

The Land Stewardship



Keeping the Land and People Together

Letter

Vol. 19, No. 3

www.landstewardshipproject.org

JULY/AUGUST 2001

Plowman's Progress

Conservation tillage can help make up for the mountain of abuse our agricultural soils have been exposed to over the years. But for now, it's up hill for minimum till.

By Brian DeVore

Dan Towery remembers well when John Deere introduced its new 750 no-till drill planter in the early 1990s. It was more than a new addition to the implement giant's line of iron—it was a sign that conservation

tillage had truly arrived. After all, the company whose namesake had brought intensive tillage to the farming masses was now investing in a system that disturbs the soil as little as possible.

"That put the stamp of approval on no-till," recalls Towery, a natural resources specialist with the Conservation Technology Information Center (CTIC).

Indeed, at the time John Deere's move seemed just one more milestone conservation tillage would pass on its way to becoming the dominant form of crop production in the nation. At its most basic, conservation tillage is any cropping system that attempts to leave at least one-

third of the field's surface undisturbed. Many variations of the system have evolved over the years. On the more mainstream end of the spectrum is "mulch tillage," which uses a chisel plow to mix dead plants and the soil, leaving approximately 30 percent of the soil surface covered with residue. "No-till," on the other hand, leaves as much as 80 percent of the soil surface protected. It does this by leaving the soil undisturbed from harvest to seeding and from seeding to harvest. The only tillage is the soil disturbance caused when a narrow slot is cut for the seed.

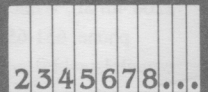
In the 1980s just a few million acres were covered by various forms of conservation tillage. By 1997, the soil on

Plow, see page 12...



Southwest Minnesota crop farmer Mike Perkins (see page 13) works on a no-till corn planter designed to place seed through heavy residue. Says one researcher who has studied conservation tillage systems: "You can change hybrids, you can change herbicides, but this is different. Making a change in tillage is a fundamental change in your management system." (LSP photo)

Inside



Getting skinned alive.....	2
Mushroom checkoff ruling.....	4
Pride of the Prairie launched.....	6
USDA nomination bad news.....	7
Local food, local people.....	8
Sustainable ag funding restored.....	9
Food & Farm Connection.....	10
Is conservation tillage possible without chemicals?.....	16
Review: <i>This Organic Life</i>	18



The *Land Stewardship Letter* is published six times a year 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 newsletter as a benefit. Annual membership dues are \$35.

All inquiries pertaining to the content of the *Land Stewardship Letter* should be addressed to the editor, Brian DeVore, 2200 4th St., White Bear Lake, MN 55110; phone: 651-653-0618; fax: 651-653-0589; e-mail: bdevore@landstewardshipproject.org.

BOARD OF DIRECTORS

David Andow, Charlotte Brooker, Dan French,
Monica Kahout, Ron Kroese,
Cheryl Miller, Ruth Murphy,
Ken Peterson, JoAnne Rohricht,
Joe Rolling, Sr. Mary Tacheny,
Jim VanDerPol, Bruce Vondracek

STAFF

Southeastern Minnesota Office

180 E. Main St., P.O. Box 130, Lewiston, MN
55952; phone: 507-523-3366; fax: 2729;
e-mail: lspse@landstewardshipproject.org

Karen Benson, Bobby King,
Richard Ness, Karen Stettler

Twin Cities Area Office

2200 4th St., White Bear Lake, MN 55110;
phone: 651-653-0618; fax: 0589;
e-mail: lspwbl@landstewardshipproject.org

Louise Arbuckle, Tara Blumer, George Boody,
Brian DeVore, Cathy Eberhart,
Dana Jackson, Ray Kirsch, Katie Person,
Ron Rengel, Caroline van Schaik

Policy Program: 3203 Cedar Ave. S.,
Minneapolis, MN 55407;

phone: 612-722-6377; fax: 6474;
e-mail: marks@landstewardshipproject.org
Mara Krinke, Mike McMahon,
Mark Schultz, Paul Sobocinski

Western Minnesota Office

103 W. Nichols, Montevideo, MN
56265; phone: 320-269-2105; fax: 2190;
e-mail: lspwest@landstewardshipproject.org

Audrey Arner, Amy Bacigalupo,
Anne Borgendale, Patrick Moore,
Michele Skogrand, Terry VanDerPol

This newsletter printed by Roscoe Printers, Wanamingo, Minnesota

Commentary !?!?!

The peeling of the pelt

By Charles Burns

EDITOR'S NOTE: Land Stewardship Project member Persis Suddeth recently sent us a few pages of some writing done by her late father, Charles Burns. In the following passage, Burns recalls a car trip through South Dakota during the height of the Dust Bowl. Suddeth says she was 6 at the time and recalls the dust storm described here. She and her then 5-year-old brother, Padraic, were sitting in the back seat of the car and were "two whiney, sweaty, unhappy kids" by the time the storm passed.

One of the worst and driest of those years was 1934. That was the year the French balloonist first floated into the stratosphere from the Black Hills. I am impelled to try to give an account of a dust storm, and of a blown-away quarter section.

We were somewhere southeast of Huron, our goal for the night, in an old four-passenger Chrysler. Our speed was under 50 mph., the day was hot, the windows open, the horizon was miles ahead. Then the horizon darkened and black clouds gathered. There was lightning to the left. We were sure there would be rain. But it did not come at once. Instead, ahead of the thunderheads and below them billowed a dark grey curtain. Neither of us ever had seen a real dust storm. This was one. It was almost eerie. When the curtain, the moving airy wall of black dust was half a mile off, we could see it clearly. We rolled up the windows. We slowed the car and then turned on our headlights. Even so we could scarcely make out the sides of the road. I glanced at my wife and saw rivulets of sweat moving muddily down her cheeks. I remember the relief with which we greeted the thundershower that followed.

We were surely within 40 miles of Huron when the storm struck. We got to a hotel and bathed.

The rain we had that afternoon cleared the air and laid the dust down by converting it to mud (I honestly believe much of it was so converted in midair). But it was

a freak bit of weather. We were assured by those with whom we spoke, and by our own eyes, that rain was all but unknown in South Dakota that year. The croplands—that is the plowed lands—were barren except for weeds. Possibly there were a number of these, but the dominant one and the only one I remember was the tumbleweed. This is a thistle which had been inadvertently imported from Russia with, I was often told, the hard Russian wheat which was adopted in the semidesert Plains lands in the late 19th century. It is, I think, the ancestral "winter wheat" of this area. The thistle plant is like a ball, somewhat flattened at the bottom, with a root which weakens and breaks before the strong autumnal winds. It rolls then, wherever the wind blows it, discharging its seeds as it goes.

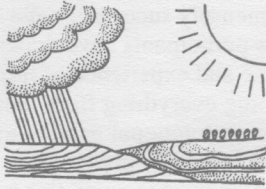
My purpose in describing the dust storm is to illustrate what the native grass and the sod, which was its matted roots and its life, meant to the Plains country.

A hundred miles west of the dust-and-rain storm we really saw the meaning. We were driving through the dry, lifeless head east of Pierre. This region had never been "broken." The "grass" was grey stubble. Then, suddenly and clearly, we saw beside the road a stretch of land that had been broken probably only a few years earlier. It was a quarter section, a square half a mile on each side. It was mostly smooth brownish black in color in contrast to the dull greyish brown of the unbroken surrounding sod which had not greened the previous spring. To the depth of the plowshare which had turned the sod and killed the grass, not a native plant grew. And the plowed soil, down to the furrow's depth of six inches or so, had blown away. Except for green clumps of tumbleweed (Russian thistle) which stood scattered over the entire 160 acres. Exotic excrescences, hip high, round and green, each sat on a truncated cone of root-anchored earth! I had never heard of this phenomenon. I have never heard of it since.

We may well have passed other such "forage fields" unobserving. I remember that the day before we visited Uncle Terrence at his home by Wall Lake, he had told me some farmers were harvest-

Dust Storm, see page 3...

Sustainable Soil



...Dust Storm, from page 2

ing the thistles and making silage of them—that they were the only fodder many farmers and ranchers had. He had slough grass from the dry lake bed. There had been no rain that spring—or in the winter or the fall before. “The grass hadn’t greened,” he said. These words are all I can remember verbatim. But those four words describe disaster. Uncle Terrence and other able-bodied men had been fortunate to have WPA [Works Progress Administration] jobs. I believe he was working at road building because

I recall his telling that the black topsoil was 20 feet deep in one “cut” he had worked on. That is surely an indication of how many hundreds and thousands of years the buffalos and their native grass had been cycling and storing the basic nitrogenous substances on which all plant and animal life depends, the abundance which had made seed production nonessential for this grass.

Have I conveyed the concept that this grass was the Plains, the essence? That grass was not something separate which grew on the Plains. It was of the earth. Its pelt, as it were. So that where by hooves or wagon wheels, by plow or railway, the land was wounded, the scars persisted for as long as that land and the climate which made it should last.

By now, I understand, much of the native wild grass is gone. But, where it is undisturbed I am sure, its roots reach down to soil moist enough to sustain it, and its top tendrils reach out to cover and hold the earth even where the grass on the

surface had been torn away or worn away. As a man’s skin grows to heal a wound, so does the buffalo grass. The “breaks” of the Missouri, it seemed obvious to me then, were grass-healed gullies cut by the runoff of unusually heavy rains. I never saw such gullies raw, but healed wagon tracks and cattle or buffalo paths were common and they looked like related phenomenon to me.

I was aware of the strength and fragility of this environment when I was 18, and remember arguing with my father that the sod should not be broken, but I did not realize then as I do now just how fragile—and beautiful—that Plains environment was. Its strength was of the past. Without a self-seeding—or otherwise self-sustaining—grass, it had no fruitful future. Irrigation dams on the Missouri River are an ineffective archaic device which cannot compensate for the stem-cured wild hay of that great gentle slope that stretches, dry and windblown, from the Rockies to Iowa. □

Letters

Simplistic measure, simplistic results

Thanks for your excellent article contrasting the soil runoff consequences of different farming practices (“Same Storm—Different Outcomes,” April/May/June *LSL*). The Universal Soil Loss Equation (USLE) is one of the most widespread, inflexible, and overrated explanatory frameworks around, yet it is still “bread and butter” for far too many academic agronomists and extension agents. As early as the 1970s scientists in other parts of the world were critiquing this USDA-promoted model as too mechanistic and simplistic. One can simply not accurately capture a chaotic phenomenon like soil erosion from its unique geographic and cultural context. Casual application of such “sloppy science” does a gross disservice to farmers not only in the U.S. but elsewhere around the world.

In *Lie of the Land: Challenging Received Wisdom on the African Environment*, the dire consequences of imposing “universal”—i.e. western—scientific assumptions in developing countries is well documented. The extrapolation of soil erosion rates from small artificial field plots to “real-life” watersheds is but

one example given in this book. In a setting like Zimbabwe, such constructed “facts” were crudely deployed by colonial officials to condemn traditional agriculture and justify draconian intervention—such as the notorious 1951 Native Land Husbandry Act that effectively rendered agroforestry and polyculture “illegal.” Today, proponents of indigenous permaculture such as Zimbabwe’s Natural Farming Network are still dealing with the fallout of such misguided science entrenched within archaic policy. Scary soil erosion figures from field station test plots are routinely trundled out by the World Bank and U.S. Agency for International Development technocrats to argue against long overdue land reform, ostensibly because they “prove” low input, small scale communal farming is “unsustainable.”

The French philosopher Michael Foucault has noted that political power is often oppressively exercised through the formation and accumulation of knowledge, including methods of observation and procedures of investigation. Other critical observers of modern society such as Lewis Mumford have warned us to not misread technological development as benign or apolitical. As the article appears to suggest, if we really wish to tackle erosion, then we need to not only question the utility of concepts like USLE, but also the appropriateness of tools like the plow.

The U.S. suffered a horrific Dust Bowl in large part due to reckless promotion of large-scale mechanical cultivation, yet this “Gospel of the Plow” was exported worldwide, creating more self fulfilling soil erosion crises in such far-flung places as Zimbabwe. I eagerly await the day when land grant college researchers consciously design and conduct experiments for comprehensive evaluation of entire farming “packages”—from theory to technique. We should not depend upon mere happenstance for such comparisons.

— John E. Peck, Jr.
St. Cloud, Minn.



What’s on your mind?

Got an opinion? Comments? Criticisms? We like to print letters, commentaries, essays and poems on issues covered in this newsletter. Contact: Brian DeVore, *Land Stewardship Letter*, 2200 4th St., White Bear Lake, MN 55110; phone: 651-653-0618; fax: 651-653-0589; e-mail: bdevore@landstewardshipproject.org.



Farm Beginnings deadlines Oct. 8, 15

Classes for the 2001-2002 Farm Beginnings program start Oct. 27 in southeast Minnesota and Nov. 3 in western Minnesota. The deadline for applying is Oct. 8 in southeast Minnesota, and Oct. 15 in the western part of the state. The classes usually fill by early fall, so those interested should apply soon.

This is the fifth year Farm Beginnings classes have been offered in southeast Minnesota and the second year for the western Minnesota program. Farm Beginnings provides participants an opportunity to learn firsthand about low-cost sustainable methods of farming. Of the more than 56 families who have

graduated from the program, over 60 percent are involved in farming, according to Karen Stettler, who coordinates the southeast Minnesota program. The program offers training through a series of sessions this fall and winter. Topics to be covered include Goal Setting, Decision Making, Establishing a Business Plan, Money Management, Biological Monitoring, and Innovative Marketing.

But Farm Beginnings is more than a series of training sessions, says Stettler. The foundation of the program is a mentorship component that links established farmers with course participants through on-farm educational tours.

This farmer-to-farmer networking has proven immensely successful, and Farm Beginnings participants have drawn on the expertise and experience of farmers who are doing everything from management intensive rotational grazing to commercial vegetable production.

Farm Beginnings is again this year offering a zero-interest livestock loan program, made possible by a generous \$250,000 grant from Heifer Project International. Through this program, LSP offers livestock to beginning farmers who have successfully completed the Farm Beginnings program, demonstrated financial need, and are prepared to care for the livestock.

To apply for the southeast Minnesota program, call Stettler at 507-523-3366, or e-mail her at stettler@landstewardshipproject.org. For the western Minnesota program, contact Amy Bacigalupo in LSP's Montevideo office by calling 320-269-2105, or e-mailing amyb@landstewardshipproject.org. □

U.S. Supreme Court rules mushroom checkoff unconstitutional

In a case that could have far-reaching impacts on all commodity checkoff programs, the U.S. Supreme Court ruled June 25 that the mandatory mushroom checkoff violates the First Amendment free-speech rights of mushroom producers. The Campaign for Family Farms (CFF), the group suing USDA to uphold hog farmers' democratic vote to end the mandatory pork tax, applauded the 6-3 decision. The Land Stewardship Project is a founding member of the Campaign.

CFF joined with the Western Organization of Resource Councils (WORC) in a friend of the court brief filed in the mushroom case, arguing that the mushroom checkoff be declared unconstitutional because it "compels producers to finance and/or to be associated with political or ideological speech to which they are opposed."

The parallels between the mushroom and pork and beef checkoffs are strong, with all three programs spending the majority of funds on programs that benefit corporate producers and processors instead of independent farmers.

After reviewing the Supreme Court decision, hog farmer plaintiffs and the Campaign for Family Farms decided to file a claim that the pork checkoff is unconstitutional.

"I object to what the NPPC says and does with my pork checkoff money," says LSP member Rodney Skalbeck, who is a

purebred swine breeder near Sacred Heart, Minn. "Their whole message, with their promotion and their research, is get big or get out."

The claim, if accepted by the court, will be attached to an existing case brought by the CFF against USDA for its refusal to terminate the mandatory pork

checkoff even though a majority of hog farmers voting in last fall's referendum chose to end the tax.

Despite the vote, U.S. Secretary of Agriculture Ann Veneman has refused to terminate the mandatory pork checkoff, requiring farmers to keep paying the failed and unpopular tax. □



Grant Krieger recently sent a message to U.S. Agriculture Secretary Ann Veneman with a "pro-democracy" sign he put up near his Kerkhoven, Minn. hog farm. The Land Stewardship Project is distributing similar signs throughout Minnesota. One sign is for hog farmers ("Our Votes Count"), and the other is for supporters of family hog farms ("Democracy Counts"). For information on obtaining a sign, call LSP's Policy Program at 612-722-6377. (LSP photo)

2001 Twin Cities Local Foods Banquet Sept. 29

Our Sustainable Pantry—Building a Regional Food System from the Ground up

The Land Stewardship Project's third annual local foods banquet in the Twin Cities area will celebrate the rich tastes of our region with the theme "Our Sustainable Pantry: Building a Regional Food System from the Ground Up." Join us on Sept. 29 for another delicious meal created by LSP member and chef Brad Beal from the bounty of our stewardship farmers.

Sample appetizers while visiting farmer displays and bidding on food and farm items in a silent auction. Learn from LSP member-farmers Bonnie and Vance Haugen about their grass-based dairy in southeast Minnesota and their marketing efforts through the Midwest Food Alliance and PastureLand Cheese. Enjoy the fellowship of other Land Stewardship Project members, and leave with renewed energy to do your part to make a regional food system a reality.

Lutheran Church of the Redeemer,

located at 285 North Dale Street in St. Paul (just one block south of I-94), will be hosting us in its spacious fellowship hall. Plenty of parking is available. A playroom for children is just off the dining area.

Everyone is invited, from any region. Look for your invitation in the mail if you are in the Twin Cities area, or call the White Bear Lake office at 651-653-0618. The deadline for reservations is Sept. 20.



Volunteers make this event possible. If you'd like to help out, contact Cathy at 651-653-0618 or cathy@landstewardshipproject.org to find out how you can get involved—chopping veggies, setting up tables and chairs, lighting candles or arranging flowers. Farmer-members are invited to set up displays to promote their products.

S.E. LSP annual meeting/picnic Sept. 8

The Land Stewardship Project's southeast Minnesota office will be holding its annual meeting Sept. 8, from 12:30 p.m. to 5 p.m., at Farmer's Community Park near Lewiston. The event will feature a potluck picnic (local foods are encouraged), great music, children's activities and softball/volleyball.

You are asked to bring a dish to pass (drinks provided), tableware, lawn chairs, and a friend. If you are planning on attending, please contact LSP's Lewiston office at 507-523-3366. □

Farm Beginnings staffer needed

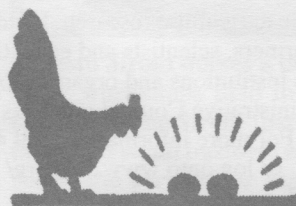
The Land Stewardship Project is looking for someone to help coordinate its southeast Minnesota Farm Beginnings program between September 2001 and August 2002. This position would be filled through the AmeriCorps program, a national service initiative.

Farm Beginnings is a unique educational training and support program designed to help people who want to evaluate and plan their farm enterprise (see page 4). The staff person would work

with beginning farmers and with those just receiving "livestock loans" from Heifer Project International. The staffer would coordinate "Monitoring Teams" and biological monitoring on participant's farms. In addition, they would develop and implement a format for continued communication with past Farm Beginnings participants.

A yearly living stipend of \$9,300 will be paid. Upon completion of service, an AmeriCorps member is eligible for an education award of \$4,725, which can be applied toward tuition, loan repayment or other educational expenses. The AmeriCorps member would need to have access to transportation for this position. Work related mileage and expenses will be paid by LSP.

For more information, call Karen Stettler or Richard Ness at 507-523-3366 or fax 507-523-2729. You can also e-mail stettler@landstewardshipproject.org for more information. □



LSP Board changes

Charlotte Brooker, Monica Kahout and Bruce Vondracek recently joined the Land Stewardship Project's Board of Directors.

Brooker, of Maplewood, Minn., holds a bachelor's degree in elementary education and a master's degree in environmental education from the University of Minnesota. She taught in the Anoka-Hennepin and White Bear Lake (Minn.) school districts and was an original member of the Minnesota Environmental Education Board. Most recently, Brooker has been active with the Izaak Walton League, where she has served in various positions, including state president.

Kahout raises hogs and crops with her husband Gary near Olivia, in southwest Minnesota. She has a bachelor's degree in music from Luther College and taught in the Apple Valley (Minn.) school district. Kahout has long been involved in various issues related to family farms and the environment, most recently working to hold factory farms accountable in Renville County. She serves on LSP's Livestock Concentration Committee. Kahout has also been a leader with LSP's and the Campaign for Family Farms' work to end the mandatory pork checkoff tax.

Vondracek is a fisheries research scientist with the University of Minnesota's Fish and Wildlife Research Unit. He has served on the Board of Directors of the Minnesota Institute for Sustainable Agriculture (MISA), and has been involved with various USDA Sustainable Agriculture Research and Education (SARE) projects. Vondracek worked extensively with the Monitoring Project, a joint initiative of LSP and MISA.

Leaving LSP's Board are **Dale Hennen and Charis Stenberg**. They both served two, four-year terms. **Hennen** recently served as the LSP Board Chair. He is Director of the Rural Life Office of the Catholic Archdiocese of St. Paul and Minneapolis. **Stenberg** recently served as the Chair of LSP's Board Development Committee. She lives in the southeast Minnesota community of Pine Island and has long been an activist on food and farming-related issues. □



LSP looking for western MN direct-selling farmers

Are you a western Minnesota farmer who wants to get more value out of your production by marketing straight to consumers or institutions in the region? Then call 320-269-2105 or e-mail tlvdp@landstewardshipproject.org soon to participate in a special survey being conducted by the "Pride of the Prairie" program. This new local foods initiative is seeking information on producers and potential producers of "field to fork" farm products.

"This short survey will be an easy way for local farmers to inform us about their interest in selling direct to consumers and developing local institutional markets," says Terry VanDerPol of the Land Stewardship Project's western Minnesota office. "We want to cast a wide net and get in touch with as many farmers as possible who are marketing food directly to consumers, or who are interested in starting that type of farming enterprise."

The farmer survey will be followed up with a polling of local consumers to determine what aspects of food production and marketing are important to them.

This survey is just one of the initiatives of Pride of the Prairie, which was launched this spring in an attempt to create a system where food from local farms routinely makes it onto the tables of citizens in the Upper Minnesota River Valley. This initiative will create and distribute widely (both in print and via the Internet) an extensive directory of local food producers and processors. In addition, Pride of the Prairie will work with the University of Minnesota-Morris to provide local foods on the college's menu. Finally, the initiative will hold community discussions and raise awareness about the importance of directly supporting local farmers.

"Studies show that local food systems are good for farmers, consumers and the local economy," says Bev Struxness, a Milan area farmer and member of the West Central Regional Sustainable Development Board. "In fact, a local food system provides a kind of vitality that truly supports and benefits everyone in

rural communities."

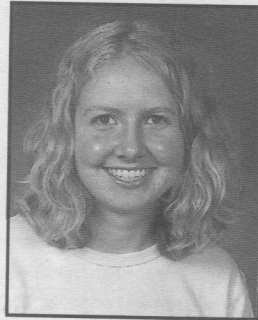
Pride of the Prairie recently received funding and collaborative support from the West Central Regional Sustainable Development Partnership. Besides LSP, others collaborating on the project are West Central Research and Outreach Center, University of Minnesota-Morris, as well as other partners and interested citizens. □

Pride of the Prairie intern

Anne Borgendale has been working as an intern with the new Pride of the Prairie local foods program (see previous story).

Through her internship, Borgendale is working with staff in the Land Stewardship Project's western Minnesota office to develop and conduct a survey of local food producers to assess their production

methods, current marketing strategies and interest in being identified as part of a local foods network. Borgendale is studying chemistry at the University of Minnesota-Morris, and she works with the school's Center for Small Towns. Her family dairy farms in the Montevideo area. □



Anne Borgendale

Dan French on SARE Council

Land Stewardship Project member Dan French was recently appointed a producer representative to the USDA's North Central Region Sustainable Agriculture Research and Education (SARE) Administrative Council. French farms with his wife Muriel near the southeast Minnesota community of Dodge Center. They are pioneers in the use of management intensive rotational grazing for dairy production.

Since 1988, the SARE program has funded and administered innovative sustainable agriculture research. Funding goes to farmers, scientists and educators, as well as institutions and organizations. The Administrative Council manages the program. For more information, call 402-472-7081, or log onto www.sare.org/ ncrsare. □

Ag endowed chairs named

Luanne Lohr and Douglas Tiffany have been named as the 2001-2002 School of Agriculture Endowed Chairs in Agricultural Systems at the University of Minnesota.

Lohr, an associate professor in the Department of Agricultural and Applied Economics at the University of Georgia-Anthens, will conduct a case study on how to build a regional or state organic food network to keep more value-added proceeds from organic production and processing in Minnesota. She will also work with the organic industry and the University of Minnesota to develop a graduate course in the economics of agroecology.

Tiffany is a research fellow in the University of Minnesota's Department of Applied Economics. During his time in the Endowed Chair, Tiffany will work on a variety of agricultural energy-related projects.

The Endowed Chair is part of the College of Agricultural, Food and Environmental Sciences at the University of Minnesota, and is managed by the Minnesota Institute for Sustainable Agriculture (MISA). For more information, contact MISA by calling 612-625-8235 or e-mailing misamail@umn.edu. The MISA Web site is <http://www.misa.umn.edu/>. □



Creative Conservation

"You have over one million creative farmer minds out there in the country. If you tell them the environmental results that you want and give them financial incentives to achieve them, they will find a way to deliver."

— Land Stewardship Project member and farmer Dave Serfling, in testimony before the U.S. Senate Agriculture Committee Hearing on Working Lands, July 31, 2001

See www.landstewardshipproject.org for a transcript of the entire testimony.



Dairy farmer Bonnie Haugen explains how she and her family are working to restore a worn out farm using management intensive rotational grazing. Bonnie, who farms with her husband Vance near the southeast Minnesota community of Canton, hosted a streamside grazing school in late June. A Wisconsin version of the school was hosted by beef producers Don and Kim Dubenbostel. Land Stewardship Project, along with various other organizations and agencies, co-sponsored the schools. (LSP photo)

MSAWG hires regional coordinator

Teresa Opheim has been hired by the Midwest Sustainable Agriculture Working Group (MSAWG) to fill the new staff position of Regional Coordinator, which will be located in the office of the National Catholic Rural Life Conference in Des Moines, Iowa.

MSAWG is a network of 35 farm, food, rural, conservation and environmental groups organized in 1988 to promote sustainable agriculture in federal policies and programs. Land Stewardship Project helped found MSAWG and is an active member of the Sustainable Agriculture Coalition (SAC), an MSAWG subgroup of 13 organizations that works on federal farm policy issues. MSAWG supports farm programs that benefit family farmers and rural communities while enhancing the environment and food security.

Opheim has been the Communications Director of the Iowa Environmental Council since 1998. In her new position as Regional Coordinator, Opheim will coordinate grassroots outreach in the Midwest and recruit new member organizations. She will also work with MSAWG grassroots organizations to develop support for the Conservation Security Act and other proposed farm legislation beneficial to sustainable agriculture.

To contact Opheim, call 515-270-2634, or e-mail teresaoheim@hotmail.com. □

Action alert: Block Dorr's nomination

Sometime in early fall, the U.S. Senate Agriculture Committee will be considering the nomination of Thomas Dorr to the position of USDA Undersecretary of Agriculture and Rural Development. The Land Stewardship Project has joined more than 160 other organizations in opposing the nomination, which was made by President George W. Bush. Dorr, of Iowa, has made it clear that when it comes to the future of agriculture and rural development, he does not believe there is a role for family-sized sustainable farming systems.

For example:

- In a 1998 *New York Times* article, Dorr said he envisioned a nation of 225,000-acre mega-farms—or one farm for every 350 square miles (the average U.S. farm size today is 450 acres). He has also publicly supported the North Carolina model of factory hog production and believes states like Iowa should “facilitate the growth” of such a system. Dorr has been called “the poster boy for corporate agriculture.”

- As a member of the Iowa State University Board of Regents, Dorr fought university extension’s work to promote sustainable farming practices.

- At a 1999 seminar on economic development held at Iowa State University, Dorr argued that three of Iowa’s most prosperous counties do well economically because “they have been very non-diverse in their ethnic background and their religious background.” Such comments cast doubt on whether, as a top USDA official, Dorr would support policies that promote diversity in rural areas (to hear the comments Dorr made at the seminar, log onto <http://washingtonpost.com/wp-srv/mmedia/politics/053001-8v.htm>).

To express your opposition to the appointment of Dorr, contact your U.S. Senator and tell him or her to block the nomination. The ranking members of the Senate Agriculture Committee, Richard Lugar (R-Indiana) and Tom Harkin (D-Iowa) should also be contacted. Lugar can be called at 202-224-4814, or e-mailed at senator_lugar@lugar.senate.gov. Harkin’s phone number is 202-224-3254. His e-mail is tom_harkin@harkin.senate.gov.



Ernesto Sirolli makes a point during one of three “Entrepreneurial Agriculture” workshops held in Granite Falls, Minn., this summer. Sirolli is the founder of the Sirolli Institute, which helps communities spawn and support farm and small business enterprises. The Land Stewardship Project co-sponsored the series. For more information on the Sirolli Institute, log onto www.sirolli.com, or call toll-free 877-SIROLI. (LSP photo)

Local foods on local plates

By Audrey Arner

The foods on a Western Minnesota dinner plate have traveled an average of 1,300 miles. While volatile energy prices continue to plague us, western Minnesotans are reliant on food production from the Imperial Valley and Latin America and distribution systems based in New Jersey or Houston.

The almost exclusive emphasis on commodity production, reinforced by our federal farm program, has depleted our ability here in farm country to feed ourselves. The skill set and infrastructure required to grow food locally, distribute it effectively and prepare it wholesomely is sadly underdeveloped. Institutional food use in our schools, hospitals, and care facilities, although logistically convenient, has come to depend on intercontinental companies. There is a frail link between the students, faculty, patients or laborers, and the agricultural landscape that surrounds our communities.

Our vision for a sustainable community food system in western Minnesota features foods grown, processed, distrib-

uted and consumed in an ecologically and socially responsible manner on a regional, community scale. We are not alone.

With the support of the West Central Regional Sustainable Development Partnership and Prairie Renaissance, both headquartered in the western Minnesota community of Morris, we are laying some important groundwork to create a new reality.

Together with students, faculty and other community members we are launching "Pride of the Prairie" to link local farms with institutions like the University of Minnesota at Morris (see story, page 6). It is our intention to provide infrastructure and inspiration for a variety of food connections between our region's food producing farms, and the home and institutional kitchens of the Upper Minnesota River Valley.

For starters, we'll be surveying the farmers to find out what and how much food they have that is consumer ready. We will also produce a comprehensive list that will be published on paper as well as on the Web.

We will also be surveying consumers to assess what aspects of food production

and marketing are important to them, and are developing an inventory of the region's processors and their specialties.

Lynn Mader, our food systems consultant, is getting to know the new University of Minnesota at Morris food service contractor in her efforts to create the bridge for "Local Foods Go To College," a fall food forum and dinner to take place in November in Morris.

We expect that this project will have ripple effects in a variety of other community endeavors like church dinners, annual meetings, fund raisers and personal buying habits. We hope that this new work will have genuine social and economic impact in ways that retain and attract people. A new community of resource-conserving, food-producing farmers will be effectively networked, having improved marketing capacity and, hence, profitability. Quality of life will consequently improve also for the consumer base, being healthily in touch with the source of their sustenance. The community fabric will strengthen.

We hope the effects of this project will endure and that the fundamental ways that foods are grown and eaten in the region, how they are distributed, and what impacts all this has on economic, environmental and social well-being, will be enhanced for the very long term. □

LSP organizer Audrey Arner directs markets grass-fed beef raised on her farm near Montevideo.

When the rubber chicken hits the road

Increasingly, the nonmarket costs associated with our modern food system are starting to come to light. These are costs that don't show up on the price tag for a pound of pork, gallon of milk or head of lettuce, but they impose "expenses" on society just the same. Depopulated rural areas, eroded soils, contaminated water and decimated wildlife habitats are just some of the costs industrialized agriculture is able to externalize. Now, a study out of Iowa shows that the conventional food distribution system carries a hefty, nonmarket price tag as well—and the atmosphere itself is footing the bill.

The study, conducted by Iowa State University's Leopold Center for Sustainable Agriculture, looked at three local projects in Iowa where farmers sold directly to institutional markets such as

hospitals, restaurants and conference centers. On average, the "local food" traveled 44.6 miles to reach its destination. That compares with 1,546 miles if the food items had arrived from conventional national sources, report the study's authors.

So what kind of "cost" does all that well-traveled food impose on society? A major cost is the massive amounts of carbon dioxide emissions produced by the extra burning of fuel. Carbon dioxide emissions are considered a major factor in the development of greenhouse gases in the atmosphere. The study's authors estimated that growing and transporting 10 percent more of the produce for Iowa consumption in a locally based food system (direct marketing to institutions, Community Supported Agriculture, farmers' markets, etc.) would result in an annual reduction in carbon dioxide emissions ranging from 6.7 to 7.9

million pounds, depending on the system and truck type.

As everyone from insurance companies to seaside resort owners become increasingly concerned about the effects of global warming, carbon dioxide reductions may serve as an incentive to create more localized food systems.

But before that can happen, conclude the researchers, "Economic value must be assigned to the external environmental cost of burning more fossil fuels and releasing more CO₂."

Would you like reduced global warming with that burger?

For a copy of *Food, Fuel, and Free-ways: An Iowa perspective on how far food travels, fuel usage, and greenhouse gas emissions*, contact the Leopold Center at 515-294-1854. A copy can be downloaded from <http://www.leopold.iastate.edu/>.

Legislative Update

MN Legislature restores sustainable ag funding

But provides corporate welfare to factory farm

For supporters of sustainable agriculture and family farms, the 2001 session of the Minnesota Legislature was a very mixed bag, according to Paul Sobocinski, a Wabasso, Minn., farmer and organizer for the Land Stewardship Project.

"On the one hand, lawmakers restored money that had been cut out of various sustainable agriculture programs," he says. "However, they then turned around and gave more than one hundred and ninety thousand dollars to a single large hog operation in a blatant show of support for factory farms. What kind of message does that send?"

During much of the session, it looked as if Minnesota's nationally known sustainable agriculture programs would be damaged beyond repair. Agriculture Commissioner Gene Hugoson proposed siphoning \$370,000 out of the state agriculture department's sustainable and organic farming programs. Such cuts would have reduced by half the money available for demonstration grants and education programs as well as eliminated a first-in-the-nation organic cost-share program.

The cuts would have also restricted publication of the *Greenbook*, a popular annual summary of on-farm sustainable agriculture research. The Minnesota Institute for Sustainable Agriculture's Information Exchange, which receives funding through the agriculture department, was also threatened by Hugoson's proposed cuts. The Information Exchange has proven to be an invaluable resource for farmers who are seeking information from the University of Minnesota on low-cost, sustainable alternatives.

In addition, critical higher education funding for the Alternative Swine Systems Program at the University of Minnesota was in jeopardy during the session. The Alternative Swine Systems Program was created in 1997 with a \$125,000 per year appropriation. It has already conducted extensive research on low-cost, environmentally friendly systems, such as deep-straw bedding, at a time when there is an increasing demand for such information. Wayne Martin is the

coordinator of the Alternative Swine Systems Program.

"The Alternative Swine Program is extremely important to independent producers who want to make money raising hogs while practicing good stewardship," says Sobocinski, who raises hogs. "LSP is committed to keeping this program strong."

Making a difference

Through the hard work of LSP and other members of the Sustainers' Coalition, funding for the agriculture department's sustainable agriculture programs was completely restored in the Agriculture and Environment Finance Bill. In the Higher Education Finance Bill, the Alternative Swine Systems Program was specifically named by the Legislature as an initiative that should continue. Charles Muscoplat, Dean of the College of Agricultural, Food, and Environmental Sciences, also indicated his support for the program in communications with legislators.

Governor Jesse Ventura eventually signed both finance bills into law. Sobocinski says much of the credit for restoration of support for sustainable agriculture goes to citizens from throughout the state who made it clear how valuable these programs are to them. Farmers and other citizens testified before committees, made telephone calls, wrote letters and sent e-mail messages, says Sobocinski.

"That we were able to get these cuts restored despite some major obstacles speaks well to the power of LSP's and our allies' grassroots organization."

Another key initiative that LSP worked for was the continuation of the agricultural rural sociologist position at the University of Minnesota's West Central Research and Outreach Center in Morris. While this position was not named specifically in the Higher Education Bill, it received strong support from legislators. In addition, Dean Muscoplat acknowledged in testimony and written communication to legislators that the position was an important one.

On the negative side, the Legislature

voted to give Hancock Pro-Pork \$192,000 to help it pay for a court-ordered Environmental Impact Statement (EIS). One version of the legislation would have provided \$1 million to any factory farm that had been court-ordered to do an EIS. However, citizen concerns over such a blatant handout for factory farms caused lawmakers to limit the funding and scope of the bailout, according to Sobocinski.

Despite the scaling back of the EIS funding bill, giving the money to Hancock Pro-Pork is a slap in the face to opponents of the hog facility's expansion plans, according to Sobocinski. In 1998, a Minnesota District Court judge ordered the Pope County hog operation to conduct an EIS study on the impacts of the operation. An EIS is ordered in cases where there is evidence a proposed facility poses a significant environmental risk. The House of Representatives pushed through the grant even though the state had already trimmed by nearly half the cost of Hancock's EIS. Despite citizen calls and e-mails to his office protesting the bailout, Governor Ventura declined to veto the measure.

"This sets an incredibly bad precedent for public subsidy of factory farms," says Sobocinski.

Overall, the 2001 Minnesota Legislature will go down as one where the shortsighted views of certain policy makers had a major negative impact on farm policy, says Sobocinski. However, several legislators showed courage in standing up for family farmers and sustainable agriculture, he added. In the Senate, key legislators who were consistent in their support for continuing sustainable agriculture programs were Leonard Price, Jane Krentz, Ellen Anderson and Twyla Ring. Key supporters of LSP's efforts to continue the Alternative Swine Systems Program in the Higher Education Finance Bill were House members Marty Seifert (who authored the amendment) Lyndon Carlson, George Cassell, Steve Dehler, Peggy Leppik, Paul Marquart, John Tuma and Ted Winter. Senators Chuck Fowler, Steve Murphy and Deanna Wiener supported funding in the Senate version of the Higher Education Bill. □

Food & Farm → → → → Connection



Stewardship Food Network

The *Stewardship Food Network* is a list of Land Stewardship Project members who produce meat, dairy products, eggs, vegetables, fruit, flowers, grain and other goods in a sustainable manner. The Network also lists LSP member-businesses selling or processing food produced by other LSP members.

Some of the production methods used by the Network farmers include certified organic, antibiotic and hormone-free, free of genetically modified organisms, pasture-based, integrated pest management to reduce pesticide use, deep-bedded straw livestock housing and conservation tillage.

The listing provides contact information for the farmers so consumers can call or e-mail them personally to learn more about production methods, availability of products and prices. For a complete listing, contact our Twin Cities office at 651-653-0618 or go to our Web site

(www.landstewardshipproject.org) and click on *Food & Farm Connection*.

LSP will periodically update and make corrections to our Food Network listing. If you are an LSP member who would like to be listed, please contact us at our Twin Cities office. Here are the latest corrections/additions:

Southwest WI

☐ Talking Oak Farm

Richard & Sandy Hall
321 11&1/4 Street
Prairie Farm, WI 54762
Phone: 715-455-1158

E-mail: tknokfrm@chibardun.net

Web site: www.TalkingOakFarm.com

→ Products: **Venison, venison sausage, garlic & shallots**

→ Also services: **St. Paul Farmers' Market; Minneapolis Farmers' Market**

Southwest MN

Double D Natural Meats

Don & Bex Struxness; Dan & Missy Struxness
Milan, MN 56262
Phone: 877-298-7442;
320-752-4733

→ Products: **Beef**

Food retailers wanted

Do you know of a restaurant or retail grocery that features food produced locally by sustainable family farmers? Let us know and we'll contact them about joining the Land Stewardship Project and getting listed in the Stewardship Food Network. To nominate a business, call Cathy Eberhart at 651-653-0618, or e-mail her at cathy@landstewardshipproject.org.

Midwest Food Alliance blooms

By Ray Kirsch

From fields, gardens, orchards, and pastures, the wealth of our summer is rolling in. And to help consumers identify this local wealth, Midwest Food Alliance (MWFA) is kicking off its second year of education, marketing and celebration.

This year we'll be certifying and promoting more farms and foods than ever. Foods with our seal of approval will include sweet corn, tomatoes, cabbages, radishes, beets, squash, pumpkins, cucumbers, green beans, apples, blueberries, beef, pork and dairy

products. We'll have over 25 farms in our program this year. You can find a listing of MWFA farms at:

www.thefoodalliance.org/midwest.html.

We'll also be working with more retail partners. This year MWFA foods will be in six Coborn's stores—four in the St.

Retailers, volunteers wanted

If you are a retailer who is interested in carrying MWFA-certified products, or if you want to volunteer some time doing an in-store demonstration, contact Britt Jacobson by calling 651-265-3682, or e-mailing bjacobson@foodchoices.org.

Cloud area, and one each in Little Falls, and Elk River. We'll be in three Kowalski's stores in the Twin Cities metro area. We'll be in both Mississippi Market locations in St. Paul. And finally, we'll be in the Barlow's Plaza Hy-Vee store in Rochester and T. Harberts Foods in Plymouth.

Midwest Food Alliance is an exciting opportunity for consumers to invest in stewardship, local farms, great food, and community health—the proverbial, “putting your money where mouth is.” For LSP members, however, it can be more than that. It's an opportunity to put values into action—to take tangible

MWFA, see page 11...

stewardship steps.
For example:

• **Volunteer to demonstrate foods.**

Here's an advantage any other farm, processor, or marketer would give their right arm for. And as it happens, they can't buy it. They can't buy knowledgeable, excited volunteers that will demonstrate and talk about MWFA foods and how they're good for the environment and the community.

MWFA will be sending out letters this fall to recruit demonstration volunteers. When you get yours, think of the difference you can make with just a few hours. Can't wait to get a letter? Then call Britt Jacobson at 651-265-3682 and let her know you're willing to help.

• **Tell friends and neighbors.** LSP members are ambassadors for our common work. Let folks know what MWFA products are all about and where to find them. Everyone eats and most folks want to support good stewardship and local farms—they're just unsure of how to do it.

• **Recruit retailers and farmers.** Is there a grocer near you that you'd like to carry MWFA foods? Ask them. Send their name along to Britt and we'll work to get them in the program. Is there a farm (maybe yours!) that would be a good fit for MWFA? Now's the time to get certified and begin participating. Call me at 651-653-0618 to learn how to get that farm—your farm—involved.

• **Invest in your health.** Put some MWFA foods in your shopping cart. Invest in your environment, your community's health, your health. Share a dinner with others and tell them this story. ☐

Midwest Food Alliance Farm Coordinator Ray Kirsch is based in LSP's Twin Cities office. If you're a farmer who wants to learn how to get your products MWFA certified, contact Kirsch by calling 651-653-0618, or e-mailing rkirsch@landstewardshipproject.org. Information on MWFA is also available at www.landstewardshipproject.org (click on Food & Farm Connection). In addition, MWFA's partner in the Pacific Northwest, The Food Alliance, has information at www.thefoodalliance.org/midwest.html.



The La Crescent, Minn., apple orchard of Jackie and Harry Hoch (pictured here with their daughter Angie) was recently certified by the Midwest Food Alliance. Future issues of the *Land Stewardship Letter*, as well as the LSP Web site, will feature photos of other MWFA-certified farmers. (LSP photo)

Hey direct-marketers!

Farmer-members of the Land Stewardship Project who direct market food are invited to set up displays at the 2001 Local Foods Banquet, Sept. 29, in St. Paul, Minn. (see page 5). For more information, call Cathy at 651-653-0618, or e-mail her at cathy@landstewardshipproject.org. ☐

Midwest Food Alliance Retail Partner Stores

Coborn's, Inc.

Sauk Rapids Superstore
110 1st St. S
Sauk Rapids, MN 56379

St. Cloud-Fifth Ave. Store
327 5th Ave. S.

St. Cloud-Centennial Store
2118 8th St. N

Sartell Store
707 1st Ave. N.

Little Falls Superstore
1101 2nd Ave. NE

Elk River Superstore
19425 Evans St. NW

Kowalski's Markets

Woodbury Store
8505 Valley Creek Rd.

St. Paul Store

1261 Grand Ave.

White Bear Lake Store

4391 S. Lake

Hy-Vee

Rochester-Barlow's Plaza
1315 6th Street NW

Mississippi Markets

1810 Randolph Ave.
St. Paul, MN

622 Selby Ave.
St. Paul, MN

T. Harberts Foods

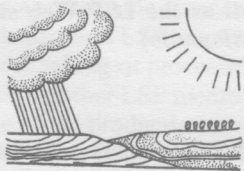
1605 Highway 101 N.
Plymouth, MN



110 million acres, or about 37 percent of all cropland, was being managed using some sort of minimum tillage system. At one point, the *Wall Street Journal* hailed conservation tillage as one of the fastest growing farming trends in the country. It looked likely that by 2002 more than half of all crop acres would be covered by heavy amounts of plant residue.

And the soil responded. Total U.S. erosion dropped by 42 percent between 1982 and 1997, according to the USDA's Natural Resources Inventory. During that period, erosion on all cropland declined from an annual rate of eight tons per acre, to five tons. Water caused erosion fell from 4.4 tons per acre, per year, to three tons, while annual wind erosion rates

Sustainable Soil



were reduced from 3.6 tons to 2.2 tons.

But "the good old days" may have been short-lived. The amount of acreage under conservation tillage hasn't risen above 37 percent since 1997 (it dropped to 36.6 last year). Indeed, the trend lines in conservation tillage aren't all bad. Pure no-till farming, particularly with soybeans, is still gaining acreage. In fact, since 1990 the number of crop acres being managed under no-till has increased by more than 200 percent to 51 million acres. But overall, conservation tillage's rapid rise seems to have hit a wide plateau.

And again, the soil is showing signs of responding. Since 1995 there has been no statistically identifiable change in the erosion rate. Soil erosion rates aren't increasing, but on the other hand no further major reductions are being made either. Maintaining the status quo is not enough: one estimate is that 90 percent of U.S. cropland is still losing soil more quickly than it can be replenished. Even though the average soil erosion rate has been reduced to five tons per acre, some scientists estimate soil can replenish itself only at about half a ton per year.

Farmers and soil scientists alike are seeing real world examples of these dire statistics in action.

"We have had the worst soil erosion

occur during the last two years that I have ever seen," says Dave Serfling, who farms in the rolling hills of southeast Minnesota's Fillmore County.

But that erosion isn't restricted to steep hillsides. University of Minnesota soil scientist Gyles Randall does a lot of research in the flat croplands of southwest Minnesota. In a recent weekly report on weather and crop conditions, Randall wrote: "...soil erosion has been horrendous again this year. Our rich, black, deep and uniform soils will only be a memory of the past if this rampant erosion is not controlled."

Soil conservation experts see no signs these troubling trends will turn around anytime soon. Conservation tillage is not the magic answer to our soil erosion problems, but it does offer a way for farmers who are raising corn, soybeans and other highly erosive crops to make their operations more sustainable. If conservation tillage remains a minority practice on our nation's crop acres, soil erosion will track upward as well, say soil experts. It's not like we haven't had plenty of warning.

Pounding plowshares

When a blacksmith named John Deere figured out how to mass-produce moldboard plows over 150 years ago, he did more than launch a new line of machinery. These plows gave farmers a reliable method for peeling back the top layer of tough prairie sod, unearthing the fabulous fertile wealth underneath. But as soon as that soil is exposed to the elements, it starts to deteriorate. Such exposure leaves the soil vulnerable to wind and soil erosion. It also speeds up oxidation of organic matter. Such oxidation can burn up nutrients before the roots of a field crop can absorb them, wearing out the soil at a fast clip. So far, farmers have been able to prop up the soil by adding nutrients in the form of chemical fertilizers or manure back into the soil. But the other downside of intense tillage—the increased erosion it causes—is harder to mask. The Dust Bowl made that clear in the 1930s. As crop tillage became increasingly more intense, erosion rates climbed to alarming levels, silting in waterways, polluting the air and causing entire farm communities to be abandoned.

But no one publicly questioned the moldboard plow's role in destroying soil until 1943, when an agronomist named Edward Faulkner wrote *Plowman's Folly*,

a book-length argument against deep, intensive tillage. He called for systems which left more dead plant residue on the surface.

Faulkner's ideas created a brief fire storm of discussion when first published, but soon disappeared from the agricultural and nonagricultural public spotlight. It wasn't until several decades later that the idea of conservation tillage on American row crops began to take hold. One benefit of conservation tillage is it uses less fuel. That made it very attractive to crop producers during the oil crisis days of the 1970s. And it had also become clear by that time that herbicides could be used to provide the kind of weed control formerly only accomplished through intense cultivation.

But it was the 1985 federal farm bill that really jump-started conservation tillage. A provision in that law required farmers to take certain soil saving steps in order to remain eligible for crop subsidies. For many farmers trying to raise crops on highly erodible soils, conservation tillage seemed a viable option.

Research in North America and Europe shows that when compared to conventional systems, conservation tillage can reduce erosion rates by 70 percent or more. It's hard to overemphasize what a difference even a little residue

cover can make on a field that would normally be clean plowed. With no protective cover, raindrops can splash soil particles up to

• • •
One estimate is that 90 percent of U.S. cropland is still losing soil more quickly than it can be replenished.
• • •

three inches away. Once loosened, those particles can be washed off a field very easily by heavy rains. On the other hand, dead plant residue can cushion raindrops, forming natural dams that pond runoff and trap sediment in the field. A wind speed as low as 13 miles per hour is capable of starting soil movement. Increasing the wind speed from 20 miles per hour to 30 miles per hour triples the rate of erosion. Buffering the soil against such forces is particularly critical early in the growing season, when corn and soybean fields are devoid of much cover. Studies in Minnesota have shown that when heavy rains come before the full development of a corn plant's canopy, the results can be disastrous. Even a simple mulch till system can cut erosion rates in half when compared to a moldboard plowed field (see April/May/June *LSL*). Even when conventionally tilled corn and

Plow, see page 13...

soybeans are well into the latter stages of their growth, the soil between the rows is bare, and vulnerable.

And all that residue contributes to the soil's innate ability to cook up its own fertility. As the dead plant material breaks down, it builds up the soil's organic matter, helping it to store nutrients and contributing to a healthy structure. Contrast that with the plowing under of all that organic matter, where, as *Deserts on the March* author Paul Sears writes, "...it remains like a wad of undigested food from a meal in the human stomach." Scientists also believe that conservation tillage may help keep carbon dioxide, a key component in creating environmentally harmful greenhouse gases, trapped in the ground.

Conservation tillage has also proven to be economically feasible. It can be pricey to switch to such things as high residue planters, but in the end less equipment is needed overall to make such a system work. In addition, a farmer using conservation tillage makes fewer trips across the field, saving fuel, as well as wear and tear on tractors. On a 500 acre farm, a no-till system can save as much as 225 hours of work time, 1,750 gallons of fuel and \$2,500 in machinery repairs annually, according to CTIC.

Eroded support

So what happened? Carmen Sandretto, an economist with the USDA's Economic Research Service who studies trends in conservation tillage, says the 1996 farm bill is partially to blame. That legislation loosened standards for conservation compliance, greatly reducing incentives for farmers to adopt new tillage systems.

Sandretto says in general the Natural Resources Conservation Service—the nation's leading soil protection agency—has made conservation tillage a "backburner issue" on the national level. (at one time, the agency's head was actually a minimum-till farmer).

Conservation tillage is the kind of practice that takes a lot of technical and moral support before it's successfully implemented on a farm, says the University of Minnesota's Randall. He has done extensive field trials on a Minnesota-friendly no-till system called strip till.

"You can change hybrids, you can change herbicides, but this is different. Making a change in tillage is a fundamental change in your management system."

When conservation tillage was really humming, there was a kind of synergy

between the public and private sector. The government required farmers to reduce erosion, and implement companies and chemical firms provided the inputs. In addition, NRCS technicians and extension educators provided help for farmers who were in the midst of adopting these systems (CTIC estimates it takes at least five years to adopt a conservation tillage system like no-till).

Conservation compliance (and

• • •
"...society may have a larger incentive for reducing erosion than farmers have."
• • •

widespread technical support, slipped into the background at about the time when the Corn Belt was hit by a run of unusually wet springs, coupled with dry falls. Those climatic conditions proved a deadly combination for a cropping system still on wobbly legs. In Minnesota, an annual residue survey conducted by the Board of Water and Soil Resources shows that the vast majority of cropland is still being clean plowed. Between 1995 and 2000, the percent of Minnesota cropland that had at least 30 percent of plant residue covering the surface flipped back and forth. It seems to have peaked at 48 percent in 1997, and was down to 38 percent last year.

Derek Fisher, a conservation agronomist with the Board of Water and Soil Resources, conducts the survey every spring between planting and the first cultivation. He says short-term weather patterns seem to be influencing farming practices more than long-term soil conservation goals.

"The amount of residue we have in the spring has more to do with what opportunities farmers had to till during the previous fall than any intentions to leave residue."

Minnesota is even defying the some-

what positive national trends in no-till; after the very wet growing season of 1993, no-till acres in that state dropped to below three percent of all crop acres, and there is little sign of a turnaround.

Another major reason conservation tillage acres are flattening out is that farmers just aren't seeing major reductions in yields as a result of soil destruction. Study after study shows that soil erosion causes much more damage off the farm than on. Siltation caused by erosion is the second leading cause of water quality impairment, according to the Environmental Protection Agency. Loose farm field soil can do everything from foul water treatment facilities to destroy fisheries habitat. In fact, in 1997 alone soil erosion imposed a total cost on U.S. society of more than \$29 billion, according to the Natural Resources Conservation Service. The social costs of continuing erosion are equivalent to 0.4 percent of the nation's gross domestic product. And on the farm? Other than in extreme cases, farmers see little immediate impact in terms of lost production.

"Unfortunately, or fortunately, we have very resilient soils," says Towery. "The soil is so forgiving—just dump more nutrients on and off you go."

Sandretto and Towery say the only way to jump-start conservation tillage is to make it clear to the public, and policymakers, that society is paying a stiff price for all that bare soil. In a 1999 study of soil erosion trends published in the *Journal of Sustainable Agriculture*, Noel Uri and James Lewis described how difficult it is for farmers to adopt new cropping systems, particularly if they don't see immediate benefits. Society at large, though, would benefit in the form of cleaner water, lower fuel usage and reduced greenhouse gases.

"Therefore," concluded Uri and Lewis, "society may have a larger incentive for reducing erosion than farmers have." □

Protecting a silent sufferer

The Perkins family isn't fooled by their soil's apparent healthy glow

It's late April and an unusually wet, cold spring is finally subsiding in southwest Minnesota. As the sun heats things up on this particular Friday morning, Jerry and Terry Perkins, along with their son Mike, work to get a corn planter ready. A warm breeze whips around the corner of their farm's cavernous machine shed, kicking up hopes that

the ground will be dry enough to take seed by Sunday. Nervous energy fills the air on this farm north of Worthington. Jerry twirls a socket wrench while Mike takes calls on his cell phone. The most relaxed beings in the vicinity are a pair of

Silent, see page 14...

black Labradors flopped in the sun.

Jerry points to the younger dog: "His name is Webster. He's named after a soil type here. It's black."

It's black, deep and rich—some of the richest in the world. But this heavy soil known for its ability to produce corn is also vulnerable. That same wind that's helping to make it tillable on this spring day can also be a highly erosive force. And although the land around here is as flat as they come, intense rains can send soil into waterways. That's why for more than 25 years the Perkins have been taking great care to disturb as little soil as possible when tilling the land. That planter they are working on won't be putting seed into clean, black furrows. The machine is specifically designed to cut through the dead leftovers of last year's crop. It's not that the Perkins family is too lazy to plow that old plant residue under. Rather, they are true believers in "conservation tillage," a system of farming that strives for as much ground cover as possible throughout the year. In a sense, this family's experience with conservation tillage tracks the history of the system itself. They have intimate knowledge of the difficulties of no-till farming, as well as the rewards. The experience this family has had with conservation tillage also makes it clear that this is not just a matter of buying a new line of implements or adopting a cookie-cutter approach to farming.

Starting simple

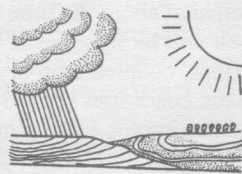
Soon after they began producing crops in 1974, Jerry and Terry Perkins started taking steps to protect their farm's soil. At first, it was something as simple as not chopping corn stalks before moldboard plowing in the fall. Instead, they went in and plowed the stalks straight, leaving parts of the dead plants sticking up to catch snow when southwest Minnesota winds scoured the surface of those flat fields. Over time, they left increasing amounts of residue on their fields. They read articles, attended field days and slowly switched their tillage equipment over to a "high residue" system.

By 1986, most of their corn was planted using minimum-till. In 1990, they rented a special high-residue drill planter and no-tilled soybeans on a small scale. It worked, and by 1994 no-till soybeans were a major part of their operation.

But Jerry is the first to point out that their corn production system is not

considered pure no-till, which basically involves no disturbance of the soil except at planting time. Such a system, which leaves up to 80 percent of the soil surface protected, is difficult to pull off in places like Minnesota, where all of that extra residue keeps cold soils from warming up in the springtime, thus slowing seed germination. This is particularly true for corn, which is sensitive to soil conditions and timing when it comes to planting. In addition, long winters reduce the breakdown of dead plant material into usable organic material. In fact, the same characteristic that make high residue

Sustainable Soil



levels advantageous during dry years—moisture preservation—can turn into a detriment during the kind of wet, cooler-than-normal seasons common in Minnesota. According to the latest residue survey done by the Minnesota Board of Water and Soil Resources, no-till production in the state covers less than three percent of all corn and soybean acres. In contrast, 18 percent of Iowa's corn acres are in no-till.

Another sticky issue related to cutting out all tillage is weed control. Because cultivators, hoes and other mechanical means aren't used in a no-till system to kill weeds, farmers must turn more to herbicides as a management tool. No-till's chemical dependence has made it a target of criticism in the environmental community (see sidebar, page 16).

The Perkins family is constantly grappling with how to control weeds without being totally reliant on chemicals. They've learned to accept that their fields won't be as weed-free as their neighbors'. However, there's a point where too many weeds can have severe impacts on crop yields—and profits.

That's why they have recently settled on a hybrid system of corn production that utilizes a combination of herbicides and light, precise tillage. Called "strip till," or "zone till," it differs from pure no-till in that a four- to six-inch strip is lightly tilled in the row with a knife-like implement after harvest. This raises a fluffed up area of black soil, exposing it on three sides. During that fall pass,

fertilizer is added to the strip. In the spring, a planter passes over the field, placing seed. The Perkins find that under this system the soil drains better and warms up quicker. It disturbs about a fourth of the total soil area, still maintaining as much as 50 percent cover or more between the rows.

Five years of field trials at the Southern Minnesota Research and Outreach Center shows strip till is a viable option to no-till: it out-yields in cold, wet soils while still offering good erosion control.

The Perkins family is also not strict about adhering to the no mechanical weed control rule of no-till. When their corn is about five inches tall, they take a high-residue cultivator—a device with one shovel or "sweep" per corn row. The cultivator is designed to kill weeds through the residue without completely turning over the soil. At the same time, the cultivator applies nitrogen fertilizer when the growing corn plants most need it. The timing of that application is important: it increases the fertilizer's efficiency and cuts the chances of nitrogen leaching through the soil and becoming a groundwater contaminant.

Because it gives them extra weed control at a critical time in the growing season, cultivating allows the Perkins to get away with banding preemergence herbicide right on the rows during planting, rather than broadcasting the chemical over the entire field. That means only about one-third of the field's surface area is sprayed with herbicide, cutting chemical use significantly.

All this takes extra management, but the Perkins believe it's worth it. Depending on weather conditions, their corn yields can vary from 15 percent above (dry conditions) to 15 percent below (wet conditions) the average for their area. But even when they experience a yield drag, the 30 percent to 40 percent lower machinery costs the Perkins enjoy helps make it pay. The family has those lower costs because they typically make three trips across a corn field during a year's time. In fact, their no-till soybean fields are often only traveled once, at planting time. A conventionally tilled field may require four or more passes, often with heavy-duty deep-tilling equipment that burns a lot of fuel and causes the biggest diesel engines to pull hard. Lower production costs is one reason the Perkins' bottom line returns have ranked in the top 20 percent of the Southwest

Silent, see page 15...

Minnesota Farm Business Management Association's farmer membership.

But they are particularly proud that during the past two decades their soil's organic matter has gone from .5 percent to 1.5 percent. To put that in perspective, the most organic matter the soil might contain would be in the 3.5 to 6 percent range. The Perkins' fields have much less compaction, which means good water infiltration and soil structure, creating an excellent environment for crop root development. Jerry says even when the soil obediently lies there and doesn't clog road ditches or silt in streams, it's often being exposed to the kind of farming practices that are shortening its productive life.

"We're stirring these soils up to the point where it's like a sandbox. It's fluffy and people think it's fine but it has little structure of its own. You have to keep fluffing it to keep its structure."

To prove a point about their soil quality, Mike takes a break from working on the planter and walks a few hundred yards to a nearby field. It's full of dead corn stalks from the previous year's crop. Soybeans will be planted here this year using a no-till drill.

Mike kicks at the residue and estimates that about 80 percent or more of the soil surface is covered. As he squats and examines the ground, he talks about how tolerating such a thick cover requires special equipment and a flexible management style that can be maddening in its complexity. Fewer field passes may mean fewer hours on the tractor, but it isn't all gravy: a lot of that saved time is used to monitor field conditions and figure out creative ways to deal with problems intensive tillage would normally handle. But then Mike sweeps aside some residue, revealing the reason such extra care is critical: a patch of Webster soil that reflects about as much light as the fur of a certain Labrador retriever.

He scoops up a double handful and grins: "Look at that structure."

That kind of self-assurance is important when you are doing a tillage system that differs from the norm. Although conservation tillage is no longer considered a fringe practice, people like the Perkins are still considered odd agroeconomic ducks in farm country. Peer pressure can sometimes be daunting.

"It takes an understanding landlord, because the fields look different," says

Jerry. Having understanding landlords is important to the family—about a quarter of the 800 acres they farm is rented. "You can't go to the coffee shop and brag with the same data in terms of the looks of the crop, or how high the yields might be. You tend not to talk very much about soil and water quality. That would take a real attitude change."

Despite their "odd duck" reputation, in a sense the Perkins are very conventional



Mike, Terry and Jerry Perkins on their Worthington, Minn., farm. "...we've seen places with a lot of erosion—to the point where you wonder how they will ever recover," says Terry. (LSP photo)

in terms of their actual farming enterprise mix. They have a basic corn-soybean rotation, with spring wheat thrown in once in awhile. All of the Perkins express frustration at the lack of more variety in their rotation. They've found a good market for wheat straw in the form of landscapers looking for mulch, but in general the local marketing infrastructure—as well as the government commodity payment system—is greatly biased toward corn and soybeans.

Mike, 32, in particular would like to go beyond just rotating one field of soybeans with one field of corn every year. The family has some land set aside in permanent grass under state and federal programs. Mike talks excitedly about the stand of native prairie he is stewarding. He's looked into making money off such natural lands through lease hunting.

"That's what I'm really striving for: overall land management as opposed to you have a big field of corn and big field of soybeans and you just flip-flop them back and forth," says Mike as he heads back to work on the planter.

Jerry says that before soil conserving

cropping practices become widely adopted, society may need to recognize the public benefits such systems can produce—such as cleaner water and a reduction in greenhouse gases—and pay for them. Most farmers today feel too vulnerable to the vagaries of weather and markets to try out a new tillage system.

No erosion of goal

It's clear the Perkins family has made the technical and intellectual transition into minimum tillage. But they don't allow an attachment to certain tillage tools get in the way of reaching their goals. Even though they are known for their use of minimum tillage, Jerry, Terry and Mike don't see their present system, or even variations of it, as the end-all.

"We're not dogmatic that it will always have to be some form of no-till," says Jerry.

They may not be dogmatic about their tools, but the Perkins are pretty much set on their goal: soil conservation. Before they started farming, Jerry and Terry were Peace Corps volunteers in Chile. Since then, they've made many trips to Central and South America, where they serve as

mentors to farmers adopting conservation tillage. It's been an opportunity to learn about farming under different conditions. It's also been an eye-opener to just how bad erosion can get, particularly in tropical areas where organic matter can drop by half in less than five years as a result of intense cropping.

Such lessons from other places are good to keep in mind on the seemingly limitless soils of southwest Minnesota. Terry says even if farmers are not seeing an immediate down side to intensive tillage, looks can be deceiving. As she glances at the fields that stretch past their machine shed, she notes that the soil's resilience can lull one into a false sense that there will always be enough of the black stuff to raise a good crop.

"Having lived in other countries and other states, we've seen places with a lot of erosion—to the point where you wonder how they will ever recover," says Terry. She acknowledges that they may never see such extreme cases in their lifetime, but decisions made now will have impacts generations down the road. "That's the farmer in me I guess." □

Does less tillage always equal more chemicals?

It's no secret that conservation tillage has spawned a bit of a mini-boom for the herbicide industry.

Farmers who don't use mechanical tillage methods to kill weeds need an option, and chemicals offer it.

In fact, USDA figures show that no-till acres consistently use more herbicides than their conventionally tilled counterparts. The Conservation Technology Information Center, a public-private partnership which is seen as a leader in providing conservation tillage information, has agrochemical company heavy hitters like Monsanto and Dow AgroSciences represented on its board of directors and executive committee. When soybeans that were genetically engineered to withstand applications of the herbicide glyphosate hit the market in the mid-1990s, no-till farmers were some of the first to buy them. As a result, by 1999, the volume of glyphosate used in the U.S. almost doubled. In 2000, Monsanto launched a program where farmers can receive up to \$10,000 each if they find Monsanto's Roundup Ready soybeans—planted in a minimum-till system—don't produce more profit than their conventional counterparts.

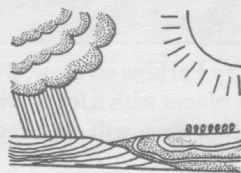
The close bonds between conservation tillage and toxic chemicals leaves environmentalists feeling more than a little queasy about this method of farming. Yes, it saves soil. But does that protection produce another environmental hazard in the form of increased chemical pollution? Supporters of conservation tillage often counter that the herbicides today are much more benign than the toxins used even just a few years ago. In addition, in theory minimum-tilled soils should do a better job of holding onto contaminants, rather than passing them into our water.

Ironically, this controversy has created a bit of a backlash against organic or low-chemical agriculture. Critics of sustainable agriculture such as commentator Dennis Avery argue that because it relies more heavily on tillage, organic crop production is automatically more highly erosive. Therefore, he and other defenders of agrochemicals say, organic agriculture is bad for the environment. The issue became even more clouded in September 2000 when the journal *Science* published the results of a study that showed no-till agriculture sequestered more greenhouse gases than organic

cropping systems (the organic system trapped more greenhouse gases than intensive tillage).

But there are a lot of misperceptions out there about the relationship between organic cropping systems and tillage, says George Kuepper, a technical specialist with Appropriate Technology Transfer for Rural Areas (ATTRA), a national sustainable farming information center. Kuepper recently authored *Pursuing Conservation Tillage Systems for Organic Crop Production*, which outlines examples of farmers from throughout the country implementing minimum tillage without the use of chemicals. Farmers raising everything from small grains to corn to vegetables are showing that organic production can be done without intense tillage, says Kuepper.

Sustainable Soil



A Washington State study conducted in the mid-1970s found that the majority of organic Corn Belt farmers were already shunning the moldboard plow in favor of minimum tillage methods. One of the longest running examples of blending minimum tillage and organic production is the Dick and Sharon Thompson farm near Boone, Iowa. They use a conservation tillage system called ridge till to produce row crops organically. Using a combination of light tillage, diverse rotations and cover crops,

farmers like the Thompsons have been able to control weeds effectively.

Kuepper says many farmers like the Thompsons would not fit the strict definition of "no-till," because they do use mechanical cultivation to control weeds. However, research on the farm shows their soil is staying in place and is building up its own organic matter. Much of organic conservation tillage involves a big picture look at a farm and controlling weeds over the long haul through rotations, cover crops and other techniques that build a healthy, pest-resistant soil, says Kuepper.

So how did minimum-till become so closely associated with chemicals?

"That's the nature of the economic systems we've built reduced tillage around," says Kuepper.

The majority of conservation tillage has been built around chemical use because major chemical companies are funding a lot of research in this area, he says. Little funding is available to investigate chemical-free conservation tillage because it doesn't rely on a lucrative input farmers can buy. Individual farms are proving chemical-free conservation tillage can be done, but now it's time to take those results and build upon them in the public research realm. Part of that research may need to involve changing attitudes on the "right way" a field should look. Weeds do affect corn and soybean yields. But is killing every last leafy pest really economically viable, or is it just a matter of appearances?

"There's a lot of pride in weed-free fields. It's very visually appealing," said soil scientist Gyles Randall after a recent car trip through the heart of corn and soybean country—a car trip where the lack of weeds in crop fields was noticeable. "The renter knows it, the landlord knows it and the city cousin knows it." □

Want to know more?

• The Conservation Technology Information Center has several fact sheets, publications and videos related to conservation tillage. It also is an excellent source of the latest statistics related to how much land is being farmed using conservation tillage. Call 765-494-9555, or log onto <http://www.ctic.purdue.edu>.

• To obtain a copy of *Pursuing Conservation Tillage Systems for Organic Crop Production*, contact Appropriate Technology Transfer for Rural Areas by calling 1-800-346-9140, or logging onto www.attra.org.

• Annual updates of research being done on the farm of Dick and Sharon Thompson are available. These reports cover the work the Thompsons are doing in the area of chemical-free conservation tillage, among other things. For a copy of the 2001 *Alternatives in Agriculture Report*, send \$10 to: Thompson On-Farm Research, 2035-190th St., Boone, IA 50036-7423; phone: 515-432-1560.



Free materials for your farm, business

Cut your expenses by receiving buckets, drums, paint, wood, or other materials free of charge. Minnesota farmers and small business owners have saved \$1.8 million by using the Minnesota Materials Exchange to receive items needed for their operation. The reuse of these good quality items also kept more than 2,700 tons of material from being wasted in our state's landfills.

The Materials Exchange program provides connections between businesses that have usable materials and those who can use them. To use the network, just call 612-624-1300 or 800-247-0015 and ask for the Materials Exchange program. For a current list of items that are available, go to www.mnexchange.org, or call to talk about materials you can receive via the exchange.

The Minnesota Materials Exchange is a free service operated by the Minnesota Technical Assistance Program (MnTAP), located at the University of Minnesota. MnTAP, funded through a grant from the Minnesota Office of Environmental Assistance, is a nonregulatory program that helps businesses reduce waste. □

Sustainable ag grad program at ISU

Iowa State University is now offering a graduate program in sustainable agriculture. Among other subject areas, the program's core curriculum includes agroecosystems analysis, integrated crop and livestock production systems, ecologically based pest management strategies, and society and technology in sustainable food systems.

For more information, call 515-294-6061, or log onto <http://www.sust.ag.iastate.edu/gpsa>. □

Fall grazing

Farmers in the Upper Midwest who want to extend their grazing season well into the fall may want to check out a bulletin from the North Dakota Extension Service. *Farm and Family Economics: Extending the Grazing Season in North Dakota by Grazing the Beef Herd on Oats Chaff and Field Corn* describes a project where brood cows were rotationally grazed during the fall. The study found that each cow (their average weight was 1,250 pounds and they had nursing calves), could be raised in such a sys-

tem at a cost of 47.7 cents per day. That's competitive with hay or other harvested feeds.

For a copy of Extension Report 53, contact the North Dakota Extension Service by calling 701-231-7882, or e-mailing dctr@ndsuxt.nodak.edu. The report can also be downloaded from <http://www.ext.nodak.edu/extpubs/agecon/farmmg/er53w.htm>. □

Dirt cheap conservation

A new 12-page brochure describes low-cost farmland conservation practices that are made even more affordable through government incentives and cost-share payment programs. *Low-Cost Conservation Practices*, by University of Minnesota Extension Service water quality coordinator Les Everett, covers manure management, field practices and pasture management. There's also a section on water, wind, trees and wildlife.

Free copies are available at the Land Stewardship Project's southeast Minnesota office in Lewiston (507-523-3366). You can also get one by calling 612-624-9282 or logging onto www.extension.umn.edu/water (click on "EQIP Education"). □

Grazing for the birds

Industrialized farming methods have not been kind to meadowlarks, bobolinks, sandpipers and other bird species that rely on grass habitat for survival. *Grassland Birds: Fostering Habitats Using Rotational Grazing* is a colorful 12-page booklet that provides guidelines on how to set up grazing systems so that such species can not only survive, but thrive.

Copies of the book are available from Wisconsin county extension offices. They can also be ordered directly from University of Wisconsin Cooperative Extension Publishing. The cost is \$6.00 (that covers shipping & handling; Wis. residents need to add state sales tax). For more information, call toll-free 877-947-7827. When ordering, ask for publication A3715. □

Rural development program guide

A 160-page guide to federal programs that offer assistance in agriculture, forestry, conservation and rural community devel-

opment is now available from Appropriate Technology Transfer for Rural Areas. *Building Better Rural Places: Federal Programs for Sustainable Agriculture, Forestry, Conservation and Community Development* provides descriptions and contact information for 80 federal programs that offer support to farmers and others seeking technical assistance, information or financial resources.

For a free copy, call 800-346-9140. The guide can also be downloaded from <http://www.attra.org/guide/index.htm>. □

Direct marketing

Want to learn about some innovative direct marketing strategies for farmers and ranchers? A free PowerPoint presentation on such strategies is available from the USDA's Sustainable Agriculture Network. *The Reap New Profits: Marketing Strategies for Farmers and Ranchers* CD-ROM is designed for agricultural educators, extension staff and others who want to offer new marketing options to producers.

For a copy, contact Abiola Adeyemi at 301-504-6422 or aadeyemi@nal.usda.gov. The presentation can be previewed by logging onto <http://www.sare.org/market99/slideshow/>. □

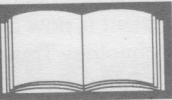
Grazing guide

Grazing Systems Planning Guide is a new 45-page publication that takes farmers step-by-step through setting up an efficient and profitable pasture system. The publication includes chapters on, among other topics, livestock, forages, water sources, fences, paddock design and layout, pasture soil fertility management and record keeping.

A free copy is available at <http://www.extension.umn.edu/distribution/livestocksystems/DI7606.html>. Printed copies are available for \$3.00 from county offices of the University of Minnesota Extension Service. They can also be ordered through the mail by sending \$5.00 (that covers shipping, Minnesota residents add 6.5 percent for sales tax) to: Extension Distribution Center, 405 Coffey Hall, 1420 Eckles Ave., University of Minnesota, St. Paul, MN 55108-6068; phone: 800-876-8636. □

Alternatives list

To download the *List of Alternative Crops & Enterprises for Small Farm Diversification*, log onto http://www.nal.usda.gov/afsic/AFSIC_pubs/altlist.htm. A print version can be obtained by calling 301-504-6559, or e-mailing afsic@nal.usda.gov. □



This Organic Life Confessions of a Suburban Homesteader

By Joan Dye Gussow

2001; 240 pages

\$22.95 cloth cover

Chelsea Green Publishing Company

P.O. Box 428

White River Junction, VT 05001

www.chelseagreen.com

Reviewed by Dana Jackson

A blurb by writer Michael Pollan on the back cover of Joan Gussow's new book caught my eye, and proved to be absolutely accurate:

"Based on a delicious literary recipe, 'one part memoir, one part manual, one part manifesto,' *This Organic Life* gives flesh to ideas about reforming our food supply that deserve not only to be heard, but tried out in the back yard. Yet this book is not only nutritious: Joan Gussow is the best of company on the page, by turns funny, poignant and wise."

This book kept me interested and sympathetic with the author clear through the last chapter. The storyteller confesses that she and her late husband Alan bought a house so defective that it had to be torn down—because they were in love with the gardening potential of its sunny back yard overlooking the Hudson River. They planted a large garden in the back yard, then gutted the 150 year-old building, which had once been an Odd Fellows Lodge. Just before they were to start rebuilding, they learned that the structural posts were rotted out. This was very upsetting, but she admits, "I wasn't as upset as I should have been." They had actually enjoyed tearing out walls, doors and ceilings, and her artist husband had been inspired to paint a series of wonderful pastels called "Gardening in Hudson Light," during the 10 months that they gardened and worked on the building. And there was the larger perspective.

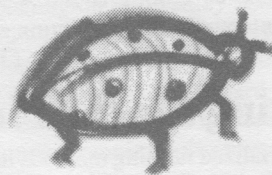
"Vegetable gardens, as this book is intended to say, are much more important than houses in the overall scheme of things. Agriculture is the foundation of civilization. Houses

come and go, but soil must be cherished if food is to be grown for us to eat."

Gussow was head of the nutrition department at Columbia Teachers College in New York for many years. She was unusual among her colleagues because she took responsibility for growing and preserving as much of the food her family consumed as possible, while living in the suburbs. It began as an economic necessity, but became a way of life.

Before deciding to buy the place in Piermont Village along the Hudson, Joan and Alan had lived for 36 years in a very large old Victorian house on a half-acre in Congers, New York, where they raised two sons. There they had learned to garden over an extended season, preserve food, and to cook what they grew. Their commitment even led them to take down a majestic oak tree to bring sunlight to the garden. But in 1992, they decided that a smaller house within walking distance of a library and community activities would be a better place to live out their lives in retirement. In looking for a house, their first requirement was that it have a sunny area for a garden. Alan found the property along the Hudson River in Piermont, and they both fell in love with it.

The book is a story of the house



fiasco, the new garden's triumphs and failures, and the transformation of a junkyard into a community garden, all interspersed with humorous anecdotes and journal entries. But it is also about how to eat local food year-round. Recipes are included too!

Joan and Alan were intent on using what they grew, and they seldom purchased food out of season or shipped in from out of their region. Since this limited their menus, they developed and adapted many different recipes for easily stored carrots and potatoes, such as Baked Grated Carrots, Carrots with Oregano, Mexican Potatoes, Potato Frittata and John's Potato and Kale Soup. Joan didn't like kale, though she was impressed by its nutrition and ease of growing, but she learned to like it (I've heard this from Community Supported Agriculture shareholders too). They

experimented constantly to increase the variety of what they grew, even trying papaws to replace tropical fruits grown on other continents.

The Gussows learned organic gardening by doing it. After Alan's stint as a visiting professor at the University of California at Santa Cruz, they adopted the Alan Chadwick raised bed method, although double digging nine raised beds in soil underlain with red clay and rocks at the Congers house gave them second thoughts. Fellow gardeners will enjoy reading about how they laid out the beds and paths in Piermont and battled floods and varmints, such as raccoons, woodchucks and rats, which were a particular problem along the river. In her Nutritional Ecology class, "near chaos broke out" when Joan, using her own garden as an example of the costs of pest management, revealed that when they captured rats in the garden, they drowned them in the river. This led to a subsequent class about the relationship of food to death.

Joan Gussow served on the Food Advisory Committee of the Food and Drug Administration during hearings about the genetically engineered FlavrSavr tomato. Although a relentless critic of the kind of food produced by industrial agriculture, her concerns were not about the nutrition or safety of the tomato, but the whole process of patenting seeds. She tells in "Lessons from the Tomato" that as a protest, she grew FlavrSavr tomatoes from seed and called the local newspaper to take a picture of her illegal, ripe FlavrSavrs. But she didn't eat the tomatoes.

In the last chapter, "California and the Rest of Us," Joan writes about the nation's vulnerability in depending upon California to put food on the table, rather than producing it locally. California's continued productivity is threatened by soil erosion, salinization of irrigated land, invasion of exotic pests, and worst of all, competition with urban communities for farmland and water. Also, the system is dependent on cheap gasoline, which will not always be with us. She asks, "Can the rest of us learn to feed ourselves again?"

Increasing demand for safe, fresh, local food offers signs that the system can be relocalized. She also believes that "as record-breaking weather" reminds us of our dependence upon Nature, "eating from closer to home will come to seem increasingly attractive." □

Dana Jackson is LSP's Associate Director.



Membership Update



Membership contest concludes

At the end of June, the Land Stewardship Project's membership contest came to an end. We want to especially thank the following people who recruited one or more new members:

Kathy Draeger
Roseann Giguere
Dale Hennen
Thomas & Jilleen Johnson
Nolan Jungclaus
James Koplun
Ron Kroese
John Steiner-Manning
Dorothy Olinger
Vic Ormsby
Ken Peterson
JoAnne Rohricht
Andrea Schmidt
Dave Schmidt
Sister Kathleen Storms
Sister Mary Tacheny
Ruth Viste
Paula Wellnitz
Jean Meister-Westermann
Mark Wilson

The participation of the above people in promoting the work of LSP is greatly appreciated and makes us a stronger organization.

A heartfelt "thank you" also goes to the following people and groups who donated prizes for the contest:

- PastureLand Coop—Dan French
- Velasquez Family Coffee—Guillermo Velasquez
- Lucia's restaurant—Lucia Watson
- Whole Farm Coop
- Moonstone Bed and Bagel Farmstay—Audrey Arner and Richard Handeen
- Java River coffee—Patrick and Mary Moore
- Winona Food Coop
- Blue Heron Coffee House
- Dancing Winds Farm Bed and Breakfast—Mary Doerr ☐

Give to LSP through the Minnesota Environmental Fund

The Land Stewardship Project is a proud member of the Minnesota Environmental Fund (MEF.) MEF is a coalition of 18 environmental organizations in Minnesota that offer workplace giving as an option in making our communities better places to live. Together MEF's organizations work toward:

- promoting the sustainability of our rural communities and family farms;
- protecting Minnesotans from health hazards;
- educating citizens and our youth on conservation efforts;
- preserving wilderness areas, parks, wetlands and wildlife habitat.

Campaigns are generally held in the fall and it will soon be time to make your choice in workplace giving. 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 Katie at LSP's Twin Cities office by calling 651-653-0618 or e-mailing kperson@landstewardshipproject.org.



...Calendar, from page 20

- OCT. 19-21 — **Women Sustaining Environment Sustaining Women: Discussions & Dialogues on Women & the Environment**, University of St. Thomas, St. Paul, Minn.; Contact: 651-962-5723; www.stthomas.edu/wec
- OCT. 20 — **Sustainable Farming Association of Central MN Fall Conference, with the theme "Greenhouse Warming: The Challenges to Farm Life,"** Staples, Minn.; Contact: Lynda Converse, 320-594-2456; converse@rea-alp.com; www.sustainablefarmingcentralmn.com
- OCT. 27— **2001-2002 Southeast Min-**

nesota Farm Beginnings classes begin;
Contact: LSP, 507-523-3366

→ NOV. 8-10 — **Working Landscapes in the Midwest: Creating Sustainable Futures for Agriculture, Forestry & Communities**, Delavan, Wis.; Contact: 612-870-3436; www.iatp.org/enviroag/

→ NOV. 10— **Flour Corn Workshop, Browerville (Minn.) Community Center;**
Contact: Lynda Converse, 320-594-2456

→ JAN. 31-FEB. 2— **4th Annual Value Added Conference**, Eau Claire, Wis.; Contact: 715-834-9672; www.uwex.edu/ces/agmarkets/valadconf.html

STEWARDSHIP CALENDAR

→ **SEPT. 8** — Southeast Minnesota Land Stewardship Project potluck picnic & annual meeting, 12:30 p.m., Farmer's Park, Lewiston, Minn.; Contact: 507-523-3366

→ **Northeast Minnesota Harvest Fest**, Leif Erikson Park, Duluth; Contact: 218-727-1414; sfa@skypoint.com; www.harvestfest.tsx.org

→ **Field Day on Dairy Manure & Corn, GMO vs. Conventional Soybean Yields, Using Hogs to Make Compost**, Agriculture Stewardship Center, Dordt College, Sioux Center, Iowa; Contact: 712-722-6220; rdehaan@dordt.edu

→ **SEPT. 12** — Pasture, Cropping & Livestock Field Day, Thompson Farm, Boone, Iowa; Contact: 515-432-1560

→ **SEPT. 12-14** — Eco-Labels—Where Do We Go From Here?, St. Louis, Mo.; Contact: 919-542-6067; Laural@mindspring.com

→ **SEPT. 13** — Field Day on Increasing Quality & Quantity of Pasture Forage with Management Intensive Grazing as an Alternative to Grazing of Wooded Land, Michael Harmon Farm, Shevlin, Minn.; Contact: 218-657-2592

→ **SEPT. 14-17** — Conference on Developing a Successful Wildlife Watching Program for Communities, St. Paul, Minn.; Contact: 800-657-3637; http://www.wildlife2001.com/about.htm

→ **SEPT. 15** — Field Day on Evaluating Best Uses of Human Resources & Inputs in a CSA Farm, One Step at a Time Gardens, Kanawha, Iowa; Contact: 515-495-6367; libland@frontiernet.net

→ **Windy River Renewable Energy &**

Agriculture Fair, Long Prairie, Minn.; Contact: Tim King, 320-732-6203

→ **Workshop on Solar Kiln Wood Drying**, Backus, Minn.; Contact: 218-894-5196

→ **Field Day on Horse Pasture Improvement Through Grazing Management & Red Clover**, Wright County, Minn.; Contact: Maribel Fernandez, 800-362-3667

→ **Field Day on Soil Ecology & Managed Soil Surfaces in a Continuous-Mulch Garden**, Seim & Bacon Farm, Ramsey, Minn.; Contact: 763-753-5099

→ **SEPT. 19** — Field Day on Adding Value by Processing Excess Fruit & Vegetable Production, Adelman Farm, Farmington, Minn.; Contact: 651-463-3543

→ **SEPT. 20** — Minnesota Sustainable Communities Network Conference, featuring Hunter Lovins, author of *Natural Capitalism*, Minneapolis; Contact: 651-296-3417 or 800-657-3843

→ **SEPT. 21** — Field Day on Nitrogen Budgeting for Manured Corn, Beef for Specialty Markets, CLA Study, Organic Corn & Soybeans, Jeff Klinge & Deb Tidwell Farm, Farmersburg, Iowa; Contact: 319-536-2314; jefkling@netins.net

→ **Field Day on Harvesting Corn with Cattle, Nitrogen Budgeting with Manure, Organic Cattle & Hogs, Open-Pollinated Corn**, Specht Farm, McGregor, Iowa; Contact: 319-873-3873

→ **Field Day on Composting, Antibiotic-Free Hogs for Premium Markets, Sheep & Chickens in a Rotational Grazing System**, Wilson Farm, Paullina, Iowa; Contact: 712-448-2708; c.c.wilson@juno.com

→ **SEPT. 29** — LSP's Twin Cities Local

Foods Banquet, prepared by chef Brad Beal, Lutheran Church of the Redeemer, St. Paul, Minn. (see page 5); Contact: Cathy Eberhart, LSP, 651-653-0618

→ **OCT. 8** — Southeast Minnesota Farm Beginnings applications due; Contact: Karen Stettler, 507-523-3366;

stettler@landstewardshipproject.org
→ **OCT. 15** — Western Minnesota Farm Beginnings applications due; Contact: Amy Bacigalupo, 320-269-2105;

→ **OCT. 16** — Bringing in the Sheaves: A Symposium on Hunger, Farming & the Fairness of the American Food System, Oklahoma City, Okla.; Contact: 918-647-9123; www.kerrcenter.com

→ **OCT. 19** — Slide show & Discussion on Rainforests, Farming & Fair Trade, 7:30 p.m., 910 Montreal Circle, Summit Brewing, St. Paul, Minn.; Contact: 612-870-0453; bruce@sustainableharvest.org
→ **OCT. 19-20** — Eating It: A Scientific Fiction Tale about Genetically Modified Foods & Corporate Greed, featuring the Tony Award-Winning San Francisco Mime Troupe (they sing, dance & tell the truth—this is a talking troupe), In the Heart of the Beast Theater, Minneapolis, Minn.; Contact: 612-721-2535

Calendar, see page 19...

Event information

Check the *Newsroom* (click on *Press Releases*) or *Calendar* at www.landstewardshipproject.org for the latest on upcoming events.



Land Stewardship Project
2200 4th Street
White Bear Lake, MN 55110

Address Service Requested



Printed on 50% recycled - 20%
post consumer waste paper

Nonprofit Organization
U.S. Postage
PAID
Rochester, MN
Permit No. 289