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The Land Stewardship Letter
Keeping the Land & People Together
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Who Benefits from these Divisions?  
Here’s Why LSP Sees a Connection Between Soil Stewardship & Social Justice

By Doug Nopar

One outgrowth of the 2016 campaign for the Presidency of the United States was that there is now a lot of talk about people being divided in this country: rural vs. urban, white vs. black, immigrants vs. native-born. For the benefit of all farming communities, must we be divided? Or can we unite across all these supposed boundaries? That’s a key question the Land Stewardship Project is grappling with these days.

This winter, we set aside a bit more time at meetings in rural southeastern Minnesota to explain why LSP takes the positions (occasionally controversial) we take and why we work the way we do, particularly in the arena of fighting excessive corporate power and working for racial justice.

As an organization, we’re not going along with all the divisions that supposedly are inevitable in rural America. Instead, we see tremendous concern among a wide spectrum of people of all backgrounds about the kinds of things that LSP cares about, like:

➔ The amount of excessive corporate power and control there is in the country, and that everyone but farmers makes money off agriculture. (Cargill scored record profits in 2016 at the same time that grain, dairy and cattle prices were in the dumps.)

➔ The lack of affordable healthcare and health insurance for farm and working class families, and the fact that young people want to come home to farm but can’t leave behind the health insurance that comes with their urban jobs.

➔ Misguided federal policy, which for so long has not been good for the soil and water, the majority of farmers or farmworkers, nor small town life.

➔ Longtime Minnesota farmers growing tired of Farm Bill benefits going disproportionately to the largest farms, and distorting planting decisions away from what’s good for the land.

➔ Immigrant farmworkers, most of whom are farm and rural people displaced from their own farms and villages in Mexico by U.S. farm and trade policy.

➔ Refugees from rural southeast Asia highly skilled at raising produce having trouble finding land to farm.

➔ Native Americans taking back control of their own food supply, something they call “food sovereignty.”

➔ Descendants of black slaves and African immigrants starting urban farms for their communities.

In truth, as farm and rural people, we can’t develop the reforms we want on our own. And to fundamentally change the system, we’re going to need the grassroots participation of all kinds of people, regardless of race, or what country we were born in. Everyone in, no one left out. It could take us a long time to get there, but we’re going to keep working for it, and not allow ourselves to be artificially divided from one another by powerful interests and giant corporations that would prefer we were fighting with each other, rather than challenging them as a united front.

Organizer Doug Nopar works in LSP’s Lewiston office in southeastern Minnesota. He can be contacted at 507-523-336 or dnopar@landstewardshipproject.org.
Cover as a Keystone Species

LSP Participates in an International Soil Carbon Conference

EDITOR’S NOTE: In early May, the Land Stewardship Project’s George Boody traveled to France and participated in “Sequestering Carbon in Soil: Addressing the Climate Threat,” an international conference (www.breakthroughstrategiesandsolutions.com) involving farmers, scientists, government officials and nonprofit organizations interested in the role building healthy soil can play in sequestering greenhouse gases and heading off catastrophic changes to the world’s climate. Boody recently stepped down as LSP’s executive director after serving 23 years in that role. He is currently LSP’s lead staffer working on science and special projects. Among other initiatives, Boody works with the Chippewa 10% Project in west-central Minnesota and the Bridge to Soil Health Initiative in southeastern Minnesota. After he returned from France, Boody sat down with the Land Stewardship Letter to talk about what he learned at the conference and LSP’s role in promoting farming systems that build healthy soil and sequester greenhouse gases.

LSL: Why was this conference convened?
Boody: There is a growing understanding that soil is part of how we can respond to our climate change problem. Soils can, if they’re functioning well, actually pull carbon dioxide out of the air and store it. So soils are one part of the solution to trying to slow the rapidly increasing global temperatures that are a function of climate change. It presents an opportunity for farmers because it directly relates to improving soil health.

LSL: Did the conference make it clear how dire the climate change situation is?
Boody: Yes, there were people there from the global South, and for them, this is not theoretical, this is very real. Another half-degree Celsius increase in global temperature and the Marshall Islands may be uninhabitable because of flooding. In the lower 48 states, Norfolk, Virginia, is suffering from flooding from just minor rainfall events because sea levels are starting to rise. And the insurance industry is clear that if we hit a 2-degree Celsius increase in global average temperatures, certain areas of business will become systematically uninsurable.

That’s not just about their business model, it’s about how do we pay for the destruction that’s going to come from extreme weather events? In Minnesota, we see effects from intense storms, and pests moving north. Time is of the essence.

LSL: What role can agriculture play in helping head off the impacts of this crisis?
Boody: This conference reinforced for me that the Land Stewardship Project is on the right track when it comes to advancing farming systems that get more cover on the land. We need to assist farmers and landowners to restore more cover in our cropping systems and maintain cover where it already exists. So if we’ve got grasslands and forests, it is counterproductive in terms of storing carbon to put them into a cropping system.

In ecology, there’s this notion that when you remove a keystone species the ecosystem it is part of breaks down. What’s the keystone species in agriculture? I think that’s interesting to think about.

It’s not one thing, it’s not that simple. But I think the keystone species could be living cover on the soil and living roots in the soil. Everything it takes to get continuous living cover on the soil becomes important. You remove cover, it’s like removing the keystone species.

And so that means protecting diversity where it exists, and that means we need to support the farmers and the small landholders around the world that are taking care of this land. They have to be able to make a living growing a diversity of crops and managing living cover to build soil health. And that also means getting animals back grazing on the land to help give economic value to continuous living cover such as grass.

For all of this to work, it’s about relationships of different organisms to each other. These break down when there are big tracts of monocultures owned by large landowners. And I think that’s what it’s about with the human community too. If farmers are going to make a living on the land with more continuous living cover, they need more markets for diverse products, federal farm policies that are supportive and research on new crops and carbon friendly systems. Then the soil organisms can make their living and pull carbon out of the atmosphere and store it.

The conference made it clear that groups like LSP are on the right track when it comes to supporting more small- and moderate-sized farming operations on the land. Across the globe, it’s these diverse agricultural operations that show the most potential for helping us build our soil health.

LSL: Was there anything you learned at the conference that surprised you?
Boody: I don’t know if I was surprised by this but I was reminded that one very effective way to sequester carbon is through silvopasturing, which combines grass-based livestock production and trees. In a Midwestern tallgrass prairie area trees aren’t maybe as desirable, so to speak. But on a savanna, which involves a mix of trees and prairie, it can be a great way to sequester carbon both in the long term and short term. It’s a good reminder that agroforestry, or silvopasturing, could increase the land’s productivity while increasing soil health and potentially carbon storage.

LSL: You mentioned that the conference made it clear that this is a dire situation we face. Is there reason for hope?
Boody: I walked away from the conference feeling hopeful. Here’s the thing: whether people choose to believe in climate change or not, and whether there are policies, say at the U.S. government level, that help us move towards reducing emissions or not, farmers practicing agroecology and businesses around the world are already moving to deal with this problem, because it’s good business. When farmers try something like cover crops or managed rotational grazing and it works, they tend to stick with it, and those practices build soil health, which in turn sequesters organic carbon.

One of the clear messages from this conference is that in terms of science, we don’t need perfection. We’ve got enough information to move forward with solutions now.

Give it a Listen

On episode 191 of the Land Stewardship Project’s Ear to the Ground podcast, George Boody talks about climate change and the role agriculture can play in sequestering carbon: http://landstewardshipproject.org/posts/podcast.


 Myth Buster Box
 An Ongoing Series on Ag Myths & Ways of Deflating Them

 ➔ Myth: We Don’t Need Publicly Supported Ag Research

 ➔ Fact: The list of benefits society has derived from publicly-funded agricultural research is impressive. Localized seed varieties, harder fruit and vegetable cultivars, soil-friendly tillage methods, animal breeds that use feed more efficiently—these are just a sampling of the public “goods” taxpayer-funded science has produced over the past several decades. The bulk of that research was done by the USDA and our land grant universities. State and federally funded test plots can take on the economic risk of figuring out what works and what doesn’t—something individual farmers usually cannot afford to do.

 Granted, this research has not always resulted in a positive payback for farm communities and society in general. For example, public research that promotes monocultural row crop systems to the exclusion of all else has resulted in major environmental, economic and even social downsides. But overall, publicly-funded research provides the opportunity for farmers and members of the general public to have a say in what questions/problems are investigated, and that’s a good thing.

 It turns out that public doorway into scientific inquiry is closing fast. According to a 2016 report by the USDA’s Economic Research Service, between 1970 and 2008, around half of total U.S. food and agricultural research and development was conducted by public institutions. By 2013, that share was only 30 percent. Public scientific research is simply shriveling away as lawmakers in Washington, D.C., and at various state capitols slash funding at unprecedented rates. A lot of innovative research initiatives have been killed, despite producing extremely valuable public benefits. Perhaps the most egregious recent example of that was when the Iowa Legislature voted this spring to eliminate the Leopold Center, but it still has no state funding, meaning for now this national treasure basically exists in name only.

 The result of the public’s withdrawal from agricultural science is that the private sector—specifically, large agribusiness firms such as Monsanto and Syngenta—have willingly stepped in to fill the gap. Consolidation in the industry, coupled with changes in patenting and intellectual property rights laws related to seeds and other “biological” products, has made private funding of agricultural research more viable than ever. Such research is not just done in company laboratories; the Microbial and Plant Genomics Institute housed in the Cargill Building on the University of Minnesota’s Saint Paul campus is a prime example of how private industry can use its money to buy access, not to mention “scientific credibility,” at a public institution.

 When eliminating funding for public agricultural research on the state or federal level, policymakers invariably point out that the private industry’s growing interest in this sector of science will more than make up for the shortfall. Whether the test plot is public or private, science is science, right? Not exactly. Corporations have little economic incentive to fund research that will not produce a commercially viable product, pure and simple. It’s hard to patent and sell a diverse farming system that keeps more continuous living cover on the land year-round. That doesn’t mean such a system doesn’t have value in terms of healthier soil and cleaner water, it’s just hard to quantify on a quarterly profit-and-loss report.

 Part of the problem with allowing the private sector to swallow up research is that these firms are vulnerable to being swallowed up themselves, further consolidating our agricultural knowledge base. Nowhere is that more evident than in the seed sector, which has been revolutionized by the development of genetically modified products, which can be patented, sold and controlled by whoever is footing the bill of this pricey research. Over the past two decades, we’ve lost over a third of our public plant breeding programs, according to Rural Advancement Foundation International. Three private firms now control more than half of the global seed market, up from 22 percent in 1996. And the industry is about to get more concentrated: ChemChina is buying Syngenta, Dow Chemical is taking over DuPont, and Bayer is gobbling up Monsanto.

 All of this will mean more of the same in the seed business: companies focusing almost exclusively on researching and developing major commodity crops like corn and soybeans, while ignoring research into plants—forages, fruits and vegetables, for example—that don’t represent as big of a market potential but are so critical to developing a more diverse food and farming system. The few public breeders still in existence are having a tough time gaining access to germplasm for propagation research. Such trading of seeds between institutions has traditionally been the backbone of public seed research.

 If we are to prevent agricultural research from becoming a completely private club, the public will need to step up and make it clear that science centered on developing diverse, innovative farming systems is a worthy investment of tax dollars. That will mean connecting some dots between, for example, a more diverse agriculture and a cleaner environment.

 There’s been progress on that front in recent years. For example, the University of Minnesota’s Forever Green initiative, which is researching how to make cover cropping and “relay” planting systems an agronomic practicality, has shown great potential for providing farmers an economic boost by allowing them to diversify out of the corn-soybean du-culture. The Land Stewardship Project and others have gotten the message across to urban and suburban legislators that such research will help produce a public good that their constituents are increasingly clamoring for: clean water. The result has been some modest state funding for this innovative research. The door into the private club isn’t exactly swinging wide open, but all that knocking is starting to pay off.

 ➔ More Information
2017 LSP Family Farm Breakfast

The Land Stewardship Project’s 12th Annual Family Farm Breakfast and lobby Day at the Capitol was held March 9. Over 200 LSP members and Minnesota state lawmakers gathered at Christ Lutheran Church across from the Capitol in Saint Paul and dined on locally produced food.

After the breakfast, roughly 100 LSP members stayed to lobby their legislators on issues such as strong local control, factory farm regulation, support for beginning farmers, affordable quality healthcare and sustainable agriculture research funding at the University of Minnesota. The citizens visited the offices of lawmakers in small groups and told personal stories as they related to various issues.

See pages 9-11 for a summary of how the legislative issues the Land Stewardship Project was focusing on fared during the 2017 session of the Minnesota Legislature. For updated reports on the legislative session, see www.landstewardshipproject.org, or check future issues of LSP’s LIVE-WIRE e-letter.

The breakfast featured food sourced from Land Stewardship Project-member farms and other businesses. (LSP Photo)

While dining on local food, over 200 citizens and lawmakers discussed legislative issues related to healthcare, local control, beginning farmer support and sustainable agriculture research funding. (LSP Photo)

LSP organizer Jonathan Maurer-Jones led a discussion on healthcare legislation during the lobby training that took place after the breakfast. (LSP Photo)

Dairy farmer and LSP Farm Beginnings graduate Nolan Lenzen talked about a bill that would provide tax breaks to landowners who sell or rent land to beginning farmers. (LSP Photo)
Who Provided the Food?

The food for the 12th Annual Family Farm Breakfast at the Capitol was sourced from these Land Stewardship Project members:

**Eggs**
- Earthrise Farm
- Kalliroe Farm
- TC Farm
- Shepherd Moon Farm
- Prairie Pride Farm

**Bacon**
- Niman Ranch
- Pastures A Plenty

**Pancetta**
- Red Table Meat Co.

**Sausage**
- Hidden Stream Farm
- Pastures A Plenty
- Farm on Wheels

**Potatoes**
- Shepherd Moon Farm
- Common Harvest Farm

**Onions**
- Shepherd Moon Farm

**Garlic**
- Seven Songs Organic Farm

**Milk/Cream**
- Organic Valley Cooperative

**Kernza Flour & Pastries**
- Birchwood Cafe
- Baker’s Field Flour & Bread

**Oatmeal**
- Whole Grain Milling

**Cider**
- Pine Tree Apple Orchard

**Honey**
- Honey & Herbs

**Coffee**
- Velasquez Family Coffee

The chef for the 2017 Family Farm Breakfast was Marshall Paulsen of Birchwood Cafe. (LSP Photo)

Thanks to the Breakfast Volunteers & Advertisers

The Land Stewardship Project would like to thank the volunteers who helped make the 12th Annual Family Farm Breakfast and Lobby Day at the Capitol a success. LSP would also like to thank the businesses and organizations that chose to support LSP’s work by placing an advertisement in the event program:

- A Couple of Gurus
- Mother Earth Gardens
- Falk’s Seed Farm
- Seward Co-op Grocery & Deli
- People’s Food Co-op
- Lorentz Meats & Deli
- Prairie Moon Nursery
- Minnesota Farmers Union
- Clancy’s Meat & Fish
- Albert Lea Seed House
- CSP & Associates
- May Day Cafe
- Cook County Whole Foods Co-op
- Clean Up the River Environment
- Voices for Racial Justice
- Mississippi Market Natural Foods Co-op
- Birchwood Cafe
- Seven Corners Printing
- Triangle Park Creative
- National Farmers
- Take Action Minnesota
- Burt’s Meats
- Bryant Lake Bowl/Red Stag/Barbette
- Pesticide Action Network North America
- St. Peter Food Co-op
- The Book House in Dinky Town
- Farmers’ Legal Action Group, Inc.
- Niman Ranch
- Ledebur Meat Processing, Inc.
- Trotter’s Cafe & Bakery
- Foresight Bank
- Minnesota Nurses Association
- Organic Valley Cooperative
- Mighty Axe Hops
- Baker’s Field Flour & Bread
- Red Table Meat Co.
- Education Minnesota
- The Databank
- Sustainable Farming Association of Minnesota
- Izaak Walton League
- Eureka Recycling
- Minuteman Press Uptown
- Harmony Food Co-op
- Velasquez Family Coffee
- The Wedge Co-op
- Linden Hills Co-op

Land Stewardship Project in the News

The work of the Land Stewardship Project and our members has received extensive media coverage in recent months. Here’s just a sampling:


For more LSP media coverage, see our LSP in the News page at www.landstewardshipproject.org.
LSP Delegation Headed to Mexico in 2018

The Land Stewardship Project is inviting members to participate in an LSP-Witness for Peace 2018 delegation to Mexico February 4-13. This will be the second LSP-Witness for Peace trip to the region (see the No. 3, 2016, issue of the Land Stewardship Letter for a report on the 2016 trip).

Mexico has been the target of major foreign investment and transnational corporations since the North American Free Trade Agreement (NAFTA) went into effect in 1994, and more recently since constitutional reforms were passed in 2014. This has had a devastating effect on the Mexican countryside. As the LSP delegation witnessed firsthand in March 2016, small farmers’ holdings are targeted for purchase for industrial agriculture use or tourist development, support for small farms is almost non-existent, communal lands are up for sale, and mega-projects have proliferated, polluting the land and off-shoring the profits. Many people have no option but to migrate to the U.S. In addition, many of the human rights violations in Mexico are committed against community members fighting to protect their land and their way of life. U.S. foreign policy plays a big role in this story through free trade policies, militarization, and the lack of insistence on human rights improvements.

LSP members participating in the 2018 delegation to Mexico will investigate firsthand the effects of NAFTA over the past 22 years, particularly on Mexican small farmers and communities. Trip participants will stay in a community with high rates of out-migration and learn about the effects on family, community life and farming. They will also meet with Mexican farmers working on reforestation efforts, protection of native crops and promotion of local markets and food consumption. This is an opportunity to compare the impacts of large-scale farming in Mexico and the U.S. while strengthening a global grassroots movement for sustainability, food sovereignty, migrant rights and land rights.

Details will be determined soon. Watch future issues of the Land Stewardship Letter and our LIVE-WIRE e-letter for updates.

For more information or to register for the delegation, contact LSP’s Nick Olson at nicko@landstewardshipproject.org or 320-269-1057.

LSP Staff Changes

Abby Liesch has left the Land Stewardship Project to join the staff of a Twin Cities gardening and landscaping business. Liesch joined LSP’s Individual Giving and Membership Program in 2007 and was based in the organization’s Twin Cities office. During the past decade, she has worked as a membership assistant and database coordinator. Through these positions, Liesch recruited new members, ran telephone banks, strengthened the renewal process, developed LSP’s social media presence and trained staff on database management, as well as managed events. Liesch was also a key player in developing LSP’s new website in 2012, and served as its assistant administrator.

Leah Auckenthaler recently worked as a telephone fundraiser/membership builder for LSP’s Individual Giving and Membership Program. Auckenthaler is a frequent LSP volunteer and has a degree from Hunter College in cultural anthropology, with an emphasis in forced migration and community organizing. She has worked for Everytown for Gun Safety, the New York City Ballet and the Boulder Philharmonic Orchestra, among other places. Auckenthaler recently testified at the Minnesota Legislature in opposition to a bill weakening air quality standards for the frac sand industry.

Stephanie Porter has concluded her work as an organizer for LSP’s Policy and Organizing Program. Porter joined LSP’s staff in 2014 through a position made possible by the Lutheran Volunteer Corps. During her time with the organization, Porter did organizing work around numerous issues, including the Toxic Taters Campaign, frac sand mining, healthcare and water quality.
Minnesota Legislature

Lawmakers Support Beginning Farmers, Sustainable Ag Research, Local Control & Environmental Review

By Bobby King

The Land Stewardship Project has been working during the entire session of the 2017 Minnesota state Legislature to advance an agenda that puts people and care of the land first. As always, it is our members meeting with and calling their legislators and speaking up for these policies that is the core of our success.

As this Land Stewardship Letter went to press, the Legislature was going into a special session to resolve final budgetary differences between Governor Mark Dayton and legislators. Here, we will provide an update on where the Land Stewardship Project’s legislative priorities stood as of this writing. Look for a final report on the 2017 session at www.landstewardshipproject.org.

Beginning Farmer Tax Credit

Legislation that would provide an income tax credit to Minnesota landowners who rent or sell land to a beginning farmer made it into the tax bill that was sent to Gov. Dayton in mid-May. The tax credit would equal 5 percent of a parcel’s sale price, 10 percent of the cash rental fee and 15 percent of the crop share value. Beginning farmers hoping to participate in the tax break initiative must be involved in a farm management program of some sort, and the bill would give them a $1,500 income tax credit to enroll in such a program.

This tax break for landowners is based on a similar incentive developed in Nebraska and promoted by the Center for Rural Affairs, an LSP ally. Beginning farmers say such an incentive could help them overcome one of the biggest barriers they face: access to land. LSP farmer-members testified in favor of the Minnesota bill and LSP has been instrumental in pushing this legislation for over a decade.

Status: This provision was included in the overall tax bill that was vetoed by Gov. Dayton over other concerns. LSP will work to make sure the beginning farmer incentive is included in the final tax bill.

Forever Green

The Forever Green research initiative at the University of Minnesota is doing cutting-edge science related to helping farmers get more continuous living cover on the land using perennials and cover crops. LSP, working with the Minnesota Environmental Partnership, has gotten legislative funding for the initiative in the past, and it’s paid off. For example, Forever Green’s work with the perennial wheat plant Kernza has gained national attention.

Status: The Legislature provided Forever Green $750,000 each year for the next two years through the Clean Water Fund.

Local Control

Every year corporate interests try to weaken local control by making it more difficult for local governments to stop harmful developments and protect their communities. Keeping local democracy strong has been a LSP priority for decades. House File 330 would have weakened local control for cities by requiring in some cases a two-thirds super majority to enact an interim ordinance. Currently, an interim ordinance can always be enacted by a simple majority—that’s how democratic rights should work. The interim ordinance allows a city to quickly enact a moratorium when unanticipated development is proposed that is of concern to the community. This is an emergency power that allows the community time to study the issue, review its zoning ordinances, and, if needed, adopt new zoning controls.

Status: LSP members and staff fought hard against the legislation by sending letters to the editors of newspapers, testifying in hearings and contacting lawmakers and the Governor directly. On May 15, that work paid off when Gov. Dayton vetoed House File 330. In his veto letter to Speaker of the House Kurt Daudt, the Governor made it clear how he felt about this proposal: “The provision weakens local control and the rights of local community members.”

Environmental Review

Despite citizens’ calls from across the state, the Minnesota Senate sided with corporate interests and passed the Senate Omnibus Environment Finance Bill with a provision that would have doubled the size factory farms can be before environmental review is required.

Doubling the environmental review threshold to 2,000 animal units is about paving the way for more and larger factory farms in Minnesota. As the law now stands, factory farms over 1,000 animal units must undergo environmental review. These are the largest 7 percent of feedlots in our state. The current threshold of 1,000 animal units is so large that only nine factory farms were required to do an environmental review in 2016 (1,000 animal units equals 3,333 hogs, or 714 dairy cows, or 1,000 steers).

LSP-sponsored advertisements ran on 71 radio stations and featured farmer and LSP member Dale Post of Goodhue County speaking about how environmental review was critical to him and his neighbors when confronted with a proposed factory farm. LSP members throughout rural Minnesota expressed their opposition to this proposal through letters-to-the-editor and by contacting lawmakers directly.

Status: Because of LSP’s pressure, lawmakers dropped this provision while the overall Environment Finance Bill was being negotiated in a conference committee.

Frac Sand Facilities Regulation

In 2013, LSP helped push through a law that required the Minnesota Pollution Control Agency (MPCA) to create rules controlling air pollution emitted by frac sand facilities. The Environment Omnibus Finance Bill contained language that removes
Greed: A Pre-Existing Corporate Condition

The War on Affordable, Quality Healthcare Continues

By Paul Sobocinski

One of the Land Stewardship Project’s deepest held beliefs is that people’s lives and health need to take priority over corporate bottom lines. One of the big stories of 2017 is the many threats we are seeing to this important value. In a year when action is desperately needed to improve healthcare affordability and access, actions at both the federal and state levels are more likely to make it worse.

In Washington, D.C., the so-called American Health Care Act recently passed by the U.S. House of Representatives could represent a major step backward on healthcare. If it were to become law, this immoral bill would slash nearly $1 trillion from Medicaid funding and dramatically reduce subsidies that help families afford insurance. It would allow states to eliminate protections for people with pre-existing conditions and bring back lifetime limits that would mean the very sickest could be cut off from health coverage. Together, these changes are projected to knock 24 million Americans off health insurance. Do not believe the claims that this bill will protect patients or lower costs—it will upend the current American healthcare system and hurt millions of people in order to provide giant tax breaks for the very wealthiest people.

While the spectacle at the federal level has drawn the most attention, a smaller version of these dynamics has been playing out in Minnesota. The main healthcare story of the 2017 legislative session is this: the Legislature has chosen to spend almost $900 million to support and prop up a corporate health insurance system that isn’t working, while proposing to cut $500 million from programs that cover families, children and the most vulnerable in Minnesota. As this edition of the Land Stewardship Letter goes to press, it remains to be seen whether Governor Mark Dayton will allow these cuts to go forward. In what has already been a session marked by hand overs of money and control to the corporate insurance system, we Minnesotans need to brace ourselves for a healthcare picture that could look worse, not better.

Below are the major healthcare changes legislators pushed through this session. As you can see, the changes mostly prioritize the desires of insurance companies over the needs of the farmers, small business owners, and many other Minnesotans who need quality, affordable healthcare.

A Premium Reduction, but…

In January, the Legislature passed and Gov. Dayton signed into law a $300 million bill that on the face of it took a positive step towards providing affordable healthcare, at least for this year. Senate File 1 reduces premiums by 25 percent for about 100,000 Minnesotans—those buying individual insurance plans who do not qualify for assistance through MNsure subsidies. This provides needed relief for those hit hardest by the incredible costs being charged by insurance companies for individual plans. However, the bill also allows for-profit health maintenance organizations (HMOs) to operate in the state, a situation that, as was outlined in the No. 1, 2017, Land Stewardship Letter, could lead to more focus on profit over people’s healthcare needs. In addition, the legislation could allow current nonprofit HMOs to convert to being for-profit companies. The $7 billion in assets that are currently held by HMOs, much of which was accumulated through public contracts and which are supposed to be devoted to public purposes, could be converted to private profit. The law does not do enough to protect these public assets.

Corporate Welfare for Insurance Companies

People across Minnesota, especially rural residents and many farmers, have struggled with the high costs and poor quality of individual health insurance plans in the past several years. Health insurance companies have helped create an unstable individual market by raising premiums and deductibles, changing their plan offerings, and abandoning parts of the state to try to squeeze profits out of a smaller slice of the overall insurance market. In step two of the corporate healthcare hand over at the Legislature, the insurance industry successfully made the case that premium assistance for people was not enough—the insurance companies needed a public handout.

As a result, a state-funded “reinsurance” plan became law in April. Reinsurance is a fancy name for protecting insurance companies from losing money. It provides $540 million in public funds to insurance companies to cover the most expensive patients. In theory, such a payout for the riskiest policies

Healthcare, see page 11…
would make it possible for companies to lower premiums for their other customers. However, despite a push by the Land Stewardship Project and others to put in place a requirement that in exchange for reinsurance insurance companies must reduce premiums, no such stipulation of accountability was made part of the bill. This legislation also does nothing to address high deductibles and the narrowing of insurance options for people on the individual insurance market. In effect, this is a $540 million publicly-funded gravy train for health insurance companies.

While the reinsurance bill was being debated, Gov. Dayton proposed allowing people on the individual insurance market to enroll in MinnesotaCare, a public program that has provided high-quality, lower cost health coverage to low-income Minnesotans since 1992. Currently, enrollment in MinnesotaCare is limited to families below 200 percent of the federal poverty level (the equivalent of a family of four earning over $49,300 annually). Dayton’s proposal would have allowed all Minnesotans on the individual market to buy into MinnesotaCare.

This would be a significant boon to farmers and small business owners, who have incomes that vary from year-to-year, and often earn just enough to keep them from qualifying for MinnesotaCare. It would have ensured that a quality plan with wide access to doctors and hospitals was available in all corners of Minnesota, something that is by no means assured by corporate insurance providers. And after a one-time start-up cost of $12 million, the MinnesotaCare buy-in would have been funded entirely by those who pay for the premiums. Despite all the advantages, the MinnesotaCare buy-in option failed by one vote in the Senate, leaving thousands of Minnesotans with the possibility of having no real access to healthcare insurance coverage in 2018.

The End of MinnesotaCare?

Not only did lawmakers refuse to expand MinnesotaCare, they are considering a plan that would stifle the program or could eliminate it altogether. Folded into the House and Senate’s budget proposal is legislation that would shut down MNsure, the state-run health insurance exchange that allows Minnesotans to enroll in public healthcare programs and shop for private insurance. The proposal would force Minnesota to abandon MNsure and use the federal health exchange. One problem: the federal exchange is not compatible with MinnesotaCare. This could be a backdoor way of eliminating this important public program, as there may be no way for the 100,000 Minnesotans eligible for MinnesotaCare to sign up for it. Or the state would need to create a new process for enrolling in Medical Assistance and MinnesotaCare, a needless expense that could create more confusion and frustration for people trying to enroll in the appropriate health insurance plan. Shutting down MNsure will not solve the problems with healthcare, but would create new ones.

Cutting in the Midst of a Surplus

The final act in the healthcare drama at the state level this session is the budget proposed by the Republican-led Legislature. After spending nearly $900 million on premium relief and reinsurance, the House and Senate are pushing a plan that would cut $500 million from the Health and Human Services budget. This money funds hospitals, nursing homes, mental health facilities, and community resources, and these cuts would threaten care for 1.2 million people who are on Medical Assistance and MinnesotaCare—all at a time when the state has a $1.6 billion surplus.

The proposed cuts would fall hardest on families and children. The so called “savings” is accomplished through gimmicks such as removing accommodations for inflation from the Department of Human Service’s budget, in effect pretending healthcare costs will not increase. Another gimmick is an onerous system that would make people enrolled in Medical Assistance verify multiple times a year that they qualify for the program. Cuts of this size will mean the state cannot negotiate contracts that cover the cost of people on Medical Assistance and MinnesotaCare, likely causing insurance companies to flee this market. After spending freely to subsidize insurance companies to try to “stabilize” the private insurance market, legislators are proposing cuts that would actually destabilize the public programs.

As on the federal level, programs that provide coverage and care to people who need it most are on the chopping block. At a time of a budget surplus here in Minnesota, people’s lives are being put in danger to attain dubious cost savings and to subsidize the profits of insurance companies. Why are we undermining people’s healthcare at a time when we have the economic resources? The evidence is clear: to Minnesota lawmakers, preserving the fat profits of corporate healthcare takes precedence over people’s lives.

If we as Minnesotans really want to fix healthcare, we all have to come together and clearly demand and hold elected officials accountable to producing legislation that prioritizes the rights of all Minnesotans to have quality, affordable healthcare.

Minnesota LSP healthcare organizer Paul Sobocinski can be contacted at sobopaul@landstewardshipproject.org or 507-342-2323. LSP healthcare organizer Jonathan Maurer-Jones is at 218-213-4008 or jmaurer-jones@landstewardshipproject.org. For the latest news on how healthcare fared during the 2017 session of the Minnesota Legislature, see www.landstewardshipproject.org or watch for updates in LSP’s LIVE-WIRE e-letter. For details on healthcare options and how to get involved in LSP’s efforts to reform the system, see the Affordable Healthcare for All page on our website.
More than 85 members and supporters of the Land Stewardship Project delivered a clear message April 11 to a key member of the U.S. House Agriculture Committee: the next Farm Bill must help small- and mid-sized farmers while protecting our soil and water. The LSP meeting, which was held in Redwood Falls, Minn., provided an opportunity for Minnesota U.S. Representative Collin Peterson to hear from a variety of farmers about what should go into the 2018 Farm Bill, which is currently being drafted by lawmakers.

“We need a Farm Bill that puts people, communities and the land first,” said Gaylord, Minn., dairy farmer Darrel Mosel.

Mosel spoke to Rep. Peterson about how his two sons are having a hard time getting started in farming because of the current slump in commodity prices. He and other speakers called for policy initiatives that would support beginning farmers and give them easier access to farmland.

Rep. Peterson agreed that the farm economy is facing a dire situation. “If we have an average crop this fall, a ton of people are in trouble,” said the Congressman.

Loretta Jaus, a dairy farmer from Gibbon, Minn., emphasized the need for working lands conservation and promoting sustainable farming practices.

“In years of low prices, instead of more and more of our public dollars going to programs based on bushels-per-acre, why aren’t we connecting the dots between the myriad of social and environmental challenges that could be positively addressed through crop diversification, soil health and conservation practices?,” Jaus asked.

LSP members also talked about the current wastefulness of the federal crop insurance program and how farmers want a risk management system that provides long term stability, rather than big payouts to the largest operations.

“Putting a cap of $50,000 on these crop insurance premium subsidies would mean that currently only corn-soybean farms over 3,000 acres and up to 6,000 acres, depending on the deductible, would see a limit,” said Randy Krmzarick, a corn and soybean farmer from Sleepy Eye, Minn.

Rep. Peterson responded that he would like to see more Farm Bill funding for beginning farmer initiatives and conservation programs like the Conservation Stewardship Program. He said practices such as cover cropping have proven effective, including on his own farm, and he thinks the next Farm Bill should provide more support for such practices.

Peterson committed to working to increase funding for the Beginning Farmer and Rancher Development Program by $50 million and to investigate concerns over how Environmental Quality Incentives Program money is being used to construct large-scale corporate backed animal feedlots. He also agreed to meet with LSP members again in August to continue to address the emerging crisis facing the farm economy and to discuss working for a 2018 Farm Bill that supports family farmers and the land.


See page 14 for details on a Farm Bill meeting LSP held with U.S. Rep. Tim Walz.
Voices from the Land
Farmer Stories Highlight the Need for New Farm Policy

EDITOR’S NOTE: During the Land Stewardship Project’s recent meeting with U.S. Representative Collin Peterson (see page 12), farmer-members shared stories about their own situations and what the next Farm Bill should do to address issues related to getting the next generation of farmers started, supporting family farmers, creating healthy soil and clean water, and restricting concentration in agriculture. Here are excerpts of those stories.

“Everybody knows that farming is risky with weather and all of the other issues. But when you do climb a ladder you do have to have come assurance that the thing is sitting on stable ground, and I feel like I’m at the top of the ladder and at any moment it could slide off the roof. I guess the first instinct is to grab the roof and pull it back straight. And I think that’s what LSP is trying to do here for us. LSP is trying to create a Farm Bill that can stabilize agriculture again and stop the erosion of our rural communities and bring back some sense of stability again. Another concern I have is that as a farmer I’ve had 35 years of experience on the land, during which my sons haven’t really been able to use the lake that’s in our community. That’s just not right. I think LSP’s convinced that the environment doesn’t have to suffer to have a strong agricultural system.”
— Darrel Mosel, dairy and crop farmer, Gaylord, Minn.

“The challenge I see for each of us—farmers, consumers, policymakers—is to commit to doing some serious dot connecting that stretches our thinking and gets us to imagine the possibilities of a Farm Bill that through the serious infusion of public funds delivers to each and every citizen a food and farm policy that is stable, healthy and just. Let’s do it.”
— Loretta Jaus, dairy farmer, Gibbon, Minn.

“So what I see as a beginning farmer in a rural community is that we are good for our communities. We are civically involved in our communities. We volunteer, we donate, we send our kids to schools. We’re involved in churches. We want to improve the arts and culture and vibrancy of our local communities, because we’re citizens. I know there are more young people who want to do what we are doing. And they are ready to buy farms, be involved in the community and grow good food for people. There are other people who are responsible, hardworking, smart, but the hurdles are frankly overwhelming at times.”
— Laura Frerichs, CSA vegetable farmer, Hutchinson, Minn.

“The challenge I see for each of us—farmers, consumers, policymakers—is to commit to doing some serious dot connecting that stretches our thinking and gets us to imagine the possibilities of a Farm Bill that through the serious infusion of public funds delivers to each and every citizen a food and farm policy that is stable, healthy and just. Let’s do it.”
— Loretta Jaus, dairy farmer, Gibbon, Minn.

“What would you like to see in the 2018 Farm Bill? The Land Stewardship Project would like your input. Contact Tom Nuessmeier at 507-995-3541, tomn@landstewardshipproject.org, or Ben Anderson at 612-722-6377, banderson@landstewardshipproject.org.

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Federal Farm Policy

Voicing Support for Conservation, Family Farmers
LSP Members Send the ‘Our Farm Bill’ Message to Rep. Walz

Over 100 family farmers and rural residents gathered in Utica in southeastern Minnesota May 11 to discuss federal agriculture policy reforms during a special Land Stewardship Project meeting with Minnesota U.S. Representative Tim Walz. Participants in the meeting made it clear that the 2018 Farm Bill needs to support family farms, conservation, beginning farmers and rural communities. Walz and other members of the House Agriculture Committee are in the process of drafting the 2018 Farm Bill.

Tom Nuessmeier, a farmer from Le Sueur, Minn., and an LSP staff member, spoke about the financial crisis facing family farms. With the increased corporate consolidation in agriculture, Nuessmeier said, “We need a Farm Bill that puts people, the land and communities first. We need the 2018 Farm Bill to be our Farm Bill.”

Winona farmer Bryan Crigler spoke about the difficulties beginning farmers face, including limited access to land and the slowness with which USDA Farm Service Agency loan applications are processed. “There are a lot of challenges for people to get into farming,” said Crigler.

He also emphasized the need for investment in a more vibrant local food systems infrastructure, which would help farmers who are trying to capture more of the economic value of their production.

Myron Sylling of Spring Grove, Minn., spoke about how the use of cover crops has dramatically reduced erosion on his corn and soybean farm. He called for more support for farmers who are undertaking practices that sustain and build soil health.

Lewiston, Minn., farmer Jennifer Rupprecht also talked about the need for policy that supports farms using practices that are good for the environment. She asked Rep. Walz to champion soil health by increasing conservation payments for cover crops and resource conserving crop rotations in the Conservation Stewardship Program (CSP).

Rupprecht also pressed the Representative to reform federally subsidized crop insurance by requiring recipients of premium subsidies to utilize practices that build, rather than destroy, soil health.

“It makes sense that if I drive better I get better auto insurance. If I farm better I should get better crop insurance premiums,” said Rupprecht. “Minnesota needs a real leader, someone who will stand up to insurance companies and interests who refuse to let the program evolve and adapt.”

Rep. Walz agreed to fight to increase CSP payments and spoke about the need to bring people together to work for a broad consensus on making the crop insurance program work for more farmers. He also agreed to meet with LSP in the future as development of the 2018 Farm Bill progresses.


Questions for the New USDA Secretary

Earlier this year, over 400 Land Stewardship Project members and supporters from across Minnesota returned postcards to LSP that included questions for Minnesota U.S. Senator Amy Klobuchar. The postcard writers wanted Sen. Klobuchar to use the questions during the Congressional hearings that were held for Sonny Perdue, who was nominated by President Donald Trump to be the next USDA Secretary of Agriculture (Perdue’s nomination was eventually approved). The overwhelming themes expressed in the postcard questions centered around whether Perdue would favor family farms over corporate agriculture, prioritize conservation and land protections, and help beginning farmers.

LSP forwarded the postcards to Sen. Klobuchar’s office and communicated these priorities directly to her staff. We followed the hearings closely and received a copy of questions Sen. Klobuchar submitted for Perdue to respond to in writing. LSP was disappointed that none of them directly echoed the themes which our members wrote to her about. LSP’s Policy and Organizing staff is following up with the Senator’s office on this issue. For more information, contact LSP’s Ben Anderson at 612-722-6377 or banderson@landstewardshipproject.org.
LSP Joins in Legal Defense of Winona County Frac Sand Ban

Corporate Interests’ Lawsuit is Last-Ditch Effort to Undo County Board’s Decision

The Land Stewardship Project in May filed a notice of intervention in a lawsuit challenging Winona County over its ordinance prohibiting frac sand operations. LSP is taking this legal action to represent the interests of its Winona County members whose farms, homes, air and water are protected by the frac sand ban. “Because LSP and its members devoted hundreds of hours of work, over years, on grassroots efforts that led to Winona County prohibiting frac sand mining, they have a vested interest in preserving the legality of the ban,” says Ed Walsh, the lead attorney representing LSP in the intervention proceeding. “For this reason, LSP has given notice to the parties in the lawsuit that it intends to join in the lawsuit as a defendant, along with the county, so that LSP may use its legal resources to fight off this challenge to the county’s ordinance.”

The frac sand ban was the direct result of a 17-month grassroots organizing campaign led by LSP in which residents from across Winona County called on the County Board of Commissioners to place the best interests of the land and people above corporate profits. In November, the Board passed the ban on any new operations for the mining, processing, transport or storage of industrial minerals, including the silica sand desired by oil and gas corporations for hydraulic fracturing. In public hearings and comment periods held in 2016, an average of 80 percent of the testimony and written comments received by the county favored the ban.

Barb Nelson, a member of LSP’s Winona County Organizing Committee, lives at the Arches in Warren Township, several hundred feet from a proposed frac sand mine that is prevented by the ban. “My neighbors’ health, safety, quality of life and the landscape of our unique area to the address of the Minneapolis office of Larkin Hoffman. “Whoever the so-called Southeast Minnesota Property Owners are, they clearly don’t speak for the vast majority of people of this county,” says Nelson. “People here, especially family farmers and rural residents, understand that the land is not just property and it shouldn’t be destroyed for profit.”

Attorney Ed Walsh is volunteering his legal services pro bono to the Land Stewardship Project. Walsh is an LSP member and rural New Hartford Township resident who is a career trial lawyer and has worked extensively in municipal zoning law with his Illinois and La Crescent, Minn., law firm Walsh, Knippen & Cetina, Chartered.

Also representing LSP as additional counsel are attorneys Scott Carlson and Lynn Hayes of Farmers’ Legal Action Group (FLAG). Founded in 1986 and based in Minnesota, FLAG is a law center providing legal services and support to family farmers and their communities. FLAG and LSP have worked closely on a variety of issues over the past several decades.

Fracturing. In public hearings and comment periods held in 2016, an average of 80 percent of the testimony and written comments received by the county favored the ban.

For more information on LSP’s work related to the frac sand ban campaign in Winona County, contact Johanna Rupprecht at 507-523-3366 or jrupprecht@landstewardshipproject.org. Online information is also available on the Frac Sand Organizing page at www.landstewardshipproject.org.

When Unwanted Development Comes to Town

Produced by The Land Stewardship Project’s Policy and Organizing Program, Protecting Your Township from Unwanted Development provides guidance on using the Minnesota Interim Ordinance and other tools in the state’s Municipal Planning law. It also contains an extensive list of resources.

The most recent edition is an updated version of the original 1997 publication. It can be downloaded at http://landstewardshipproject.org/repository/137/township_manual06.pdf. Paper copies are available from LSP’s Policy and Organizing Program by calling 612-722-6377, or e-mailing bking@landstewardshipproject.org.
Digging into a Soil Health Test

A University Analysis of the Haney System Unearths Some Questions

By Caroline van Schaik

A streak of creativity brightens the landscape when farmers join forces with scientists to investigate “the standard” of what we thought we already knew. Take, for example, the fresh look at how soil functions—collectively called soil health—that has been the talk of Land Stewardship Project workshops and field days the past five years or so. It was farmer curiosity that led to scientific breakthroughs in measuring the ability of soil biology to generate its own fertility. As this new approach gains momentum, one result is that our agricultural world is being rocked (or at least nudged) by new test data that reinforces what some farmers have already noted in their fields: healthier soils require less fertilizer.

At their core, soil health tests quantify the results of soil biology by capturing more plant-available nitrogen than what a standard chemical analysis can measure. This more complete assessment is good news not only for farmers who could save on fertilizer costs, but for any member of the public that’s interested in cleaner water—less fertilizer means less contamination of our lakes, streams, rivers and groundwater. In addition, farmers are finding that soil with a higher biological rating absorbs more rainfall and stays put better, two characteristics that bode well for the environment.

Our land grant universities and their extension services should be at the forefront of work that promotes soil health when the results have such far-reaching societal consequences. In fact, the University of Minnesota is at the leading edge of such innovations as perennial wheat and other Forever Green initiatives that provide much-needed year-round coverage of Minnesota soils (see page 9 for more on Forever Green).

So I did a double-take when the U of M launched its new Soil Management and Health website (www.extension.umn.edu/agriculture/soils) recently with research that all but dismissed a popular soil health test—and did so with a baffling angle on its data.

Granted, scientists should always show appropriate caution before jumping into something new. And this particular protocol, called the Haney Soil Health Test, is definitely not the status quo. Standard tests focus on the chemical analysis of three key elements needed for plant growth: nitrogen, phosphorus and potassium (NPK). An NPK analysis is a handy tool if one is focused solely on how much fertilizer should be purchased to maximize crop yield.

But this narrow view has its shortcomings; research is making it clear that taking a more holistic view of soil rather than focusing on a few isolated nutrients provides big agronomic and environmental benefits. Furthermore, without the empirical evidence of a test, farmer observations of better functioning soil remain anecdotal, which limits the extent to which certain innovative agronomic techniques gain credibility within the scientific and agricultural communities.

Farmers Seeking Soil Info

The scientist behind the soil test in question is Dr. Rick Haney, a Texas-based USDA researcher whose work was jump-started by farmers puzzled by what they observed in their fields, much of which ran contrary to conventional wisdom. We hear that, too. For example, farmer-presenters at LSP soil health workshops this past winter (see page 18) noted significant erosion problems on fields covered in corn residue. This is troubling, given that surface residue is known as a tried and true way to protect soil. The good news is the farmers also reported virtually no soil loss where the roots of cover crops were present. These farmers also noted better soybean yields even after a cover crop took up soil moisture, improved organic matter after years rather than decades of keeping living roots in the soil, and better weed suppression in the wake of growing a non-cash crop like rye. Some of them are getting comfortable pointing to soil biology for an explanation.

Haney’s soil health calculation—a mathematical mashing of five independent assessments that include the Solfita carbon dioxide (CO2) “burst” test and total organic carbon and nitrogen sampling—tells a story of soil as a living organism. Farmers are responsive to this connection: the longer the rotations, the more roots, the less tilling, and the more soil life, the higher the soil health score. We’ve seen that right here on farms I’ve sampled.

As a result, biology-friendly practices that happen also to be at the heart of environmental stewardship and farm profitability are on the rise. That includes cover cropping, managed rotational grazing, less or no tillage, and cautious reductions in agrichemical application rates. Clearly, farmer intrigue in and response to the microbial underworld of their fields turns out to be good for the land and society.

The U of M Analysis

In light of this interest, University of Minnesota researchers set up an experiment comparing the Haney Soil Health Test to the standard chemical method for measuring plant available nitrogen in the soil. They sampled fields under three different tillage systems: moldboard plowing, ripping and strip tillage. Findings were reported as pounds of available nitrogen per acre. (The University’s full report on this research, “Should soil health results be used when

Haney Test, see page 17...
Haney Test, from page 16

determining fertilizer needs in Minnesota?,” is at www.extension.umn.edu/agriculture/soils/soil-properties/haney-soil-test.)

The data comparing samples taken from the top six inches in the soil profile show that the Haney method measures more plant-available nitrogen in that half-foot of area than the standard test does. This pattern held across the three tillage systems. For example, strip tillage samples showed 78 pounds of available nitrogen in the top six inches using the Haney method as compared to 29 pounds using the standard testing method.

Apples & Oranges

The problem is, the U of M's researchers did not use this “apples-to-apples” comparison of soil depths to reach their ultimate conclusions about the utility of the Haney test. Rather, the final standard test results were based on samples taken from the top 24 inches of the soil profile. As I mentioned before, the Haney results were based on samples drawn from the top six inches of soil. Considering that half-a-foot of soil matter was compared directly to two feet of sample material, the results were predictable. Depending on the tillage method, the Haney data showed overall from 37 to 97 fewer pounds of available nitrogen per acre than its standard counterpart.

Given the results derived from the wide difference in sampling depths, it's not surprising U of M scientists concluded that the Haney test, “would trigger a higher nitrogen application rate than when using standard testing procedures and U of MN Fertility Guidelines.” Their take home message? “Non-standard” soil tests can lead to over-applications of fertilizer, which can cause environmental problems and even result in reduced yields. Stahl says the U of M continues to follow directions and outreach centers, and that the University hopes to have more to report on in the future. Along with the hundreds of farmers who continue to flock to soil health events, I can’t wait to see the results.

Lizabeth Stahl, a U of M Extension educator specializing in crops, led the study. When contacted about the research, Stahl acknowledged that soil sampling depth can greatly impact test values. For example, less mobile nutrients are typically concentrated in the upper depths. But the Haney test is set up to be conducted only in the top six inches of the soil profile.

“Soil labs will tell you if you want to run a Haney test in your field, collect soil from a zero to six-inch depth,” Stahl wrote in an e-mail. “So, for an applied, real-world comparison, that is why we followed directions and took samples from zero to six inches for the Haney test.”

Stahl also pointed out that the Haney test has not been correlated or calibrated for Minnesota conditions.

“It was developed in Texas, which has a completely different environment, different soil types, different temperatures, different precipitation, different growing season, differences in soil organic matter, cropping system, and so on,” she wrote. “That should raise all kinds of red flags as we know these factors influence nutrient availability, mineralization, etc.”

The data comparing samples taken from different depths, comparing different depths of soil to one another is confusing. The only appropriate comparison to Haney results is with six-inch samples since the Haney test is only applied to that depth. Laboratories that offer a “non-standard” test such as the Haney recommend an additional subsoil chemical analysis for serious nitrogen management. These labs make their fertilizer recommendations based on standard tests but specify that soil health test results could influence actual rates. The U of M research team does not go that far: “...it is not recommended to be used to help determine fertilizer needs,” they write of the Haney test. It should be noted that Stahl and the other U of M researchers do acknowledge that non-standard soil health tests, “can be used to help demonstrate contrasts in management practices.”

The problem is that most people will read this research report on the U of M’s main soil health web page and conclude that it is best to stick exclusively with the standard testing methods, even when the actual data conclude otherwise. That’s unfortunate, since it threatens to shake us to some old ways of thinking about soil even as something interesting is unfolding. After all, even 20 years ago we didn’t envision building soil organic matter in mere years or measuring what we just called “unavailable” nutrients.

Water, climate, cash flow, erosion, air and habitat issues are all the better when agriculture is defined by growing food and soil. Haney results focus the conversation on why this is so and what farmers can change in real time for a higher test score, producing in the bargain better armor in their fields against a barrage of climatic and economic challenges. The bottom line is that standard “NPK” soil tests don’t tell farmers what they need to know to adequately address their significant role in environmental and economic resource management.

The Haney test is not above criticism. U of M researchers charge accurately that this particular soil health assessment isn’t correlated to Minnesota soils or calibrated for specific fertilizer recommendations. And I believe Dr. Haney needs to publish his on-going correlation work with 30,000 soil samples from around the country, including Minnesota.

It’s the mission of our land grant institutions to conduct such science for the public good. Stahl says the U of M continues to evaluate the Haney test through on-farm trials and at some of the school’s research and outreach centers, and that the University hopes to have more to report on in the future. Along with the hundreds of farmers who continue to flock to soil health events, I can’t wait to see the results.

Caroline van Schaik works on soil health and continuous living cover out of LSP’s office in Lewiston, Minn. She can be contacted at 507-523-3366 or caroline@landstewardshipproject.org.
Raising Expectations in the Field

*LSP Workshops Focus on Making Soil Pay its Own Way*

Our agricultural soils may be starved, naked and just plain exhausted, but that’s no excuse for allowing low expectations for this resource to govern how we farm. That general theme emerged repeatedly during a series of soil health meetings sponsored by the Land Stewardship Project in southeastern Minnesota earlier this year.

“Nothing is free in an ecosystem—everything costs,” said Dr. Kristine Nichols, a soil microbiologist and the chief scientist at the Rodale Institute. She was the keynote speaker at a Feb. 15 meeting in Caledonia, which, like the other LSP soil health events this winter, was standing-room only. “The difference is you can pay the costs with added chemicals, or you can have plants pay the costs by utilizing the sun’s energy. A healthy soil biology is a highly efficient system. It works better than adding chemicals to the system.”

Nichols went on to describe research she conducted first as a USDA scientist and later with the Rodale Institute showing how healthy soil can build its own fertility and resilience when a diversity of living roots are present and microorganisms are given the right environment to thrive in. Nichols, who while working for the USDA was part of the groundbreaking Burleigh County Soil Health Team in North Dakota, says farmers have shown that the way to create such a resilient environment is by following a set of principles that involve minimizing soil disturbance, keeping it covered, maximiz-
Soil Workshops, see page 19…

Dr. Kristine Nichols: “Nothing is free in an ecosystem—everything costs. The difference is you can pay the costs with added chemicals, or you can have plants pay the costs by utilizing the sun’s energy.” (LSP Photo)

...Soil Workshops, from page 18

grazing either pasture of annual cover crops such as grazing corn and rye. Annual cover crops take pressure off Haugen’s perennial pastures as well as help him get through the summer slump when hot, dry weather can send cool season grasses into dormancy.

“Some people call them cover crops—I call them forage crops,” said Haugen, who farms near Canton. “What I do with my cows is turn forage into milk and because I have a milk truck coming regularly I have a measuring stick of how my pastures are performing.”

Rick Bieber thinks a lot about the relationship between soil and farm financial health. During a January LSP soil health meeting in Elgin, the South Dakota crop and livestock producer talked about the dire economic straits his family’s farming operation was in during the 1980s. Part of their problems were due to the financial crisis that was overwhelming all of agriculture at the time. But Bieber said his farm’s economic issues could also be traced to the fact that the soil was being abused through too much tillage.

To cut his reliance on fuel and other expensive inputs, Bieber began reducing tillage significantly, eventually adopting a no-till system of production. In the late 1990s, he began experimenting with cover crops, and in 2006 South Dakota State University began establishing research plots on his farm because of the impressive advances Bieber was making in building soil health.

Bieber’s system of no-till, cover crop cocktails and rotational grazing of cattle has helped some of his fields double their organic matter content over the years. In fact, he said his organic matter ranges from 4 to 5 percent, twice what many neighboring farms have. The result has been in some cases triple the yields for crops like corn, soybeans, sunflowers and flax. Such consistently good yields in all weather conditions have given Bieber the confidence to begin passing his farming operation on to the next generation.

Although they are a nice benefit, high yields don’t necessarily always equal financial success, Bieber cautioned. What really excites the farmer is that increasing soil biota has pumped up the efficiency with which his fields utilize moisture. In other words, he’s getting more bushels per inch of rainfall because the increased organic matter helps capture and utilize every bit of moisture available.

That is key in the part of north-central South Dakota where Bieber farms, since it averages only around 17 inches of rain annually. Bieber said as a result if integrating no-till and cover cropping, he has gone from producing three bushels of corn per inch of rain to consistently being in the eight bushels per inch range. That means his healthy soil is resilient enough to produce profitable yields even during droughty periods.

At one point during his presentation, Bieber flashed a slide showing a stand of his non-GMO corn next to a plot of corn genetically engineered to tolerate drought. Bieber’s corn ended up yielding 16 percent more by the end of the season.

“It’s not about the best yields, it’s about the most efficient yields,” said the farmer. “If you take care of the soils and you allow the life below the soils to flourish, the life above the soil flourishes.”

SARE Cover Crop Survey

If you are a crop or livestock farmer in southeastern Minnesota, the Land Stewardship Project invites you to join the Soil Builders’ Network to receive regular updates on workshops, field days and on-farm demonstrations related to the latest in soil health and cover cropping.

The Soil Builders’ Network was launched earlier this year to establish an extensive network of farmers interested in building back their soil using innovative crop and livestock systems. To join the free network, sign up at www.landstewardshipproject.org/stewardshipfood/lpssoilbuilders, or contact LSP’s Shona Snater at 507-523-3366 or SSnater@landstewardshipproject.org.

Give it a Listen

Olaf Haugen talks about the connection between cover crops, soil health and dairy profitability on episode 192 of the Land Stewardship Project’s Ear to the Ground podcast: http://landstewardshipproject.org/posts/podcast.

In episode 190, Dr. Kristine Nichols describes how we can build agronomic, economic and environmental resiliency in our agricultural soils: http://landstewardshipproject.org/posts/podcast/940.

Episode 189 features Rick Bieber talking about how building soil health saved his farm from financial ruin: http://landstewardshipproject.org/posts/podcast/939.
EcoLlogical Agrarians

Graduate-Level Farming

Mastodon Valley is Setting Out to Redefine Agriculture

EDITOR’S NOTE: The Land Stewardship Letter is running an occasional series of articles on “ecological agrarians”—farmers who are integrating the principles of ecology into their agricultural operations. To read the first installment in this series, see page 21 of the No. 1, 2017, edition of the Land Stewardship Letter.

By Brian DeVore

When Peter Allen was pursuing a doctorate in restoration ecology at the University of Wisconsin, his view of the world was relatively simple: the best way to build a healthy ecosystem was to keep humans out of the picture. Before starting the Ph.D., Allen had this paradigm reinforced while obtaining a master’s degree from UW in conservation biology and sustainable development and an undergraduate degree in environmental science from Indiana University. A vegetarian at the time, the role of livestock in devastating the land played a particularly large role in Allen’s academic-based ecological worldview.

“I was coming from a traditional ecological restoration ecology perspective of humans are kind of bad on the landscape and we’re trying to restore some sort of native natural balance,” Allen says on a beastly hot summer day.

As he says this, he’s standing on the upper slopes of a steep hillside overlooking southwestern Wisconsin’s Kickapoo River Valley. He has just hiked past his small herd of beef cattle grazing on the lower parts of the hill. Before that, Allen had checked on other pastures as well as a restored prairie habitat on his farm while riding around in a solar powered Polaris Ranger. During the ride, he had stopped periodically to look at the other livestock—hogs, sheep and goats—he and his wife Maureen are raising on this farm and which they sell to consumers looking for naturally raised meat.

To say Allen has modified his view of how to have a positive impact on the landscape is an understatement.

As he stands on that Wisconsin hillside, watching a curtain of rain march down the Kickapoo Valley, Allen ticks off all the amenities that drew him to this 220-acre piece of ground. There is a remnant oak savanna stand, which is one of rarest natural habitats left in the Midwest. And there are also two springs and a wetland, which provide a source of water as well as feed a small creek. Then there is the remnant native grasses growing in the hillside pastures—as he zig-zags up the hill, Allen points out yarrow, bee balm, goldenrod and black-eyed Susan. Meadowlarks, goldfinches and an angry-sounding killdeer flush as he gains altitude.

“It’s got all the various ecotypes of the Driftless Area represented in this one place,” Allen says excitedly, sounding like someone who has spent years studying ecology, which he has.

But then he looks down at what at first glance seems to be the least interesting part of this farm, and gets really animated.

Below, tucked into a pocket between the hillside and a trout stream called Camp Creek, is something all-to-common in the rest of the Midwest: a 40-acre field of soybeans. It looks relatively flat, but Allen explains that when heavy rains hit the farm, a surprising amount of the field’s soil washes into the stream. Any contaminants along for the ride in that runoff eventually make their way to the Kickapoo, which connects to the Wisconsin River and eventually the Mississippi.

This domesticated, monocultural reminder of industrial agriculture’s dominance of the landscape stands out in stark contrast to the naturalness of the rest of Allen’s ecological oasis, which he calls Mastodon Valley Farm. And he is thrilled to have the field there. It will provide him a prime opportunity to put into practice years of classroom training, reading, research, and, most recently, on-the-ground experiments. He can’t wait to begin the process of converting the field to prairie, and eventually making it part of the rotational grazing system he has set up for the livestock being produced here.

Beyond the Fencerow

Allen’s change of heart on how restoration ecology could be executed on the Midwestern landscape can be traced to some of the history he studied while in college. Specifically, he had studied the ecology and history of the oak savanna ecosystem, which consists of hardwood trees like oaks interspersed with tallgrass prairies (but oaks do particularly well in savannas, since their thick bark protects them from the effects of grass fires). In effect, oak savannas are the transition between prairie and the woodland, so you have the best of both worlds. These are highly diverse habitats because of this mix of trees and prairie. One estimate is that by the time Europeans arrived, roughly 50 million acres of oak savanna habitat existed in a band stretching along the eastern edge of the Great Plains from Texas into southern Canada. There were also scatterings of this habitat in Indiana, Michigan and Ohio. Most of the oak savanna habitat was wiped out to make way for farming in the latter half of the 19th century. Perhaps 30,000 acres of the habitat remains in the Midwest today, with each parcel amounting to less than 100 acres.

However, because of the difficulty of row-cropping some of the steeper hillsides that make up regions like the Driftless Area of southwestern Wisconsin, southeastern Minnesota and northeastern Iowa, this region has prime pockets of oak savanna habitat remaining. In fact, scientists believe this region has the largest area of what they call “restorable” oak savanna.

What Allen came to realize was that oak savannas are not a climax community—what, when left to its own devices, nature will aspire to. When the first European settlers arrived in regions like the Driftless Area, what they should have found was closed canopy forests. But journals made repeated references to oak savannas, which is a habitat reliant on intervention.

“If you leave land alone, it doesn’t just turn into savanna,” says Allen. “It takes quite a bit of active management.”

It’s now commonly believed that Native American societies managed these habitats with fire. The result was a landscape rich in herbivores like deer, elk and bison, and which produced numerous nuts and fruits.
including acorns, hazelnuts, prairie crab apples, plums, strawberries, raspberries, blackberries, pawpaws, hawthorn haws, gooseberries and highbush cranberries. In other words, the American Indians’ management system was helping the land produce more food for human consumption. Just because the first European settlers didn’t recognize what they considered a managed agricultural landscape—squared off fields with fences and monocrops of grains—didn’t mean it wasn’t being managed to produce food.

Oak savannas also have the potential to produce lots of wildlife habitat, as well as sequester carbon—the trees trap and store carbon for a hundred years or more, until they die or are cut down. The grasses, if they are managed well, can keep sequestering carbon in perpetuity, according to Allen (there is not yet scientific consensus on just how much carbon grasslands can sequester long into the future).

“Grasses and trees are duking it out in this never-ending battle,” says Allen. “And sometimes it’s going to be all grass, and sometimes it’s going to be all trees. Sometimes it will be a mix of both.”

While working on his Ph.D. dissertation, he developed a model of a farm patterned on oak savannas—it would integrate a polyculture of tree crops, fruit and nut production, as well as the rotational grazing of multiple species of livestock. The domesticated animals would take the place of fire as a way to maintain open spaces between the trees. Such a management system would require actually removing trees to create that open space, an idea that Allen concedes “freaks out” his environmentalist friends. At about that time, Allen was in a bar talking about this idea with a friend who was into permaculture—a method of food production that relies on perennial species that don’t have to be replanted every year. “He was like, ‘Oh yeah, that’s kind of like what Mark Shepard does,’” Allen recalls the friend saying.

Shepard’s New Forest Farm, which is near Viola in southwestern Wisconsin, has become a model for integrating, or “stacking,” various enterprises utilizing perennial species such as fruit and nut trees. Allen ended up going to New Forest Farm to collect data for a case study. “All of a sudden this idea for a dissertation wasn’t just in my crazy head—there was an example of it on the ground,” he recalls.

In 2012, Allen pitched a tent on New Forest Farm with plans on spending a week. He was so struck by Shepard’s use of the savanna concept that he ended up spending an entire summer there with Maureen, who has a degree in zoology. They extended their stay through the winter by living in a shack on the farm, and Allen convinced some friends to go in on helping them buy six steers. By their second summer on New Forest Farm they were grazing 20 head of cattle, as well as pigs, sheep and poultry amongst the hazelnuts and other woody species growing there. Allen was hooked. He was also convinced that he didn’t need to get his doctorate to accomplish his goal of using agriculture to restore oak savanna habitat. After spending a decade in graduate school, he dropped out six months shy of finishing. He and Maureen began looking for land that had that right mix of natural habitat and cropped acres, and in 2014 bought a farm just eight miles from Shepard’s operation.

Allen’s decision to leave school was opposed by just about everyone he knew, including Shepard. But he felt putting off getting established on the land would cost him precious “momentum”—he was finished reading and learning about ecological restoration, now was the time to take action.

If he hadn’t jumped at this chance, “I would probably have a job in Madison with the University teaching, talking about starting a farm someday, always talking about starting a farm,” says Allen. “Even when I was in the academy, I never quite fit in. Most of the ecologists thought I was crazy, because I’d talk about bringing in goats to manage invasive species, or we should bring cattle in to manage these grasslands. And then the ag people thought I was crazy because I was thinking about diversity and grassland birds and pollinators and these kinds of things.”

Allen does miss one aspect of academia: teaching. Since launching Mastodon Valley Farm, he has somewhat filled that void by offering an annual one-week course on designing permaculture farming systems that combine livestock, grass and woodlands. He’s also been working on a book describing his methods and experiences.

Eco-Economics

In 2017, the Allens are starting their fourth growing season on Mastodon Valley Farm. A lot has happened in a short amount of time. They’ve built a cabin and are living off the grid, utilizing solar power and driving 11 miles to utilize an Internet connection. The livestock herds that were launched on New Forest Farm are now fully established on the Allen place. They have also started a meat marketing enterprise to help make their ecological restoration project economically viable.

Like many ecological agrarians, they are hoping to get the environmentally-conscious consumer to financially support their method of managing the landscape. Allen relates the story of a conversation he had with someone who felt since he didn’t manage land directly, there was nothing he could do to influence the health of the ecosystem.

“I told him, ‘You influence the landscape three times a day. Every time you put something in your mouth you are influencing a piece of ground,’” says the farmer.

Mastodon Valley Farm sells its meat utilizing the Community Supported Agriculture, or CSA, model. Consumers in Madison and La Crosse buy a “share” in the farm, which entitles them to a monthly delivery of beef, pork and lamb. Peter and Maureen

Ecological Agrarians, see page 22...
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...Ecological Agrarians, from page 21...

have about 60 regular customers and are marketing roughly 20 beef cattle, 25 hogs and 20-25 lambs annually using this model.

The farmers believe if they could double their livestock numbers it would fit their economic needs, but would not overtax their land base. Around 80 acres of the farm is currently being grazed and one of the limiting factors is being able to pipe water for livestock to some of the more inaccessible areas of the hilly parcel.

Allen is excited about the recent advances in rotational grazing that make it more possible than ever to manage such a rugged landscape with livestock. Portable electric fencing, solar energizers, and advances in watering systems all help.

“It allows you to manage animals on the landscape in a much more intentional way than just opening it all up and saying, ‘There you go, we’ll see you next month or whatever,’ ” Allen says. “With less than $500 in resources, you can move a lot of cattle.”

Being in the business of producing livestock that are slaughtered for meat is quite a stretch for the former vegetarian, but the more Allen studied ecosystems like oak savannas, the more he realized there’s no such thing as grass without grazing animals, and these days, without an economic reason to raise those herbivores, it’s not practical to have them on the Midwestern landscape.

“Yes, *Bos taurus* is not a native species, but it’s a pretty close mimic,” he says. “It’s a lot better to have the function of herbivores on the landscape, even if they’re not native, than to be insistent on only natives, because it’s a little late for that.”

At one point, Allen shows specifically where limited grazing has made a difference. The result is a dense stand of 250-year-old oaks and 50-year-old maples and other hardwoods, as well as bushy undergrowth that make it all but impenetrable.

“I mean it’s bare soil in there,” says Allen, “not a blade of grass in there—I mean it’s bare soil in there,” says Allen, adding that despite the impressive timber growth, the undisturbed woodland is much less diverse than the open mix of pasture and trees below it.

**Thinking Like a Mastodon**

Allen concedes it has been quite a wakeup call to take what he had learned in academia and apply it to the land.

“There were things I thought I understood from a book, but when you actually see it firsthand, it’s different,” he says.

For example, he had always thought of plant communities as being relatively static and wasn’t prepared for how dynamic they can be, with different grassland species, for example, dominating the landscape from one year to the next.

“What’s been really neat is just seeing the same place multiple seasons,” Allen says as he scans the hillside and names off the various grassland species present. “I’m excited for 20 years, 30 years in.”

He has adjusted his land management through observation, as well as trial-and-error. Allen has also benefited greatly from the advice of neighboring farmers, who have insights into local weather, soil and plant conditions that a lifetime of university learning could never replicate.

Allen’s long-term goal is to create a 50-50 mix of grass and tree habitat throughout the farm. Ironically, if one were to look at an aerial photo of Mastodon Valley Farm, the conclusion would be that he’s accomplished his mission; it’s pretty much evenly divided between grass and trees. But location is everything when it comes to overall ecosystem health. The problem is, these habitats are clustered together—the trees tend to be on the tops of the hill, and the open areas are lower, where they are more accessible to livestock and cropping.

“We’ve got 50 percent of 100 percent canopy and 50 percent of 100 percent grass. They’re not integrated, they’re segregate,” says Allen.

As a result, he’s cutting down trees to open up where it’s solid canopy, and planting trees in the open grassland. Creating that interspersed habitat means some good old-fashioned grunt work involving chain saws and brush clearing. In a way, Allen sees himself trying to replicate what the mastodonts that used to roam this valley did: they removed trees and opened up the landscape, creating a mosaic effect that attracted graziers. When one is sweating over the chain-sawing of elms and ironwood to let in the sunlight, thinking about the profound impacts megafauna had on the landscape over millennia puts things in perspective.

“I’m thinking, ‘I’m like the mastodon’s surrogate. I’ve cleared a few acres—I’ve got a hundred to go,”’ Allen says, his voice trailing off as he laughs. “I turn 34 next month—I have plenty of time.”

Allen says the mix of pasture and woodland on his farm provides the perfect laboratory to test his ideas for restoring a healthy oak savanna habitat using selective logging and the rotational grazing of livestock. “Grasses and trees are duking it out in this never-ending battle,” he says. (LSP Photo)
Applications Open for 2017-2018 LSP Farm Beginnings Course

Minnesota-Wisconsin Region Class to Begin in Fall 2017

The Land Stewardship Project’s Farm Beginnings Program is accepting applications for its 2017-2018 class session. The class will be held in Pine City in east-central Minnesota.

LSP’s Farm Beginnings program is marking its second decade of providing first-hand training in low-cost, sustainable methods of farming. The course is for people of all ages just getting started in farming, as well as established farmers looking to make changes in their operations. Farm Beginnings participants learn goal setting, financial and enterprise planning, marketing and innovative production techniques.

This 12-month course provides training and hands-on learning opportunities in the form of classroom sessions, farm tours, field days, workshops and access to an extensive farmer network. Classes are led by farmers and other agricultural professionals from the region. The classes, which meet approximately twice-a-month beginning in the fall, run until March 2018, followed by an on-farm education component that includes farm tours and skills sessions.

Over the years, more than 750 people have graduated from the Minnesota-Wisconsin region Farm Beginnings course. Graduates are involved in a wide-range of agricultural enterprises, including grass-based livestock, organic vegetables, Community Supported Agriculture and specialty products.

The Farm Beginnings class fee is $1,500, which covers one “farm unit”—either one farmer or two farming partners who are on the same farm. A $200 deposit is required with an application and will be put towards the final fee. Payment plans are available, as well as a limited number of scholarships. For application materials or more information, see www.farmbeginnings.org, or contact Dori Eder at dori@landstewardshipproject.org, 612-578-4497.

Besides Minnesota and Wisconsin, Farm Beginnings classes have been held in Illinois, Nebraska and North Dakota. Farm Beginnings courses have also been launched in South Dakota, Missouri, Kentucky, Indiana, New York and Maine.

LSP’s Farm Dreams: Is Farming in Your Future? Find Out July 23

Farm Dreams is an entry level, four-hour, exploratory Land Stewardship Project workshop designed to help people who are seeking practical, common sense information on whether farming is the next step for them. This is a great workshop to attend if you are considering farming as a career and are not sure where to start. Farm Dreams is a good prerequisite for LSP’s Farm Beginnings course (see above).

LSP holds Farm Dreams workshops at locations throughout the Minnesota-Wisconsin region during the year. The cost is $20 for LSP members and $40 for non-members.

The next class is scheduled for Sunday, July 23. The class runs from 1 p.m. to 5 p.m. and will be held in Minneapolis. Another class may be scheduled for August or September; details are still being finalized.

For more information, see the Farm Dreams page at www.farmbeginnings.org. Details are also available by contacting LSP’s Dori Eder at 612-578-4497 or dori@landstewardshipproject.org.

Next LSP Journeyperson Course Starting This Fall

The Land Stewardship Project’s year-long Journeyperson Course is designed to support people who have several years of managing their own farm under their belt, and are working to take their business to the next level. This course offers advanced farm business planning and a mentorship, as well as guidance on balancing farm, family and personal needs, along with a matched savings account.

The next Journeyperson session will begin this fall—final details are still being worked out.

For more information, contact LSP’s Dori Eder at dori@landstewardshipproject.org or 612-578-4497. More information is also on the Journeyperson page at www.farmbeginnings.org.

Passing On the Farm? Check out the Farm Transitions Toolkit

Owners of farmland who are looking to transition their enterprise to the next generation of farmers can turn to the Farm Transitions Toolkit, a comprehensive Land Stewardship Project/Minnesota Institute for Sustainable Agriculture resource. The Toolkit is for those people who want to pass their farm on in a way that supports healthy rural communities, strong local economies and sustainable land stewardship.

The Toolkit contains resources, links to services and practical calculation tables to help landowners establish a commonsense plan. It also features user-friendly resources on the economic, legal, governmental, agronomic, ecological and even social issues that must be considered in order to ensure a successful farm transition. It is rounded out with profiles of farmers who are in various stages of transitioning their enterprises to the next generation. An online version of the Toolkit is available on the Land Stewardship Project’s website, www.landstewardshipproject.org/morefarmers/farmtransitiontools/farmtransitiontoolkit; paper versions can be purchased by calling 800-909-6472.
The Curve of Binding Energy

O kay, calculus lesson of the day, courtesy of some pasture grass, fencing and a herd of ruminants. Calculus, in case you’ve forgotten, is the mathematical study of rates of change. It can be a handy way to calculate where you’re headed and how long it will take to get there. Let’s say you are a farmer who, while walking in a rotationally grazed pasture, is trying to assess how much forage will be available for how long and for how many animals. The problem is that pasture plants don’t grow at the same, uniform rate; you’re measuring a quantity that is a moving target.

“It’s either increasing at a decreasing rate, or increasing at an increasing rate,” says farmer Keith Johnson, who, while studying electronics engineering at South Dakota State University became well acquainted with the wonders, and frustrations, of utilizing calculus to solve problems. “Well, that’s the start of setting up an integral in calculus. So you can use integrals and derivatives and all your calculus and look at things like where are you? Where are you going to be? Where’s the curve going?”

For Johnson and his wife Anna, such calculations are a key component of their farming operation. Like many beginning farmers, they are constantly stepping back to assess not only when a particular pasture will peak in its productivity during a specific growing season, but where the “curve” of their overall agricultural enterprise is headed years down the road. At first blush, their backgrounds—besides his training in engineering, Keith has worked as a logger and in the commercial fishing industry; Anna holds a doctorate in plant pathology from the University of Wisconsin and could tell you all you want to know about Phytophthora infestans, the late blight pathogen of potatoes and tomatoes—would appear to have little to do with raising livestock on grass in west-central Minnesota’s Sibley County. But to the young couple, it’s not so much about what you study or what you are trained in, as it is about learning to engage your brain and apply critical and analytical thinking skills to addressing tricky questions.

And if there was ever a profession that requires such mental (and physical) gymnastics, it’s a form of farming that strives to step out of the dominant corn-soybean monocul-
“It’s really just out of the goodness of his heart that he did that,” says Keith of the neighbor who sold them the land. “He wanted to see a young person get started and utilize those buildings on that farm that he grew up on. It is an incredible opportunity because as a young farmer looking for land, I can’t afford 160 acres or even 80 acres.”

The following year, Keith and Anna were married, and she brought to the budding farming enterprise an intimate knowledge of plants. “One of the first things he asked me was, ‘What’s that plant that the sheep won’t eat?’,’” Anna recalls with a laugh. She also came equipped with a passion for developing a farming system that was based on creating more biodiversity on the landscape in an economically viable way. Keith and Anna call their enterprise Blissful Bee Pastures (http://blissfulbeepasturesmn.com) for a reason: “Our pastures are full of bees and flowers and I think that’s important for the diversity,” says Anna.

Soon after acquiring the 50 acres, the Johnsons used cost-share funds from the USDA’s Environmental Quality Incentives Program to erect perimeter fencing and started setting up a rotational grazing system. They then set about converting the corn-soybean ground to pasture by seeding a variety of legumes and grasses using a seeder Keith engineered using a servomotor, a micro-controller and an LCD readout screen to monitor seeding rates.

“It was probably a little overboard but I just enjoyed building it,” says Keith of the high-tech seeder.

Such a conversion of land has raised eyes brows in the neighborhood. For one thing, that’s 50 acres that’s no longer corn. And as if erecting fence in an area where farmers have ripped out wire and posts to make room for more row crops isn’t odd enough, the Johnsons have also put in cross-fencing so the land can be rotationally grazed.

“The vehicles slow down and people say, ‘There they go putting in another interior fence,’ ” says Keith with a laugh.

No matter how many perplexed looks the parcel gets, Keith and Anna say it’s been fun to watch how the perennialization of the land has led to the “waking up of the soil life” in the form of more thriving forage species each passing year. And that’s important for a piece of ground that’s serving as the hub of a grass-based cattle and sheep enterprise. During the past few years, Keith and Anna have grown their sheep herd to 70 ewes and have a half-a-dozen beef cattle.

They’ve recently started direct-marketing grass-fed lamb and beef, and they hope to eventually double their lamb herd operation and raise as many as 15 to 20 cattle. In 2016 the couple expanded their land base slightly when they bought an additional 10 acres in the neighborhood.

But growth in the scope of the farm is not a top priority at the moment—Keith and Anna are focusing more on putting their analytical and problem-solving skills to work trying to perfect the current way they are doing things. Keith, ever the tinkerer, half jokes about mounting accelerometers on sheep with a radio signal that would alert him in the dead of night if the animals suddenly start to become quite mobile—in other words, they’re running away from predators such as coyotes.

On a more serious note, Anna is using her skills with setting up experimentation to take a deep look at how best to finish sheep on pasture. The sooner the lambs are finished, the more forage that is left for the ewes and the longer into the winter they can graze, leading to less hay usage.

It turns out that by mid-July pasture plants start to lignify, making them less palatable and nutritious, creating a situation where just as the farmers need the pastures to be peaking, they are actually headed into a trough production-wise. The Johnsons have been experimenting with various pasture mixes to try and hit that sweet spot of animal/plant productivity. Lindsey is also interested in utilizing the grazing of annual cover crops as an option.

“Ideally, the lambs would finish by the end of August, which is a hard month to get good gains in, so it may not be possible, but we are trying some different things,” explains Anna. “We’ve gotten close but never quite got there. We’re designing some experiments, setting up plots, collecting and analyzing data. There’s so much to it, the deeper you get into it.”

Keith and Anna continue to read everything they can get their hands on related to grass-based livestock production, as well as attend field days, workshops and conferences. This has allowed them to network with other farmers who are in various stages of establishing grass-based livestock operations. Keith says Farm Beginnings was invaluable for creating the network required when one is engaging in a kind of agriculture that’s not commonly practiced in the immediate neighborhood.

He says the course also helped guide the direction of Blissful Bee Pastures in a way that goes beyond determining what kind of forage to plant or how often to rotate livestock through a grazing system. Back in 2011-2012, one exercise that Farm Begin-
Farmland Available

- Dan Hoffman has for rent 6.8 acres of farmland in southeastern Minnesota’s Mower County (near Dexter). The land has not been sprayed for several years and tile drainage was recently installed every 40 feet. There is a shed and a house. Contact: Dan Hoffman, 507-421-7167.
- Diane Webb has for sale a 30-acre berry, herb and vegetable farm in northwestern Minnesota’s Otter Tail County. Ten acres is tillable and there are two season extension buildings: a 30 x 100 greenhouse and a 30 x 96 high tunnel. There is also a building that was erected as a storefront and it has a walk-in cooler, a three-compartment stainless steel sink and other amenities related to specialty crop farming. Contact: Diane Webb, 218-640-3276.
- Knelly Dettinger has for sale a 10-acre certified organic farm in Minnesota’s Dakota County near the Twin Cities. There is 80,000-square-feet of greenhouse space, 2 acres open tillable land, irrigation and a compliant septic system. There is also a packing shed facility, warehouse facility and a two-bedroom home. Across the road 116 acres of tillable organic land is also available. The asking price is $599,000. Contact: Knelly Dettinger, 507-272-0526, kdettinger@kw.com.
- Knelly Dettinger has for sale a 121-acre certified organic farm in Minnesota’s Dakota County near the Twin Cities. There is an irrigation well, spray buffer plantings and a 5-acre homesite. With the exception of the 5-acre homesite, the land is in a permanent agricultural easement. There is a large pole shed for packing or machinery; there is no house. The asking price is $754,000. Contact: Knelly Dettinger, 507-272-0526.
- Tim and Karen Burdock have 10 acres of farmland for sale in western Minnesota’s Big Stone County. The land has not been sprayed for several years and there is a small fenced pasture. The land is on an 80-acre pond and about 30 additional pasture acres are available. There is a pole barn with electricity, as well as two garages, one with electricity. A house is available. The price is $100,000. Contact: Tim and Karen Burdock, 320-305-0970, kburdic@gmail.com.
- Linda Hutchinson has for sale 19.5 acres (12 tillable) in southeastern Minnesota’s Dodge County. The land includes pasture, fencing and water, and has not been sprayed for several years. The house is a teardown. The property is between Rochester and Austin. The price is negotiable. Contact: Linda Hutchinson, linda48hutchinson@gmail.com, 651-214-1853.
- Andy has for rent 18 acres of tillable farmland in Rice County, near Minnesota’s Twin Cities. The land is fertile and suitable for growing vegetables, fruits and flowers; there are no outbuildings or a house. It is near the town of Webster and has easy access to Interstate 35 (it is 40 minutes from Minneapolis/ St. Paul and 20 minutes from the southern suburbs). Contact: Andy, 612-504-9135 (text), farmland.rice@gmail.com.
- Eric has for rent 5-10 acres of farmland in Chisago County, near Minnesota’s Twin Cities. There is a tree nursery on the farm, which includes pasture. The soil ranges from sandy to peat. It has been spot-sprayed to control perennial weeds, but no other pesticides have been applied for over eight years. There is storage available, as well as water and electricity; no house is available. The rent fee is negotiable; Eric is open to ideas for the farm. Contact: Eric, 651-208-1473, eric@branchland.com.
- Joshua has for sale a 2-5 acre section of an apple orchard in northwestern Wisconsin (between Menominee and Spring Valley). There are no buildings on-site. The orchard was planted in 1968 and it is on a ridge top with an east-west orientation; trees are in various stages of life and health (it sat idle for 19 years). There are wide alley-ways between trees and good grass for grazing. He is willing to work with beginning farmers/ homesteaders or landowners, and is willing to do a land contract. If he sold 5 acres outright, the price would be $25,000; if the land was sold with a land contract, the price would be $30,000 and buyer would have five years to pay off the contract (a down payment of $7,000-$10,000 would be required). Contact: Joshua, aces-tralseeds@gmail.com, 715-505-5629.
- Parker Ogburn has for rent 6.48 acres of tillable farmland in northwestern Wisconsin’s St. Croix County (near Roberts). The fields are surrounded by natural lands and Ogburn is transitioning the fields from conventional farming this year. There is water and electricity at the barn, which is several hundred feet from the fields. There is a 95 x 50 pole barn, which can be locked, and in which some equipment can be stored. No housing is available. The rental fee is negotiable. Contact: Parker Ogburn, 541-610-2352.
- Dudley Parkinson has for sale 15 acres of farmland in western Wisconsin’s St. Croix County, 35 miles east of Minnesota’s Twin Cities. The land consists of pasture and woods, and has not been sprayed since at least 1987. There is a traditional dairy barn with a newer metal roof, heated shop, plumbing/electrical, and attached three-stall horse barn. There is also some fencing with three small corrals. There is a farm house with a two-car garage. The asking price is $175,000. Contact: Dudley Parkinson, 715-377-5560, dudleyparkinson@me.net.
- Marilee Fleming has for sale 27+ acres of farmland in northwestern Wisconsin’s Polk County (near Turtle Lake). The land has pasture and has not been sprayed for several years. Ten acres are fenced and have been used to raise small livestock. There is a garden, asparagus patch, rasp-berry patch, rhubarb patch and mint patch. There are also apple trees, crab apple trees and maple trees (over 200 are tapped); the property comes with a sugar shack and a maple syrup extractor. There are also butternut trees, chokecherry trees, as well as oak, ash and poplar. There is also a barn, heated shop, metal shop and several other buildings, as well as a house. The asking price is $189,000. Contact: Marilee Fleming, fleming@amerytel.net.
- Jan Kenyon has for sale 100 acres of farmland in southwestern Wisconsin’s Vernon County (near Ontario). The land has not been sprayed for several years and it includes 50 acres of tillable land, 20 acres of woods, 6 acres of pasture and a south slope meadows/old orchard space. There is a chicken coop, barn with hayloft, garage, cabin and a five-bedroom house. Kenyon is willing to divide the land into 50-acre por-
Seeking Farmers

Seeking Farmland

- **Jerome** is seeking to purchase 10-100 acres of tillable farmland in **east-central Minnesota's Wright County**. He and his family are currently raising hay and row crops near Buffalo, Minn., and would like to expand their small operation on a conservation basis. Contact: Jerome, 763-442-4793.

- **Lorrie Ogren** is seeking to purchase 1+ acres of farmland in **Minnesota or Wisconsin** in close proximity to the Twin Cities region. Land that has not been sprayed for several years and that has water and a house is preferred. Contact: Lorrie Ogren, 505-795-0468 (call or text), Lorriekayo@gmail.com.

- **Luke Tully** is seeking to purchase 40-80 acres of farmland in **Wisconsin**. Land with pasture and a house is preferred. Contact: Luke Tully, uesegi1@gmail.com.

- **Eric LaCanne** is seeking to purchase 80 acres of farmland in **western Minnesota's Renville County**. His goal is to develop a no-till operation that utilizes no chemicals to control weeds. Land with pasture is preferred; no house is required. A contract for deed would be a plus. Contact: Eric LaCanne, rlacanne@yahoo.com.

- **Jeffrey Albert Wald** is seeking to purchase 2-20 acres or more of farmland in the **southeast region of Minnesota’s Twin Cities**. Mixed-use land is preferable, with some trees, pasture and cropland desired. At least one outbuilding would be preferred. A house is required, but it can be a fixer-upper. Contact: Jeffrey Albert Wald, 651-276-4583, jawald34@gmail.com.

- **Andy** is seeking to purchase 5-20 acres of tillable farmland in the **Twin Cities, Minn., region**. Land that has not been sprayed for several years and that has access to water is preferred. No house is required. Contact: Andy, petran1420@gmail.com.

- **Girard Goder** is seeking to rent 1 tillable acre of farmland in the **Twin Cities, Minn., region (Hennepin County)** for vegetable and flower production. No house is required. Contact: Girard Goder, girard.goder@gmail.com.

- **Vince Peters** is seeking to rent 1-2 acres of farmland in the **Twin Cities, Minn., region**. Peters is interested in raising poultry and land with sheds/building sites, fencing, water and electricity is preferred; no house is required. Contact: Vince Peters, 651-983-7563, vincentpetersji@gmail.com.

- **David Rosenberg** is seeking to rent farmland in **Minnesota**. Land with pasture and outbuildings such as a barn and chicken shed, as well as a house, is preferred. Contact: David Rosenberg, 320-859-6402, momisheather102772@gmail.com.

- **David Gongoll** is seeking to rent 150-300 acres of tillable farmland in **east-central Minnesota’s Carver County**. Land with field tile is preferred; no house is required. Contact: David Gongoll, 612-849-8125, Gongoldavid@gmail.com.

- **Jonathan Bell** is seeking to rent 10-25 acres of farmland in the **Midwest**. Land with pasture and a house, and that has not been sprayed for several years, is preferred. Contact: Jonathan Bell, 253-905-1916, Jpbell66@gmail.com.

- **Carlos Quezada Hoffman** is seeking to purchase at least 6 acres of farmland in the **Twin Cities, Minn., region (Dakota, Scott, Carver or Hennepin County)**. Land that has not been sprayed for several years is preferred; no house is required. Contact: Carlos Quezada Hoffman, 612 237-4816, quesoque@gmail.com.

- **Jeremiah Peterson** is seeking to purchase 7-40 acres of farmland in **central Minnesota’s Morrison County**. Land with a house and at least one outbuilding that’s not a garage is preferred. Contact: Jeremiah Peterson, Jpeterson@veteranvalorfarm.org.

- **Claire and Tadhg** are seeking to purchase 10-15 acres of farmland in **south-central Wisconsin’s Dane County**. Water, outbuildings and a house on the property would be good, but are not a necessity. Contact: Claire and Tadhg, 262-366-6452, cberezowitz@wisc.edu.

- **Briana Eickhoff** is seeking to purchase 10+ acres of farmland in **northeastern Iowa’s Dubuque County (or surrounding counties)**. Eickhoff prefers land with timber and water, but they are not required. No outbuilding or a house are required; an abandoned farm or one otherwise in need of cleanup work is welcome. Contact: Briana Eickhoff, bs3519_00@hotmail.com, 515-708-3501 (call or text).

Seeking Farmer

- **Kathleen Anderson** is seeking a farmer to join her operation in **northeastern Minnesota’s St. Louis County (near Brimson)**. Currently .5 acre is under cultivation in vegetables, but more acreage could be added; they are not required. No house or a field tile is preferred; no house is required. Contact: Kathleen Anderson, 218-848-2442, wintermoon@brimson.com.

- **Dorie Grimes** is seeking a farmer to farm 4-5 tillable acres in **Minnesota’s Chisago County near the Twin Cities**. The land has not been sprayed for at least five years. No housing is available. Contact: Dorie Grimes, Doriecronin@gmail.com.

- **Craig David** is seeking a farmer who would be interested in shared or partnered pasture for sheep or beef. He has 50 acres of rolling pasture available in **southeastern Minnesota’s Wabasha County (Hwy Park Township)**. The pastures have been in CRP for many years. David has little farming experience and is interested in a long-term partnership involving grass-fed livestock or a possible mix of fruit trees and livestock. He is open to ideas for sustainable, organic agricultural use of the land. Contact: Craig David, 651-227-6386, artdavidii@yahoo.com.

- **Mike Sharp** is seeking a farm partner or partners interested in raising vegetables for market and in helping to lay the groundwork for an expanded enterprise on a 38-acre farm in **central Minnesota (near St. Cloud)**. Sharp primarily grows vegetables and did run a small CSA a number of years ago. Ten acres are tillable; there are 7 acres in mixed grasses that have not been sprayed in over 10 years. He has a small tractor, barn, equipment, etc.; some rustic housing options are possible. The long-term goal is to sell into the greater St. Cloud area. Sharp is looking for some creative ideas; profit sharing available. Contact: Mike Sharp, msharp@cloudnet.com.

- **Sarah Miles** is seeking a farmer to help with daily chores and projects such as fencing, shed construction, landscaping and product development on a 4-acre farm in **southeastern Minnesota’s Winona County (near Lewiston)**. The operation currently consists of a 200+ laying operation. The long-term goal is to make the farm a permaculture operation; it has not been sprayed in at least four years. Housing, some meals and monthly pay provided. Contact: Sarah Miles, 507-452-1056, sarahmls032@gmail.com.

- **Spruce Shadows Farm** is seeking a full-time farm manager for its pasture-based sheep breeding stock operation in **Bloomington, Minn., which is part of the Twin Cities Metropolitan Area**. The farm includes 60 acres and has 120 ewes. Responsibilities include moving animals on pasture, maintenance of fences and equipment, mowing, spreading manure and plowing snow, among other duties. Housing is available and the pay is negotiable. Contact: Cindy Wolf, info@sheepimprovement.com, 507-450-5453.
Rancher, Farmer, Fisherman: Conservation Heroes of the American Heartland

By Miriam Horn
2016; 394 pages
W.W. Norton & Company
www.rancherfarmerfisherman.com

Reviewed by Dana Jackson

It was surprising, and interesting, to discover that my family history is connected to the specific geographic areas that the “Rancher and Farmer” in the title of Miriam Horn’s new book inhabit in the great American Heartland.

Dusty Crary, the conservation hero in the first chapter of Rancher, Farmer, Fisherman: Conservation Heroes of the American Heartland, manages the family ranch his ancestors created along the “Front” of the Rocky Mountains near the town of Choteau, Mont., and the Teton River in the Missouri watershed. The stories Crary tells about hardships of early settlers along the Front match some I heard from my own parents. One hundred years ago this past February, my newly-wed parents left Salina, Kan., on a train and got off at the end of the line near Winifred, Mont., to homestead on the prairie about 200 miles east of Choteau, south of the Missouri River. The struggle to survive frontier hardships and the death of their first child brought them back to Kansas, where I was the fifth child they raised. I grew up in Abilene, a town surrounded by wheat fields and dominated by tall grain elevators and a flour mill about 30 miles east of where wheat farmer Justin Knopf, the second conservation hero in this book, farms 4,500 acres with his father and two brothers. About 10 miles north of his family’s original farm on Gypsum Creek is where I once lived and my three children grew up on the banks of the Smoky Hill River, which flows into the Kansas, then the Missouri, which empties into the Mississippi. Justin Knopf’s landscape is very familiar to me.

The “American Heartland” in the title of this book is the huge region of the Mississippi River watershed. Horn describes the 4,000 mile long Mississippi as the “main artery of American commerce,” cutting through “grand sweeping landscapes” that have provided food for the nation and livelihoods for generations of Americans. But the productive landscapes are in trouble: “…overgrazed, over-tilled, overfished; threatened by invasive species, development, ill-conceived feats of engineering, and extreme weather,” writes Horn. The author maintains that the people stepping up to save these national resources are the working people on tractors, barges and fishing boats. They are “conservation heroes,” reaching across a wide range of interests “to restore America’s grasslands, wildlife, soils, rivers, wetlands and fisheries—the vast, rich bounty that shaped our national character and sustains our way of life,” she writes.

Each chapter in this book tells the family history and life story of a “conservation hero” in the Mississippi watershed.

The Rancher

For example, rancher and former rodeo cowboy Dusty Crary is determined to keep the landscape on the plains and in the foothills next to the Rockies open and natural, not scarred by oil and gas development or chopped up into smaller ranchettes. As a hunter, Crary appreciates game species in the Bob Marshall Wilderness near his 20,000-acre ranch, but he also values grizzly bears and wolves and manages his livestock to reduce losses from predators. Crary wants private working farms and large ranches adjacent to vast areas of public land to thrive economically because he knows that keeping these landscapes connected protects biodiversity and enables wildlife species to move across the wide areas they need.

It’s Crary’s activism and his engagement in cooperative efforts to protect large scale landscapes that intrigues the book’s author, who works for the Environmental Defense Fund. Soon after Crary started ranching full time, the U.S. Congress protected the Bob Marshall Wilderness from oil drilling, but leased 150,000 acres of adjacent U.S. Forest Service and Bureau of Land Management (BLM) land to oil and gas companies, including a BLM oil lease to drill below Choteau Mountain just west of the Crary ranch. He recruited a few neighbors and helped create a coalition that succeeded in getting oil and gas leases withdrawn from all federal lands on the Front in 2006. Using the same strategies, the rancher initiated a proposal to add 67,000 acres to the Bob Marshall Wilderness and designate another 208,000 acres a “Conservation Management Area” that would allow grazing, but not new roads or leases. It took until 2014, but the proposal was passed.

Clary’s successful approach to protecting land is the theme of Horn’s book. His principles are based on starting small (no big public meetings), talking to folks who will listen while focusing on “the 80% that unites rather than the 20% that divides,” and respecting the contribution each partner brings, whether it’s local knowledge or professional expertise. In their own ways, the other conservation heroes featured in this book also follow these principles.

The Farmer

The America story of the family of farmer Justin Knopf goes back 160 years, when the Swedish settlers broke the prairie sod and established wheat farms on the eastern edge of the Great Plains. After generations of tilling the land and planting winter wheat, the prairie fertility was mostly gone by the time Knopf studied agriculture at Kansas State University in the early 1990s. A course in soil microbiology changed his whole outlook about farming. He became focused on soil health and convinced his family to gradually transition to a no-till system, use less fertilizer and plant nitrogen-fixing alfalfa in rotation with the cash crops. After exposure to North Dakota soil health “rock star farmer” Gabe Brown, Knopf started planting cover crops and experimenting with livestock grazing. The farmer knows that building soil’s organic matter content makes it more resilient in the face of extreme droughts and heavy rains brought on by climate change. Horn lauds Knopf for “revolutionizing industrial agriculture.”

But Knopf is not in this book just because of his innovative farming practices. He is a hero to Horn because he is joining the world of farm policy through a committee of the American Farm Bureau Federation. He is working to find farmer-led alternatives to solving water quality and pest problems.
instead of just contributing to what the Farm Bureau is most known for: fighting environmental regulation every opportunity it gets. Good luck, Justin!

The Fisherman
Before readers learn about the “Fisherman” in the book title, the author describes two other heroes working on the Mississippi River, an owner of a barge company and a businesswoman who advises and defends shrimpers. They are all dealing with the effects of climate change. The riverman Merritt Lane is CEO of the Canal Barge Company, which faces dangerous navigation conditions on the river because of record floods, drought–related low water and powerful hurricanes. In 2005 Hurricane Katrina caused great disruption to the shipping business; the devastation was repeated three weeks later by Hurricane Rita.

Changes in the Mississippi River system due to many years of excessive engineering by the U.S. Army Corps of Engineers have caused 2,000-square miles in the Delta that once sheltered coastal communities from tropical storms to melt into the Gulf of Mexico. When the state of Louisiana mandated a comprehensive plan for coastal protection, Lane was invited to represent the navigation industry in creating what was called the “Master Plan.” He’s now applying the Crary principles, striving for solutions that work for everyone.

The Master Plan also poses challenges for conservation hero Sandy Nguyen, the Vietnamese-born daughter of a shrimper who went on to marry one as well. Her extraordinary intelligence, courage and commitment benefit the large Vietnamese community around New Orleans. Since childhood, Nguyen has translated for Vietnamese shrimper families and helped with immigration and boat licensing paperwork. After college, she made community business assistance her profession, and following two hurricanes and an oil spill, Nguyen worked tirelessly to get small government loans to restore or buy new boats so people could get back to work. To get the natural ecosystem working again, the Master Plan calls for periodically letting Mississippi River water flow into the marshes to drop sediment and build soil. This changes the salt level in shrimp and oyster beds. So, both needing and fearing the coastal restoration that would be created by the Master Plan, the shrimpers and oystermen look to Nguyen to negotiate aspects of it for them. She gives everyone involved in this issue a chance to air their concerns.

The last conservation hero featured follows the same practical path as the others to, in this case, solve the problem of managing the declining Gulf fishery while preserving jobs. When federal strategies failed to boost red snapper populations and fisherman were going broke, Wayne Werner and 12 other frustrated commercial fisherman designed a “catch share plan” that won governmental support. This plan was prompted by the fact that to prevent decimation of the red snapper, the government had imposed the “Derby” system, a schedule of when fisherman could go out on Gulf waters and a set of limitations on how many fish they could take. The competition was fierce among the fishermen on the days they could fish, and they tended to cheat the system and overfish. Werner and his colleagues organized a system where there is an overall catch quota that is then divided up among the fisherman; they can fill their share of the catch whenever they want. Since the plan debuted in 2007, the fishing stock has revived and fishermen are earning a living again.

The Environmental Defense Fund applies the Crary principles, forging links to concerned citizens and government agencies alike to change policies, create plans and solve problems. Horn wrote this book during the Barack Obama Presidency, when these tactics made sense most of the time. With a new President and his cabinet set on gutting environmental regulations at every opportunity, principles based on working together to save a shared resource will be put to a significant test.

Former Land Stewardship Project associate director Dana Jackson co-edited the 2002 book, The Farm as Natural Habitat: Reconnecting Food Systems with Ecosystems.
LSP & You: Stay Informed, Volunteer, Renew

By Megan Smith

Get the latest from LSP on Facebook & Twitter

Do you follow the Land Stewardship Project on social media? LSP’s Facebook page is updated regularly with links to events, field days, news articles, podcasts, blogs and opportunities to take action. It’s like the daily journal of the organization. Over 7,000 people follow LSP’s Facebook page; it’s a lively and active platform to share our work for stewardship, justice and democracy. Check it out at https://www.facebook.com/lspnow.

Twitter is another way LSP has been reaching new audiences. Twitter allows LSP to report live from actions, meetings, events and field days, bringing the latest to our followers. It is also an effective organizing tool to engage political leaders and the media on LSP issues. You can find LSP on Twitter with our username @LSPnow.

If you’re not following LSP on social media yet, take a moment and check it out today. If you are following LSP on social media, thank you—and please share our page with your network to spread the word and get more people engaged in the work.

Upcoming Volunteer Opportunities in the Twin Cities

Thank you to all the volunteers who have helped to make telephone calls, stuff envelopes, run events and meetings, file paperwork and much more. Volunteers help LSP fulfill its mission and provide a major contribution to the work.

This summer we will be putting calls out for volunteers to help with the annual Twin Cities cookout on July 27. We will also be seeking volunteers for a membership telephone bank, two large mailings and more. If you are interested in helping or just want to get on LSP’s volunteer e-mail list, contact LSP’s Amelia Shoptaugh at 612-722-6377 or amelias@landstewardshipproject.org. For details on volunteering in LSP’s other offices, call 507-523-3366 in southeastern Minnesota or 320-269-2105 in the western part of the state.

Renew Your LSP Membership before June 30

If you haven’t renewed your LSP membership yet, please do so today. Keeping your annual membership current is an important part of keeping the Land Stewardship Project grounded and effective. LSP members provide the power and creativity to make the changes we seek in our farm and food system. The more members we have, the more we can accomplish. You can renew three ways: with the envelope included in this issue of the Land Stewardship Letter, online, or by calling our Minneapolis office at 612-722-6377.

You can also become a sustaining member and start a monthly pledge of $10, $15 or $20 to the Land Stewardship Project. Sustaining memberships provide a reliable and sustainable source of support for LSP. That means we can take action when and where it’s needed most. Plus, your membership is always current, so you won’t receive annual renewal notices and you can change your pledge at any time.

LSP membership assistant Megan Smith can be reached at megans@landstewardshipproject.org or 612-722-6377.

Thanks LSP Volunteers!

For the 12th year in a row Land Stewardship Project volunteers helped make the Family Farm Breakfast and Lobby Day at the Capitol (see page 6) a resounding success. They signed people in, helped in the kitchen and dining area, cleaned up and in general helped the day go smoothly.

LSP relies on our volunteers throughout the year. If you would like to learn more about volunteering opportunities, contact one of our offices: Lewiston (507-523-3366), Montevideo (320-269-2105) or Minneapolis (612-722-6377). (LSP Photo)
In Memory & in Honor…

The Land Stewardship Project is grateful to have received the following gifts made to honor and remember loved ones and friends:

- In Memory of Everett Koenig
  - JoAnn Thomas & Doug Nopar
  - Dean & Sally Harrington
  - Karen Stettler & Ted Wilson
  - Rosemary Koenig

- In Memory of Ralph Stadick
  - Mary Stadick

- In Memory of Evie Lieske
  - Martin & Loretta Jaus

- In Memory of Marge Berg
  - Martin & Loretta Jaus

- In Memory of Bette Lou Kuss
  - Martin & Loretta Jaus

- In Memory of Rachel Odina Griffin-Heublein
  - Evelyn Poole

- In honor of Prescott Bergh
  - Richard Purdy & Maureen Ash

- In honor of Ron Wetzell’s 70th birthday
  - Lea Wetzell

For details on donating to LSP in the name of someone, contact Mike McMahon at 612-722-6377 or mcmahon@landstewardshipproject.org. Donations can be made online at www.landstewardshipproject.org/home/donate.

Membership Questions?

If you have questions about the status of your Land Stewardship Project membership, give our Individual Giving and Membership Program a call at 612-722-6377, or send an e-mail to megans@landstewardshipproject.org.

Get Current With LSP’s LIVE-WIRE

Sign up for the LIVE-WIRE e-letter to get monthly updates from the Land Stewardship Project sent straight to your inbox. Details are at www.landstewardshipproject.org/signup.

Lewiston Office Seeking Telephone Volunteers

Volunteers are periodically needed for telephone banks at the Land Stewardship Project’s Lewiston office in southeastern Minnesota, particularly during the legislative session, and usually on weekday evenings or occasionally weekend afternoons. You will typically be calling other LSP members or supporters to, for instance, invite them to an upcoming meeting or event, or ask them to take action by contacting their legislators on an important bill.

If you’d like to be added to the pool of volunteers interested in helping with telephoning at the Lewiston office, e-mail LSP organizer Johanna Rupprecht at jrupprecht@landstewardshipproject.org, or call her at 507-523-3366.

The Gift of Stewardship

Gift memberships are a great way to introduce friends and family to the Land Stewardship Project while supporting the organization. When you purchase a gift membership, LSP will send the recipient a special card along with an introductory membership packet.

For more information, contact LSP’s Megan Smith at 612-722-6377 or megans@landstewardshipproject.org. You can also purchase gift memberships online at www.landstewardshipproject.org/home/donate.

Ear to the Ground Podcast

The Land Stewardship Project’s award-winning Ear to the Ground podcast features over 190 episodes focused on everything from beginning farmer issues and soil health, to policy and local food systems. Check them out at www.landstewardshipproject.org/posts/podcast.

Support LSP in Your Workplace

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

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

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 to give through the Minnesota Environmental Fund, ask the person in charge of workplace giving to include it. For details, contact the Land Stewardship Project’s Mike McMahon at mcmahon@landstewardshipproject.org or 612-722-6377.

The Land Stewardship Project's award-winning Ear to the Ground podcast features over 190 episodes focused on everything from beginning farmer issues and soil health, to policy and local food systems. Check them out at www.landstewardshipproject.org/posts/podcast.

Sign up for the LIVE-WIRE e-letter to get monthly updates from the Land Stewardship Project sent straight to your inbox. Details are at www.landstewardshipproject.org/signup.
**STEWARDSHIP CALENDAR**

<table>
<thead>
<tr>
<th>Event Description</th>
<th>Date</th>
<th>Location</th>
<th>Contact Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>JUNE 11 — LSP Farm Beginnings Field Day on Diversified Family Farming: Livestock &amp; Vegetable Production</td>
<td>1 p.m.-4 p.m., Whetstone Farm, Amery, Wis.</td>
<td>Dori Eder, LSP, <a href="mailto:dori@landstewardshipproject.org">dori@landstewardshipproject.org</a>, 612-578-4497</td>
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<tr>
<td>JUNE 22 — PFI Field Day on Managed Grazing &amp; CSP for Farm Biodiversity</td>
<td>2 p.m.-5 p.m., Prairie Quest Farm, McGregor, Iowa</td>
<td>Mary Damm, 563-536-1170, <a href="mailto:marydamm@gmail.com">marydamm@gmail.com</a>, <a href="http://practicalfarmers.org/news-events/events">http://practicalfarmers.org/news-events/events</a></td>
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<tr>
<td>JUNE 24 — LSP Prairie BioBlitz, Glacial Lakes State Park, Starbuck, Minn.</td>
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<td>(see sidebar on this page)</td>
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<tr>
<td>JULY 9 — LSP Farm Beginnings Field Day on Humanely Raised Pigs</td>
<td>1 p.m.-4 p.m., Lake City Catholic Worker Farm, Lake City, Minn.</td>
<td>Dori Eder, LSP, <a href="mailto:dori@landstewardshipproject.org">dori@landstewardshipproject.org</a>, 612-578-4497</td>
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<tr>
<td>JULY 23 — LSP Farm Dreams Class</td>
<td>1 p.m.-5 p.m., Minneapolis, Minn.</td>
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<td>(page 23)</td>
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<tr>
<td>JULY 27 — LSP Twin Cities Summer Potluck Cookout</td>
<td>5:30 p.m.-8:30 p.m., LSP Minneapolis office</td>
<td>Mark Rusch, LSP, 612-722-6377, <a href="mailto:mrusch@landstewardshipproject.org">mrusch@landstewardshipproject.org</a></td>
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<tr>
<td>AUG. or SEPT. — LSP Farm Dreams Class</td>
<td>(page 23)</td>
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<tr>
<td>AUG. 1 — Early Bird Application Deadline for 2017-2018 LSP Farm Beginnings Course</td>
<td>(page 23)</td>
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<tr>
<td>AUG. 6 — LSP Farm Beginnings Field Day on Grazing Skills &amp; Pasture Management</td>
<td>1 p.m.-4 p.m., Hannah Bernhardt &amp; Jason Misik Farm, Finlayson, Minn.</td>
<td>Dori Eder, LSP, <a href="mailto:dori@landstewardshipproject.org">dori@landstewardshipproject.org</a>, 612-578-4497</td>
<td></td>
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<tr>
<td>AUG. 8 — Soil Health &amp; Cover Crops Field Day</td>
<td>8:30 a.m.-4 p.m., Blooming Prairie &amp; Austin, Minn.</td>
<td>Shona Snater, LSP, 507-523-3366, <a href="mailto:ssnater@landstewardshipproject.org">ssnater@landstewardshipproject.org</a></td>
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**LSP’s Farm Beginnings Accepting Applications for 2017-2018 Class**

The Land Stewardship Project’s Farm Beginnings Program will be holding its 2017-2018 class in Pine City in east-central Minnesota. The deadline for applications is Sept. 1. See page 23 for details.

**Journeyperson Course (page 23)**

- **OCT. 1 — LSP Farm Beginnings/Minnesota Food Association Field Day on Extending the Vegetable Season with Storage Crops** | 2 p.m.-5 p.m., Blackbrook Farm, Amery, Wis. | Dori Eder, LSP, dori@landstewardshipproject.org, 612-578-4497 |  |
- **OCT. 21 — 2017-2018 LSP Farm Beginnings Class begins in Pine City, Minn.** | | | (page 23) |
- **NOV. 11-12 — LSP Journeyperson Retreat I** | (page 23) | |  |
- **DEC. 9-10 — LSP Journeyperson Retreat II** | (page 23) | |  |
- **FEB. 11 — LSP Journeyperson Retreat III** | (page 23) | |  |
- **MARCH 31 — Final Session of the 2017-2018 LSP Farm Beginnings Class in Pine City, Minn.** | | | (page 23) |

**Come ‘BioBlitz’ the Prairie June 24**

Are you a prairie enthusiast ready to share your knowledge and passion with others? Are you looking for a fun family day that also supports public lands? Join the Land Stewardship Project for a “BioBlitz” on Saturday, June 24, in and around Glacial Lakes State Park in western Minnesota.

This year, in partnership with the Chippewa River Watershed Project and Clean Up the River Environment, LSP will learn about and take species surveys on land managed by public agencies, as well as at a private prairie area managed with a government easement.

Details, along with an online sign-up form, are at http://landstewardshipproject.org/stewardshipfood/chippewa10bioblitz. More information is also available by contacting LSP’s Robin Moore at 320-321-5244 or rmoore@landstewardshipproject.org.