacher's brother Paul, an electrical engineer, set it up.

In fact, this entire field-to-furnace system is a do-it-yourself project, one that is accompanied by a fair amount of financial risk. For one thing, the Kreidermachers planted the prairie and Sudan grass on land that could be producing corn and soybeans, crops that are garnering good prices these days. "My neighbors think I'm crazy and wonder what I'm doing out here," says Eric with a laugh.

The family also took on the financial burden of setting up the pelleting facilities and furnaces. A commercial-sized stoker furnace alone can run $50,000 to $55,000. Kreidermacher estimates it took him two years to get his money back on the first furnaces he bought; with the rising price of the equipment, the payback period is now more like three to five years.

Kreidermacher doesn't mind pushing into new territory on his own, but he makes it clear that there's a limit to how much pioneering he can handle. There are a lot of unanswered questions. How often can the prairie be harvested without hurting its productivity? Can the prairie's biomass production be boosted? What's the number of acres needed to provide the farm's biofuel needs?

"That's stuff that apparently I'm going to have to figure out myself because unfortunately there hasn't been any research into that side of it," says Kreidermacher. "You can't go to people and ask, 'What's the best thing to plant?' There are still a lot of unknowns."

That said, there is research related to

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prairie-based biomass that has produced some tantalizing results. For example, in a 10-year study done by University of Minnesota researchers, mixes of 16 native prairie plant species yielded on average 238 percent more biomass than land planted to a single species. But a lot of questions remain as to whether that mix of species produces good heat when burned, and whether such an impressive yield can be replicated on the farm level.

Kreidermacher, ever mindful of ways to reduce waste and close the nutrient cycle on his operation, recently asked prairie experts if applying hog manure would help boost yield. The answer? "They flat out said they didn't know," says the farmer. Such lack of basic agronomic information can be frustrating for someone who makes a living growing plants.

One area the Kreidermachers have gotten a lot of help in is the actual processing of the biomass into pellets. They worked with AURI's Doering at the Institute's Waseca, Minn., office. Doering helped them figure out the heat output of various biomass materials, as well as the best way to go about doing the processing. AURI also looked at how much ash various materials produce, as well as sulfurs and chlorides, which can cause problems with residue build-up in furnaces.

"You don't just put them in and grind them and out comes the pellet," says Doering.

What the Kreidermachers have learned is that grasses tend to take a higher temperature to burn, and can produce more ash than shelled corn. However, when various grasses are combined, they tend to complement each other and make a good fuel for burning, Doering says. As Kreidermacher shows off his pelleting facilities, he seems excited to put this knowledge to use. He feels the information he's gotten from AURI has shown that prairie systems, once they are established, have good potential to meet his goal of having a consistent source of heat that he can plan a budget on.

Green Fuels- Green Farming

One factor that's increasing prairie's attraction for the farmer is that his operation borders land owned by the Minnesota Department of Natural Resources (DNR). Some of that land is established prairie, and Kreidermacher is in negotiations with the DNR about possibly harvesting some of that prairie for biomass—that would save the state the trouble of burning the prairie periodically to keep it healthy.

After checking out his prairie and Sudan grass plantings on a recent fall day, Kreidermacher guides his four-wheeler through a gap in the fence onto the DNR land. He walks out into a diverse native prairie—vegetation reaches to his chest, and the potential for producing a significant amount of tonnage is evident.

The Kreidermachers are experimenting with processing plant material into dense pellets that can be stored, transported and burned efficiently. (*LSP photo*)

But the bottom line is that for Pork and Plants to remain financially viable, prairie-based biomass must be more than a feel-good endeavor—it has to pencil out financially. That's why Kreidermacher is keeping his options open by planting annuals such as Sudan grass and utilizing baled corn stalks.

AURI's Doering says that what's good about the Kreidermacher set-up is that the family is starting out at a relatively modest scale. The fact that the biomass does not have to be moved far—a huge factor as transportation costs skyrocket—also works to the operation's favor. Experts who have examined the economies of scale in pelleting mills say the distance the material has to be transported may be the biggest competitive factor as fuel prices rise.

"Eric's not trying to supply the whole U.S.," says Doering. "It can work on a local or regional scale, and he can scale up from there."

But what is also good, says Doering, is that the Pork and Plants stoves are flexible enough to burn a variety of biomass and large enough where a little ash build-up from the less efficient grasses is not a huge problem. This means the Kreidermachers aren't totally reliant on prairie grass, or corn or wood, for that matter.

Their experiment is already having repercussions in the community. Eric and Paul market furnace boilers on the side, and have sold some to their neighbors. A few neighbors are already experimenting with growing their own biomass such as prairie plants. Eric foresees a day when the neighbors bring their baled material to him for pelletizing, and then take it back home to burn, creating a local energy system, so to speak.

Such a system could not only create more perennial plant cover on a landscape level, but would help cover the cost of owning and operating pelletizers, something the average farm that doesn't have 65,000 square-feet of greenhouse space couldn't justify. Indeed, on a recent September day a neighbor's wagonload of grass hay was waiting to take a run through one of the pellet mills.

"The whole idea of producing your own fuel is becoming very attractive to a lot of people," says Eric. "I get quite a few phone calls every week from people asking where we're at and what we're seeing. It comes down to yield again—if we can get the proper yield it's not going to take many acres for the average farm to produce their own fuel to meet their heat demands for the year."

In the end, Kreidermacher's experiment in closed-loop energy production may show how important it is that society recognizes the advantages, as well as shortcomings, of prairie-based biofuel production. What if prairie polycultures prove to be adequate sources of biomass but don't blow the doors off when it comes to yield? That's a real possibility when compared to the energy potential of monocrops such as corn. Perhaps to compete, the other "nonmarket" environmental benefits of prairie systems will need to be recognized, and valued by society via research support, as well as financial help to get such systems established.

Back on the prairie on this fall day, Eric Kreidermacher is convinced this system can earn its keep when all the nonmarket

Green Fuels, *see page 25…*

…Green Fuels, *from page 24*

benefits are figured in. "The overall picture is there are a lot of different benefits," he says. "And I think in the long term to make it viable we're going to have to see government policies both on the state and the federal level to compensate the farmer."

But for now, the farmer's wading through a whole lot of unknowns, and looking to the day when his neighbors won't think he's nuts for replacing corn and soybeans with prairie grass.

"That's the plan," says Kreidermacher with a smile as he climbs back onto the four-wheeler. ❐

Hear & read more

To listen to the Land Stewardship Project's *Ear to the Ground* podcast featuring Eric Kreidermacher, see www.landstewardshipproject.org and click on the **Listen to the Latest Podcast** link under **Take Action**. It's episode 56.

You can download LSP's fact sheet on RIM-Clean Energy, an initiative that would support farmers who raise native prairie for biofuel production, by visiting www.landstewardshipproject.org/resources-factsheets.html.

Two stoker furnaces on the Kreidermacher farm heat the greenhouses. The furnaces can burn a wide variety of plant material. (*LSP photo*)

The high price of nitrogen pollution

The valuable fertilizer is showing up in water at unaffordable levels

On March 24, a test of the well on Arlene and LaVerne Nelson's southeast Minnesota dairy farm showed it contained 48.2 parts per million of nitrate-nitrogen, over four times the state and federal health limit of 10 parts per million, and double the highest previous readings.

"When we got that reading, it was the deciding factor," recalls Arlene.

Suddenly, digging a new well, something the family had up until then considered too expensive, was not a matter of choice. They ended up spending $26,000 to drill a borehole that plunges over 520 feet into the ground—double the old well's depth. The water from the new well is clean—even the 80-cow milking herd seems healthier now. But Nelson's not convinced water quality problems, for her family or for the region, can be solved by punching more holes in the earth.

"It's not just a matter of digging a new well," she says, noting that her son, who lives five miles away, also has high nitrate-nitrogen in his well water. Her daughter, who lives in the town of Utica nearby, has to buy bottled water because of contamination issues. "My concern is for how long and then what? Do we spend $50,000 down the road for another well? Does my grandson spend $50,000? We don't know."

Nelson has good reason to worry. It's no secret nitrate-nitrogen has long shown up in surface and groundwater as a pollutant. Now increased plantings of nitrogen-hungry crops like corn are threatening to make the chemical an even bigger pollution threat in vulnerable areas like southeast Minnesota. For years, nitrogen contamination has been seen as the cost of doing business in a highly productive farming system. But recent studies and personal experiences of rural residents like the Nelsons show such costs may no longer be tenable.

Southeast Minnesota's struggle with the costs of nitrate-nitrogen offers some insights into just how expensive this pollution problem is becoming.

Nitrogen saturation

Nitrogen in water is both a human health concern and an environmental problem. High nitrate levels can lead to "blue baby syndrome" in infants, a type of asphyxiation. In addition, studies have linked consumption of water containing high levels of nitrates to health problems in adults, including bladder cancer. On a landscape level, high nitrates in water can lead to increased algal growths, which begins a chain reaction that can reduce oxygen levels in bodies of water to the point where they can't support aquatic life. A big cause of the Gulf of Mexico's "dead zone"—a low-oxygen area that in 2008 measured 8,000 square miles—is nitrogen and phosphorus fertilizer runoff from Midwestern farm fields. The number of dead zones in coastal waters worldwide is now 405, an increase of a third between 1995 and 2007, according to the Virginia Institute of Marine Science.

And that number is likely to increase. We have a lot of nitrogen in our water because it's a key fertilizer for producing row crops like corn, and we are planting more corn than ever. For example, in Minnesota's Winona County, where the Nelsons farm, corn and soybean acreage rose 31 percent from 1987 to 2007. Increased plantings of row crops have come at the expense of pasture, hay and timber—systems that reduce runoff and don't rely on nitrogen fertilizer to thrive.

Nitrogen accounts for over 55 percent of the tonnage of chemical fertilizers used, and corn production gobbles up the majority of that fertilizer. Global nitrogen demand rose 14 percent between 2000 and 2006, and those trends are expected to continue, according to the USDA. Manufacturing nitrogen fertilizer is good business these days—in October Cargill Inc. reported a 62 percent jump in fiscal first-quarter net income, mostly as a result of its involvement

Nitrogen, *see page 26…*

…Nitrogen, *from page 25*

in the fertilizer business.

A lot of the increased corn plantings are the result of the higher commodity prices generated by the demand for corn-based ethanol. In 2007, the USDA's Economic Research Service (ERS) and its Office of the Chief Economist concluded that as corn production for biofuels increases, nitrogen fertilizer use will go up around 6 percent in the Midwest. The amount of nitrogen leaching into groundwater will be 2.4 percent higher in the Corn Belt by 2016, and 10.6 percent higher in the Lake States, according to the ERS. The increase in corn cultivation required to produce 15 billion gallons of ethanol by 2033 will increase the amount of nitrogen in the Gulf of Mexico by at least 10 percent, according to a study published in the *Proceedings of the National Academy of Sciences* in March.

Homegrown problem

Nitrate-nitrogen pollution has become a global issue, but for areas like southeast Minnesota, it hits about as close to home as possible: people's drinking water. That part of Minnesota is particularly prone to groundwater contamination, what with the presence of a geological karst system beneath the soil that consists of cracks in the rock. Such gaps provide ample opportunity for surface contaminants to make their way into groundwater. Rochester, the largest community in the region, stopped using its original aquifer by 1960 because of nitrate and fecal coliform bacteria contamination (the community now drills hundreds of feet to draw pre-settlement water out of two aquifers). The farm town of Lewiston, which is east of Rochester, has drinking water so contaminated with nitrogen that it has to blend its regular well water with water from a well that taps a deeper aquifer.

Several recent studies in southeast Minnesota have shown that not only is nitrogen contamination a growing problem, but that some hard cost accounting needs to be done when it comes to dealing with its aftermath.

This summer, LSP coordinated testing of 73 wells, mostly in southeast Minnesota (six were in Wisconsin and one was in Iowa). Nitrate was detected at levels above the drinking water standard in over 9 percent of the wells tested—all of the wells that tested high for nitrates were in Winona County. Of the 24 wells tested in that county, almost 21 percent exceeded the drinking water standard for nitrate-nitrogen.

The Southeast Minnesota Water Resources Board is coordinating a large-scale nitrate testing project on 675 wells in the region. The first round of tests, released in February, showed 22 percent of the wells tested in Winona County had nitrate-nitrogen levels above 10 parts per million. Thirty percent of the wells in Wabasha County exceeded the drinking water standard, and 25 percent did in Fillmore County.

The problem appears to be getting worse. The Southeast Minnesota Regional Groundwater Monitoring Study was a water testing project carried out in the early 1990s. That study found that at the time only 2.7 percent of Fillmore County's wells exceeded the standard for nitrate-nitrogen.

According to the Minnesota Pollution Control Agency, 7 percent of all public and private wells in the state exceed the drinking water standard for nitrate-nitrogen. Studies in Iowa and Wisconsin show percentages of wells exceeding standards ranging from 12 percent to 20 percent.

It should be noted that even when tests show nitrate-nitrogen at levels below 10 parts per million, that's a sign that some sort of contamination is there; it's also an indicator that the well is vulnerable to other pollutants such as fecal coliform or pesticides.

There are numerous sources of elevated nitrate-nitrogen contamination, but one University of Minnesota-Department of Agriculture study found that "the proportion of wells with elevated nitrate-nitrogen was greater where the principal land use within a quarter mile of the well was agricultural versus non-agricultural."

That same study, which was published in the May-June 2008 issue of the *Journal of Soil and Water Conservation,* found that putting in a nitrate-nitrogen removal system such as a reverse osmosis machine costs on average $800 to install and $100 annually to maintain, and the average cost of replacing a contaminated well is $7,200. That doesn't count the cost of putting in and maintaining

Nitrogen, *see page 27…*

Nipping nitrogen in the bud

The good news is that there are numerous ways to reduce nitrogen use in farming. Accurate soil tests, better hybrids, giving manure and legumes like soybeans and alfalfa more credit for the amount of nitrogen they add to the soil and increased knowledge of just how much fertilizer is needed to produce a bushel of corn have reduced the per-acre use of the nutrient.

Soil scientists say in the Corn Belt they are seeing fewer instances of farmers applying 180 to 200 pounds of nitrogen per acre, with rates of 140 to 170 pounds per acre more common. (One Wisconsin study found that corn, depending on soil type, utilizes between 120 and 160 pounds of nitrogen per acre.) But there is still room for improvement by utilizing some relatively simple techniques.

Timing is everything

Even such steps as applying nitrogen in the spring rather than the fall can make a big difference. Twenty-five percent of the nitrogen used in the Corn Belt is applied in the fall, according to soil scientists at Iowa State University and the University of Minnesota. And as much as 25 percent of that fall-applied nitrogen is lost, often because soil temperatures are too cool to make use of the nutrient. In Minnesota, spring application of anhydrous ammonia, a major source of nitrogen fertilizer, reduced nitrogen leaching by 15 percent, according to one study.

A recent University of Wisconsin study found that in one watershed 55 percent of farmers were over applying nitrogen and of those, 10 percent were applying more than twice as much as needed. (Some estimates are that only about half of the nitrogen applied is actually used by the plant.) However, when farmers in the watershed used techniques such as legume credits, they were able to reduce nitrogen use significantly without suffering yield hits.

Alternative cropping systems that included organic management practices reduced nitrate-nitrogen losses by between 59 and 62 percent, according to a University of Minnesota study published in the July-August 2007 issue of the *Journal of Environmental Quality*. The researchers categorized "alternative cropping systems" as ones that incorporated rotation of a variety of crops including corn, soybeans, oats, alfalfa, buckwheat and rye, with nutrients supplied from legumes and fresh or composted manure sources.

Nitrate-nitrogen runoff from fields planted to perennial plants such as grass can be 30 to 50 times lower when compared with fields in a corn-soybean row crop system, according to an ongoing U of M study that's been conducted in the southern part of the state since 1973.

Research such as this makes a strong argument for raising more livestock on grass instead of corn, since systems such as managed rotational grazing make it financially feasible to establish large tracts of perennial grasses in runoff-prone areas.

…Nitrogen, *from page 26*

a water softener system—often a necessity when drilling deeper where the water has a higher mineral content. (Surveys show many well owners are not aware that carbon filters and water softeners do not remove nitrates; boiling water only concentrates nitrate contamination). The cost of removing nitrate from public water supplies is high as well—over $1.40 per 1,000 gallons in southeastern Minnesota, more than double what it was two decades ago.

The cost of doing business?

In an analysis of what would happen in one southeast Minnesota county, Olmsted, if increased ethanol demand caused corn plantings to go up, researcher Kshama Harpankar analyzed the "externalized" costs of increased nitrogen contamination. In other words, how do we account for those costs that usually aren't recognized by the marketplace? Harpankar, who did this study as part of her doctoral work in applied economics at the University of Minnesota, looked at several scenarios, including land under a corn-soybean rotation shifting to continuous corn. Other scenarios included cutting corn acreage by 25 percent, or by half, and Conservation Reserve Program acreage increasing. What she found was that when corn acreage increased, the number of domestic wells with nitrate-nitrogen levels that were above 10 parts per million rose dramatically. When corn plantings were reduced, wells with dangerously high levels of the contaminant dropped—all the way to zero in one case where corn acreage was halved. (Harpankar's study was done at a time when a major ethanol plant was being considered in Olmsted County; the project is still under consideration as of this writing).

But then Harpankar took a look at how profitable it was to raise row crops in Olmsted County in 2007. What she found was that, for example, shifting land in a corn-soybean rotation to continuous corn would generate much more revenue for farmers than it would cost to clean up private wells contaminated with nitrate-nitrogen. In other words, it may make economic sense to pollute and treat the problem, rather than to prevent the contamination in the first place. But as Harpankar points out, it's not that simple. Because of the sometimes mysterious ways nitrate-nitrogen moves within the soil and in water, in many cases the farm that produces excess amounts of the chemical is not the one that suffers from well contamination.

Indeed, scientists have been perplexed at how high nitrate-nitrogen levels can vary significantly in wells literally yards apart. It can be very difficult to predict the chemical's movements, particularly in groundwater, which also has a mind of its own.

"We must keep in mind that these are costs that will not be seen for a number of years," says Harpankar. "A farmer in Minnesota or somewhere else uses something and it shows up years down the road, and it can show up in places far away like the Gulf of Mexico. That's a problem for all these externalities—it's hard to go back to the source and assess the damage."

Secret source

The Nelsons certainly know the difficulty of tracing the source of water pollution. They started farming at their current location in 1983, and for the first 15 years or so, their well was fine. But during the past decade, they've watched with increasing alarm as nitrate-nitrogen levels have risen steadily.

Starting three years ago, things got worse, with the well water consistently testing over 10 parts per million. As the nitrate-nitrogen levels kept rising, the family invested in a reverse osmosis machine to remove the chemical from their household water. Unfortunately, such a system is not feasible for a cattle herd, and the animals showed it, according to Arlene. Somatic cell counts would fluctuate wildly and veterinary bills rose. One veterinarian told them that contaminated water was probably to blame.

What's particularly frustrating for the Nelsons is that they are an example of an operation that's using diverse rotations and other methods to keep contaminants such as nitrogen out of the groundwater (see sidebar on page 26). They have been certified organic since 2001, and use a diverse mix of pasture, small grains, corn and hay to produce milk. They haven't applied nitrogen fertilizer since the mid-1990s. So why the well contamination?

"That's one thing you can't control, is the water vein," says Nelson. "It's very hard to pinpoint all of this. Sometimes a neighbor will say, 'Well, our water test is below 10 parts per million,' even when yours is extremely high."

She thinks more crop diversity on a landscape level and fewer operations that concentrate too many animals in too little space would be major steps toward reducing water pollution (heavy concentrations of liquid manure from factory farms can also elevate nitrogen levels in water). Ultimately, such landscape-wide changes are the only viable solution to a problem that individual farms can't drill their way out of, says Nelson. She feels all too often a "water quality problem" is treated as a "well quality problem." Such a Band-Aid approach threatens to overshadow the real issue at hand.

"I think all of the water, whether on top of the ground or below, should be okay. It shouldn't matter if your well is deep enough." ❐

Mixed news about pesticides in water

When the Land Stewardship Project conducted testing of well water this summer (see page 26), nitrate-nitrogen was not the only contaminant that showed up. Six of the 73 wells tested positive for the popular corn herbicide atrazine (see page 13).

In all six wells the atrazine level was far below the state and federal safe drinking water standard of three parts per billion. However, research by the University of California-Berkeley's Tyrone Hayes shows that exposing frogs to as little as 0.1 parts per billion of atrazine causes severe health problems.

'Background' contamination

An interesting side note to the issue of agrichemical pollution and rural wells in southeast Minnesota: following the major flooding that hit the area in August 2007, the Minnesota Department of Health tested 65 wells in the area for contamination. The good news is that chemical contamination that may have been due to the flooding was short-lived.

However, 21 of the wells contained at least one pesticide or pesticide breakdown product, mostly at levels the government considers safe (atrazine was the most common contaminant, showing up in 17 wells; alachlor and metolachlor were tied for second, each showing up in six wells). Re-samples two months after the initial testing showed pesticides, as well as nitrate-nitrogen, were still present in the wells where the chemicals were originally detected, and were there at more or less the same levels as before.

Wrote the researchers who conducted the testing: this "…suggests background contamination of the aquifers supplying water to the wells, rather than direct contamination of the wells by floodwaters."

In other words, agrichemicals have infiltrated deep into aquifers that supply drinking water, and they aren't going anywhere soon.

Reviews

Stuffed & Starved

Markets & the Hidden Battle for the World's Food System

By Raj Patel
2007; 438 pages
HarperCollins
www.stuffedandstarved.org

Reviewed by Terry VanDerPol

In *Stuffed and Starved*, Raj Patel distinguishes himself with a mastery of details that he successfully weaves into the story of what a just and whole system of agriculture and food could mean for the world. From his perspective as a former World Bank and WTO employee, Patel is perhaps uniquely suited to tell the story of these two institutions, as well as the globe's major agribusiness corporations and agrarian movements. He has a clear-eyed compassion for rural people and places, minus any romanticism.

The book offers a long and broad view of world food production and trade. From the global North to the South, from Biblical times to the present, the author offers a 5,000-foot view of the food system in terms of war, political and economic domination, battles over scarce resources, climate change and shameless exploitation. He then zooms in on specific examples such as the impact of El Nino and the West African peanut crop failure on Cargill's entry into the Brazilian soy industry.

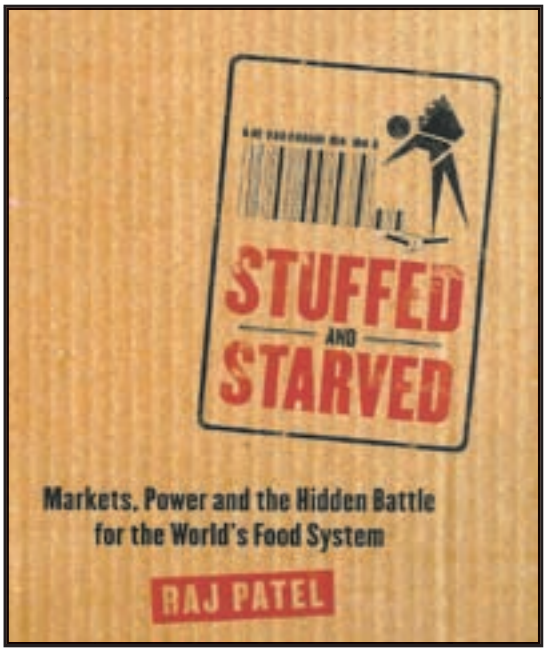
It is in this latter vignette the reader catches an early glimpse of Patel's vision of how government, the WTO, the World Bank and private corporations work in tandem to keep rural people from the North and their counterparts in the South from arriving at an understanding of their common interests and common enemies. We point fingers at the Brazilian soy industry for decimation of the forest, as well as exploitation of natural resources and indigenous people. Meanwhile, Brazil is charging U.S. agriculture with unfair subsidies that distort trade and create the dead zone in the Gulf of Mexico.

In the midst of all this, the big traders make out like bandits. They are able to "punch above their weight" in winning the policies, taxation and trade liberalization battles that enable them to keep exploiting people and the land in both Brazil and the U.S. It's an internecine squabble that fundamentally undermines democratic progress and change. Or, put another way by Bill Moyers in a recent address to environmental grantmakers, "They want us to stand with our hand over our hearts, pledging allegiance to the flag while huge, multinational corporations pick our pockets."

For those of us familiar with the politics of food and agriculture, Patel's stories have a familiar ring to them. But the stories in *Stuffed and Starved* have a special impact because they are written by a man deeply passionate about rural people, no matter where they live and farm.

Early in the book, Patel writes of farmer suicides, especially in the global South, but he also acknowledges the despair that plagues rural people in the U.S. These stories are personal— for example, Patel writes about one farmer in India, Kistaiah Masaya, eating pesticide because of what he viewed as a hopeless situation. Then the author steps back and gives us the big picture view of this tragedy by talking about the thousands of farmer suicides that take place annually.

He argues that while the stories of urban progress in many parts of the global South mask the very real poverty in cities, the vacuous, heartwarming tales of rural life, from India to the United States, camouflage great suffering. In the U.S., Patel points out that "more drug related killings happen in rural America than in its cities; in the UK, more young people kill themselves in rural areas than the cities."



In an effort to describe the impact of the WTO, "free" trade, and "structural adjustment," Patel writes at some length of Korean farmer Lee Kyung Hae and his suicide on a fence near the barricades at the WTO Ministerial meeting in Cancun, Mexico. The farmer, jabbing his penknife into his chest, called out "the WTO kills farmers!" Within days, tens of thousands of farmers from across the global South marched in solidarity, chanting, "We are Lee."

A pamphlet written by Lee Kyung Hae just prior to his death is excerpted in *Stuffed and Starved*, and it provides the foundation for what a just and sensible food and farming system might look like: "The most essential things for human beings are the elements – sun, air, water and food. These are the essential resources for people's lives. God decided that these things would be for the enjoyment of all, so that all might live. He does not intend that we monopolize (them). …Agricultural products should be saved as a human right. To live, people need to eat. You cannot commercialize this. It's such an anti-human behavior, not just anti-social, but anti-people."

In describing how the world food system exploits us all, Patel invokes the shape of the hourglass, with many farmers on one end and many consumers on the other. The narrow neck in the middle is occupied (and controlled) by a few huge corporations. From this powerful position, these corporations control both consumers and farmers.

Increasingly, the big players in that neck of the hourglass are food retailers and the reader is taken on a fascinating journey outlining the development of the supermarket and finally, the hypermarket, completing the transformation of people across the world from citizens to consumers. The apparently mundane supermarket is revealed as an amazing food architecture that encourages overconsumption, replaces food with more profitable, highly-processed food-like substances ("culinary taxidermy" in the author's words), and absolutely abhors any meaningful contact between farmer and consumer.

This is where *Stuffed and Starved* takes a most fascinating turn. Raj Patel lays the groundwork for the essential elements of the movements that will be required to change the story of human and environmental exploitation that has been told here. And his standards for these movements are high, indeed. For real change to occur, we must understand and appreciate the way systems drive behavior. Describing human behavior as the sole result of individual choices falls short of grasping the reality.

Obesity is one of the issues Patel uses to make this point. Research is clear that our "food architecture"—access to fresh vegetables and fruits as well as the number of fast food outlets nearby, for example—has an impact on obesity and adult onset diabetes

Stuffed, *see page 29…*

…Stuffed, *from page 28*

by shaping the food choices we make. But our public health conversation is almost exclusively focused on the individual choices we make, rather than the more systemic impact of the food environment.

And this failure to envision the impact of "the food system" is a critical part of our training as consumers. The supermarket, the hypermarket and the constant inundation of advertisements have trained us well. We ignore the people around us and pass by opportunities to lock arms to shape our own environment. We have been taught to acquiesce to how our environment shapes us and seek human fulfillment in individual activity, individual pleasure-seeking and consumption.

Patel writes of "ethical consumerism"—purchase decisions made on the basis of Fair Trade designations or eco-labels—as a useful action that unfortunately ultimately falls short of leveraging the fundamental change we need. A food system driven by consumers, even one featuring ethical consumer choices, still misses fundamental reform in our relationship with the land and the people who grow the food. Here, Patel invokes the concept of "food sovereignty," which he traces to the agrarian movement, La Via Campesina (The People's Way), representing as many as 150 million people worldwide.

Food sovereignty diverges from "food security" precisely in its shift of focus from the security of consumers to a focus on the right of peoples to define their own agricultural policy, to decide what they grow and what they consume, and specifically recognizes the rights of the invisible women in the world's rural places. It is not a call for a return to some imagined bucolic past. It is a vision that gives right to *peoples,* to the many instead of to the few who occupy the neck of the hourglass. It is a vision that gives people the right to experience the consequences of the choices they make, of their own collective action, instead of being subjected to the choices being made by others.

Food sovereignty demands much of those who are calling for it and it is fundamentally a democratic movement. This is the foundation on which the Land Stewardship Project will continue to build our food system work. ❒

Terry VanDerPol is a western Minnesota beef producer and Director of LSP's Community Based Food and Economic Development Program. She can be reached at 320-269-2105 or tlvdp@landstewardshipproject.org.

Eating in Place

Telling the Story of Local Foods

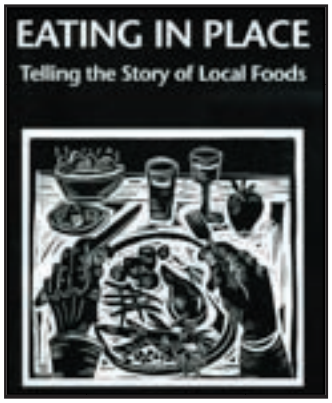
Edited by Robert Wolf
Foreword by Gene Logsdon
2007; 84 pages
Free River Press
www.freeriverpress.org

Reviewed by Brian DeVore

There are several ways to judge when a movement has "caught on" and become a part of popular culture. One strategy is to stand in front of a magazine rack and start thumbing through everything from *Ladies Home Journal* to *Outside* to the *New Yorker*. My own latest scientific survey of the glossies shows that yep, "local foods" is hot, hot, hot. Even *National Geographic* has gotten in on the act. It seems that a magazine devoted to far away places now sees going to the neighborhood farmers' market as an exotic adventure

Don't get me wrong—most of this attention to local foods is a good thing. More than a few people have joined a Community Supported Agriculture (CSA) farm after reading about the local foods movement while sitting in their dentist's waiting room. These are often people who wouldn't be caught dead reading the *Land Stewardship Letter*. But at times like these, it's important to return to the roots of the movement so we can be reminded of why it's important and why it needs to be sustained long after our fickle pop culture has moved on to the next big thing.

Eating in Place: Telling the Story of Local Foods is a nice reminder. In this slim volume, writer/teacher/publisher Robert Wolf has brought together essays (and one Q and A) that describe why people get involved with producing, preparing or eating food locally. Because Wolf is based out of northeast Iowa, most of the essays are rooted in the Upper Midwest; the one exception is the Q and A with Alice Waters, the owner of Chez Panisse in California. Important players in the local foods movement are represented in these essays: farmers, consumers, chefs, activists and academics (full disclosure: I contributed an essay on the Land Stewardship Project's local foods work).



Although these essays represent a wide range of approaches and writing styles, a consistent theme emerges: we can't do this alone. One of the most illuminating essays about how hard this teamwork can be was written by Wayne Wangsness, a northeast Iowa farmer and former economics professor who teamed up with other farmers to launch the GROWN Locally venture. This collection of farmers has garnered a lot of attention because of its early success in marketing to institutions. But it was valuable to get some nuts and bolts insights into how an initiative like this got started, and how for farmers such as Wangsness this was not the first attempt to step out of the conventional farming/marketing model. His story shows that for every successful local foods venture, there are plenty of failures.

Eating in Place shows just how many different ways there are to skin the local foods cat. Some writers truly got involved because they wanted to change the world, while others just wanted something good to eat. Still others saw this as a way for their family to survive financially.

But *Eating in Place* makes it clear these are all works in progress. That bugaboo of local foods, transportation/distribution, has yet to be dealt with fully by even the most organized, fully-resourced group of foodies.

Dennis Keeney, former director of the Leopold Center for Sustainable Agriculture, anchors the book with a reality-check essay that lays out a brief history of our current food and farming system, and why it has made attaining a more sustainable infrastructure such a challenge. The essay is a bit of a downer after 11 "feel good pieces," but it's probably necessary. We need to be reminded of just how much work is needed if we are to take the local foods movement beyond flavor-of-the-week status at the newsstand.

Brian DeVore is the editor of the Land Stewardship Letter.

New LSP office

The Land Stewardship Project's Policy Program and White Bear Lake office have a new joint location: 821 East 35th Street, Suite 200, Minneapolis, MN 55407; phone: 612-722-6377; fax: 612-722-6474.

The new office is in the upper story of an old South Minneapolis fire station, near Powderhorn Park. LSP would like to thank the volunteers who generously helped with the moving and unpacking involved with the office move. ❒

Get connected with LIVE WIRE

Sign up for the *LIVE-WIRE* for regular e-mail updates and news from the Land Stewardship Project. To subscribe, call Louise Arbuckle at 612-722-6377 or e-mail lspwbl@landstewardshipproject.org, and put in the subject line "Subscribe *LIVE-WIRE*." ❒

LSP fact sheets

The Land Stewardship Project's long-running series of fact sheets has been updated and is now available on our website at www.landstewardshipproject.org/resources-factsheets.html. The fact sheets cover a wide spectrum of topics, and more will be added in the future. ❒

LSP podcast

The Land Stewardship Project's *Ear to the Ground* audio magazine features interviews and field reports related to LSP's work.

To listen in, go to www.landstewardshipproject.org, and click on the **Listen to the Latest Podcast** link under **Take Action**. For a step-by-step guide on how to subscribe to the free *Ear to the Ground* service, visit www.landstewardshipproject.org/podcast.html. ❒

Animal welfare grants

Farmers looking for help to improve livestock facilities by making them more animal welfare friendly can apply for grants of up to $10,000 each. The grants are available through the Animal Welfare Approved Program of the Animal Welfare Institute.

Examples of eligible projects include conversion of buildings, fencing and paddock division, silviculture, improvement of water services, mobile housing, farm planning, farm health visits from recognized practitioners, alternative identification methods, alternative genetics, innovative chick transportation, alternatives to antibiotic use, and improvements in the slaughter process.

For details, visit www.animalwelfareapproved.org, or call Julie Munk at 703-836-4300. ❒

Give the gift of stewardship

As the holiday season approaches, consider giving your loved ones and friends a one-year membership with the Land Stewardship Project. Gift members receive a membership packet and a special card acknowledging your gift. As new members, your friends and family will receive the *Land Stewardship Letter*, the *LIVE-WIRE*, action alerts and updates on important food and farming issues, plus opportunities to take part in on-farm field days, local food events, meetings with decision makers and other events.

LSP is dedicated to creating an environmentally and economically sustainable food and farming system, and it is through the participation and financial support of our members that we create lasting change. Please consider giving an LSP membership this year to someone who shares our vision of keeping the land and people together.

Visit www.thedatabank.com/dpg/231/donate.asp?formid=donate to donate online. If you have questions about gift memberships, please contact Mike McMahon at mcmahon@landstewardshipproject.org or 612-722-6377. ❒

MDA *Greenbook*

The 2008 edition of the *Greenbook* is now available. For almost two decades, this popular resource has highlighted the results of innovative, practical demonstration projects that test new approaches to producing and marketing crops and livestock. The demonstration projects are funded by the Minnesota Department of Agriculture's Sustainable Agriculture On-Farm Demonstration Grant program.

For a free copy of *Greenbook 2008*, call 651-201-6012, or e-mail Alison.Fish@state.mn.us. It's also available at www.mda.state.mn.us/protecting/sustainable/greenbook.htm.

The application deadline for the current round of Sustainable Agriculture Demonstration grants is Jan. 16. Grant applications are available at www.mda.state.mn.us/grants/grants/demogrant.htm or by calling 651-201-6012. ❒

Support LSP with gifts of property

The Land Stewardship Project has launched a new initiative that allows property owners to continue their family's legacy on the land while supporting the work of the organization as well as beginning farmers.

Through ***Land & Stewardship Legacies***, LSP can accept gifts of farmland and other real estate. The ***Stewardship Legacy*** secures financial resources to support the work of LSP now and into the future. The ***Land Legacy*** is distinguished by accepting gifts of suitable parcels of farmland to serve as incubators for beginning farmers, or sold outright to promising graduates of LSP's Farm Beginnings® program. For details, check the ***Land & Stewardship Legacies*** web page at www.landstewardshipproject.org/index-joinus-land-legacies.html, or call 612-722-6377. More information is also available in the Summer 2008 *Land Stewardship Letter*. ❒

Get your local democracy bumper sticker

LSP has been a leader in standing up for the rights of local governments—particularly townships—to control harmful developments like factory farms. One way to keep township democracy strong is to go public with your support via LSP's new bumper sticker. It features the words, "Grassroots Democracy & Local Control: Stand Up For MN Townships" in eye-catching red, white and blue.

Don't be left out—for details on getting your free bumper sticker, visit www.landstewardshipproject.org/resources-misc.html, or call Bobby King at 612-722-6377. ❒

LAND STEWARDSHIP PROJECT

Membership Update

Record keeping & organizing for change

By Mike McMahon

Social change requires clear lines of communication. Whether the Land Stewardship Project is organizing to stop factory farms, enrolling new farmers in the Farm Beginnings® class, or holding meetings about getting local food into area hospitals, organizers are communicating with LSP members from different communities, with different schedules, and different communication and participation preferences. This is where good record keeping comes in.

The better our records, the better we can keep you connected to the work. Over the course of the next year LSP is making upgrades to our database and we need your help. We need you to help fill in the blanks and tell us the best way to communicate with you.

We'd like to know:

➔ Do you have a new e-mail address, or would you prefer your LSP e-mail go to another address?

➔ Have you added LSP to your "white list" so LSP e-mails aren't caught in your spam filter?

➔ Would you like to sign up for LSP's paperless membership renewal?

➔ Has your telephone number changed? What is the best phone number to reach you at?

➔ Are there any changes on your farm you'd like us to know about? Do you direct market? Where can people purchase products from your farm?

Starting later this year, you'll receive a copy of your contact information from our database with your renewal notices. Please take a moment to update your information and return it with your membership dues. Filling out the form should only take a minute, and it will be a great help to us as we work to hone our database into a better tool to serve both organizers and members in building a better food and farming system.

One hope I have is that we can increase the number of members we communicate with through e-mail. E-mail is an important communication tool—it is quick, inexpensive, and easy to share with others. There are times that our action alerts go out only to our e-mail lists because of time constraints, particularly with policy issues that can sometimes be decided in a matter of days.

Thank you for your help with this project and please let us know if you have any concerns regarding your membership. ❒

Mike McMahon is LSP's Membership Coordinator. He can be reached at 612-722-6377, or mcmahon@landstewardshipproject.org.

Thank you

The Land Stewardship Project is grateful to have received a number of gifts made in the name of loved ones over the past few months:

◆ **Karen Bartig**
In memory of her mother, Phyllis Pladsen, a devoted LSP supporter.

◆ **Hal Johnson & Michonne Berterand**
In memory of Eddy, Peter & Harry Johnson Berterand.

◆ **Nancy Jo Wehinger**
◆ **Rory & Janis Vose**
◆ **Joan Redig & Wayne Purtzer**
◆ **Beverly & Charles Henkel**
◆ **Dr. Robert Taylor & Susan Wehinger**
◆ **Tonya Campbell Purtzer & Ray Alan Purtzer**
◆ **Ramona Redig & Ed Lagace**
In memory of Margaret Redig.

For details on donating to LSP in the name of a loved one, contact Mike McMahon at 612-722-6377, or mcmahon@landstewardsshipproject.org. ❒

Support LSP in your workplace

The Land Stewardship Project is a proud member of the Minnesota Environmental Fund, which is a coalition of 20 environmental organizations in Minnesota that offer work-place giving as an option in making our communities better places to live. Together member organizations of the Minnesota Environmental Fund work to:

➔ promote the sustainability of our rural communities and family farms;
➔ protect Minnesotans from health hazards;
➔ educate citizens and our youth on conservation efforts;
➔ preserve wilderness areas, parks, wetlands and wildlife habitat.

MINNESOTA Environmental Fund

You can support LSP in your workplace by giving through the Minnesota Environmental Fund. Options include giving a designated amount through payroll deduction, or a single gift. You may also choose to give to the entire coalition or specify the organization of your choice within the coalition, such as the Land Stewardship Project. If your employer does not provide this opportunity, ask the person in charge of workplace giving to include it. For more information, contact LSP's Mike McMahon at 612-722-6377, or mcmahon@landstewardshipproject.org.

STEWARDSHIP CALENDAR

➔ *DEC. 1*—**North Central Region SARE farmer & rancher grant proposal deadline**; Contact: Beth Nelson, 612-625-8217; www.sare.org/NCRSARE/prod.htm

➔ *DEC. 4-5*—**High Tunnel/Season Extension Conference**, Alexandria, Minn.; 888-241-0781; http://open.iatp.org/phplist/sowtheseeds.php#decevent

➔ *DEC. 4-6*—**ACRES U.S.A. Conference**, Saint Louis, Mo.; Contact: www.acresusa.com; 800-355-5313

➔ *DEC. 9-10*—**Sustainable Agriculture Coalition winter meeting**, Memphis, Tenn.; Contact: Adam Warthesen, LSP, 612-722-6377; adamw@landstewardshipproject.org

➔ *DEC. 11-12*—**Next Generation Retreat on Transferring Farm Ownership to Another Generation or Another Owner,** Madrid, Iowa; Contact: www.practicalfarmers.org; 515-232-5661

➔ *DEC. 12*—**Rural Coalition Gala Celebrating Community-Based Organizations & Farm Bill Victories**, Washington, D.C.; Contact: Adam Warthesen, LSP, 612-722-6377; adamw@landstewardshipproject.org

➔ *DEC. 16*—**Honey Bees & Human Health**, 7 p.m., Bryant Lake Bowl Theater, Minneapolis; Contact: 612-624-7083; www.bellmuseum.org/calendar.html

➔ *JAN. 3*—**2009 Crow River Sustainable Farming Conference**, Gale Woods Farm, Minnetrista, Minn.; Contact: riverbend@usinternet.com; 763-972-3295

➔ *JAN. 6*—**2009 session of the Minnesota Legislature convenes**; Contact: LSP's Policy & Organizing Program at 612-722-6377 for information on how to promote legislation that supports family farms, sustainable agriculture, local food systems & the environment

➔ *JAN. or FEB.*—**4th Annual LSP Family Farm Breakfast at the Capitol**, Saint Paul, Minn.; Contact: Bobby King, LSP, 612-722-6377; bking@landstewardshipproject.org

➔ *JAN. 9*—**Practical Farmers of Iowa Annual Conference**, Marshalltown, Iowa; Contact: 515-232-5661 (ext. 101); www.practicalfarmers.org

➔ *JAN. 16*—**Application deadline for MDA Sustainable Agriculture Demonstration grants** (see page 30)

➔ *JAN. 16-17*—**Minnesota Organic Conference**, St. Cloud, Minn.; Contact: www.mda.state.mn.us/food/organic; 651-201-6140

Support LSP & Fair Trade Dec. 2

When you shop at the Ten Thousand Villages Fair Trade store in Saint Paul, Minn., on the evening of Tuesday, Dec. 2, you will also be supporting the Land Stewardship Project's work. See page 11 for details.

➔ *JAN. 16-18*—**Wis. School for Beginning Market Growers**, Madison, Wis.; Contact: 608-265-3704; www.cias.wisc.edu/wisconsin-school-for-beginning-market-growers

➔ *JAN. 22-23*— **2009 Midwest Value Added Conference**, Rochester, Minn.; Contact: www.rivercountryrcd.org; 800-226-9672

➔ *JAN. 22-23*—**Upper Midwest Regional Fruit & Vegetable Growers Conference**, St. Cloud, Minn.; Contact: www.mfvga.org; 763-434-0400

➔ *FEB. 13-14*—**Northern Plains Sustainable Ag Society Conf.**, Huron. S. Dak.; Contact: 701-883-4304; www.npsas.org

➔ *FEB. 14*—**Winter Harvest of Hardy Crops Under Unheated Protection**, Esko, Minn.; Contact: Kelly Smith, 218-879-3829

➔ *FEB. 19-21*—**Wisconsin Grazing Conference**, Stevens Point, Wis.; Contact: 715-289-4896; www.grassworks.org

➔ *FEB. 21*—**Sustainable Farming Association of Minnesota's 18th Annual Conference, featuring keynote speaker Joel Salatin**, St. Olaf College, Northfield, Minn.; Contact: www.sfa-mn.org; 320-226-6318

➔ *FEB. 26-28*—**20th Annual Upper Midwest Organic Farming Conference, featuring Vandana Shiva**, La Crosse, Wis.; Contact: www.mosesorganic.org/conference; 715-772-3153

➔ *FEB. 26-MARCH 1*—**Minnesota Cooks at Twin Cities Food & Wine Experience**, Minneapolis, Minn.; Contact: Food Alliance Midwest, 651-209-3382

➔ *MARCH 7-8*—**Beekeeping in Northern Climates Short Course**, St. Paul, Minn.; Contact: www.extension.umn.edu/honeybees/; 612-624-4798

➔ *SPRING*—**LSP's Farm Beginnings 2009 public on-farm educational events begin** (see page 17)

➔ *MAY 31-JUNE 3*—**North American Agroforestry Conference**, Columbia, Mo.; Contact: www.centerforagroforestry.org; 573-882-3234

➔ *JULY 15-17*—**3rd Annual Sustainable Ag Education Association Conference**, ISU, Ames, Iowa; Contact: www.sust.ag.iastate.edu/gpsa/default.html; 515-294-6518

➔ *SEPT 1.*—**Minnesota Cooks Event**, Minn. State Fair, Contact: Food Alliance Midwest, 651-209-3382 (see page 18)

➔ *SEPT 1.*—**Registration deadline for 2009-2010 session of LSP's Farm Beginnings program** (see page 17)

Check **www.landstewardshipproject.org** for the latest on upcoming events.

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