



36 Years of Keeping the Land & People Together Letter

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LAND <u>STE</u>WARDSHIP

PROJECT



The currency of carbon: ruminating over soil health profitability (page 16).

Bold Solutions for Rural Communities
A Failed Farm Bill Offers Hope
Soil: Naked, Hungry, Thirsty, Running a Fever
Calculating Soil Erosion's True Costs
Financial Stress: Never, Ever, Ignore Bad News
Ecological Agrarians: When Nature Bites Back
The Driftless Reader, Letters to a Young Farmer



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

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Bold Solutions Call for Bold Action

Minnesota's Next Governor Must Take Direct, Concrete Steps

By Mark Schultz

The people of Minnesota are beginning to consider what they would like the future of the state to look like in the context of the fall gubernatorial elections. Will they elect Minnesota's first lenges us to think more seriously and more boldly about what is needed, and about how we the people can make that happen.

What is most clear to me is that LSP has an opportunity, and I believe an obligation, to lift up, discuss, and work for bold and effective solutions that are of the scale and scope necessary to address the serious chalagriculture and denies small- and mid-sized farmers access to profitable markets, affordable credit, affordable healthcare and land. Let's be clear—lots of public resources go to support market development, tax abatement or other benefits for industrial agriculture and the largest corporate-backed operations. But most Minnesota farmers are locked out of those markets and there is very little public support for developing the profitable markets they need.

A recent example of this wholesale sellout to corporate agriculture is the legislative testimony of Dr. Marin Bozic of the University of Minnesota this spring. He comfortably noted that there is no hope for 80 percent of Minnesota's dairy farms, and then offered as an example of hope the multistate conglomerate Riverview LLP with



Land Stewardship Project board member and farmer Laura Frerichs recently spoke at an "Our Minnesota Future" event where rural citizens discussed their priorities with candidates for Minnesota governor. (*LSP Photo*)

woman governor? Go "Back to the Future" with a former governor? Select a leader in agriculture policy? Or a county commissioner from the Twin Cities metropolitan area?

But the key question is not who—it is what. What is needed, and how will it be done? Land Stewardship Project members are in the thick of these discussions. As we report on page 12 of this Land Stewardship Letter, farmers and other rural residents have been expressing their "Vision for Rural Minnesota."

The work done on "A Vision for Rural Minnesota," along with the Land Stewardship Project's participation with 21 other people's organizations in the statewide "Our Minnesota Future" effort (*see page 8 of the No. 1, 2018*, Land Stewardship Letter), challenges we face in Minnesota. Half-measures and short ends of the stick won't cut it.

So, in order to stimulate more thought, action and dialogue, here are some of my thoughts. These are not a prescription, nor are they LSP's adopted agenda, but they are being shared as an opportunity for us to raise the bar. Perhaps more importantly, it's a chance to lift up our own eyes to see what is really needed and what bold solutions are possible.

Redirect Public Resources to Put People First

There is no doubt we are in the midst of an economic farm crisis. In agriculture, corporate control of the economy and of government benefits large-scale industrial 34,500 cows in confinement in Minnesota. As LSP member Bill McMillin noted in a letter-to-the-editor, professor Bozic's vision would mean we only need about a dozen more mega-operations to produce milk in Minnesota.

We don't need continued public subsidies and support for these huge industrial operations, with their multi-million-gallon manure lagoons, absentee investors, lowwage jobs and an economic structure that sucks resources out of our communities. What Minnesota's next governor needs to do is redirect resources away from corporate control and focus them on the success of everyday Minnesotans, like small- and mid-

Bold, see page 4...

...Bold, from page 3

sized farms and businesses. They also need to focus on making healthy food available to all through local and regional systems. That's the way to a healthy economy and society, and a healthy land.

For example, how about Minnesota's new governor working with the people directly affected by this corporate control of agriculture to develop substantial markets for Minnesota's moderate-sized farms that are producing milk, livestock, fruit and vegetables? The state could engage seriously with public institutions that provide food to people—schools, nursing homes, day care centers and hospitals—and provide them with the resources to purchase that food from farms in our region at a much larger scale than is being done currently.

This will mean divesting from excessive support for the corporate-controlled system and investing instead in the farmers, children and elderly people of the state. It's called good government—putting the people first.

The first step the new governor should take is to appoint a commissioner and assistant commissioners of agriculture who support this and for whom this is the priority.

Stop Subsidizing Factory Farms

Did you know that the State of Minnesota currently provides corporate-backed factory farms a tax abatement for huge multi-million gallon "lagoons" filled with liquid manure? That's right, the public is basically subsidizing structures that are ticking time bombs of pollution, and which are likely to cost the public many millions of dollars for clean-up once they are abandoned by their investors. Minnesota should remove that public subsidy and establish a tax on the largest manure lagoons/pits. We could then take the revenue generated by such a tax and invest it in promoting and supporting livestock production systems-such as managed rotational grazing and deep-straw swine setups-that have proven to be a net positive for our communities and the land.

Support the Next Generation of Farmers

Many young people want to farm—people coming from existing Minnesota farms, from urban/suburban communities, and from other countries. They want to contribute to society and our economy by growing healthful food, caring for the land, and investing

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the wealth they generate in their own farms and in their communities in a way that supports schools, local businesses and community events.

When the wealth generated by agriculture runs through small- and mid-sized family farms, our communities prosper—we know this very clearly from our own history. Minnesota needs to enact policies that result in affordable access to land for beginning farmers, and address the historic structural racism that denies land to people of color. That means affordable loans, grants for startup or early scale-up, market development by the state, support for food sovereignty efforts by native communities, and improved tax credits to landowners selling or renting to beginning farmers.

Establish a Minnesota State Bank

To build a healthy economy in which prosperity is widely shared across the state, people need credit. While community banks and credit unions are good partners, more is needed. Minnesota's next governor could work to establish a "state bank," such as

the one that has suc-

cessfully operated in

North Dakota for 99

years (see https://bnd.

nd.gov/the-bnd-story).

Why should the assets

of the state-annual

etc.-be held by the

tax revenues, fees,

big banks, which

When the wealth generated by agriculture runs through small- and mid-sized family farms, our communities prosper—we know this very clearly from our own history.

• •

just use it to invest in the extension of corporate control in our economy? Rather, we should put those public assets in the state's own bank, and invest them in people: education loans that are affordable, small business loans, farm loans that support small- and mid-sized family farms. That's smart fiscal policy, and shifts resources away from corporate control.

Address the Healthcare Crisis

One issue that extends across all of our communities is the current healthcare crisis, and addressing it with real solutions should be a top priority for our next governor.

I recently read an interesting book called, Viking Economics: How the Scandinavians Got It Right. Among other policies, the book examined healthcare policy in Norway, Sweden, Denmark and Iceland. It laid out the significant fiscal savings and huge health benefits of publicly-run, publicly-funded universal health insurance systems. Among other things, these systems provide excellent coverage and care for rural people, something which many rural Minnesotans lack right now. Minnesotans get no help from the current Legislature, which wrongly pretends

What Minnesota's next governor needs to do is redirect resources away from corporate control and focus them on the success of everyday Minnesotans.

that cutting back on affordable coverage while literally handing out hundreds of millions of dollars to insurance corporations is the answer. The new governor should address the real pain and impoverishment that comes with a health system controlled for profit by major corporations.

Recognize & Reward Healthy Soil

As many LSP members have witnessed, there is a lot of excitement over the role building healthy soil in our fields and pastures can play in creating resilient, profitable, environmentally-beneficial farms. Building soil health isn't just good for farmers—it also provides public goods for everyone in the form of cleaner water, nutrient-dense food, and sequestered greenhouse gases.

I'm extremely interested in what readers of the *Land Stewardship Letter* think can be done in Minnesota through a governor's leadership and positive state policy to assist thousands of farmers attempting to build soil health on their farms. What incentives can be provided, or obstacles cleared, or public research undertaken, to assist farmers building soil? How can the resources of our public institutions be directed to promote the regeneration of the soil?

Loud & Clear

This is not an exhaustive list, of course. It's meant to stir discussion, to cause us to lift our sights as to what is needed and what is possible. I encourage LSP's members and supporters to think about what changes you would like to see in your communities and on the landscape, and what bold steps the next governor can take to bring such changes about. Let us know what you think-attend an LSP meeting, give me a call, or contact one of our organizers. Let others know, too-through your social media, or a letter-to-the-editor. Participate in a public hearing or candidates' forum. The bottom line: one way or the other, make your bold voice heard.

LSP executive director Mark Schultz can be reached at marks@landstewardstewardshipproject.org or 612-722-6377. LSP's **Our Minnesota Future** web page is under the **Organizing for Change** tab at www. landstewardshipproject.org.



2016-2017 Financial Update

Expenses by Operat	tional	Area
Policy & Organizing	.29%	\$722,481
Food Systems	20%	\$497,467
Farm Beginnings	13%	\$328,744
Farm Legacy Initiative	0%	\$12,077
Soil Health	5%	\$125,825
Membership/Outreach	12%	\$293,329
Communications	3%	\$81,697
Other	1%	\$28,968
Management & General.	11%	\$273,330
Fundraising	6%	\$160,468
Total		\$2,524,386

Temporarily R Opera	estricted & Ui ating Revenue	
Religious Grants	6%	\$100,000
Foundations & Corporations, Including Released from Restriction	on 30%	\$504,369
Government Grants	20%	\$356,619
Membership & Contributions	35%	\$608,708
Fees & Sales	5%	\$88,012
Other	2%	\$36,796
Unrealized Investment Gains (Losses)	4%	\$62,329
Total		\$1,756,833

Statement of Financial Position (As of June 30, 2017)

Assets

Liabilities & Net Assets

Total Liabilities\$590,910

Net Assets:

Unrestricted	5760,714
Board-Controlled Long-Term & Short-Term Reserves	\$603,942
Temporarily Restricted Grants for Future Fiscal Years	61,353,419

Total Liabilities & Net Assets......\$3,308,985

• From audited statements based on generally accepted accounting principles for nonprofits, which book temporarily restricted net assets raised for future use in the year granted.

• Expenses include contracts with collaborating nonprofit, university or government partners for jointly conducted work.

• Reserve Funds under Liabilities and Net Assets include previous gifts of farms donated to the Land Stewardship Project for long-term support and sold to family farmers in a way that protected the land for farming and open space.

• Mahoney, Ulbrich, Christiansen and Russ, P.A. expressed an unqualified opinion on the financial statements of the Land Stewardship Project.



2018 Family Farm Breakfast at the Capitol

Just under 300 citizens and Minnesota state legislators dined together April 12 during the Land Stewardship Project's 13th Annual Family Farm Breakfast at the Capitol. As in the past, the breakfast featured food grown on the farms of LSP members. Over the years, this event has evolved into an excellent opportunity for citizens and legislators to come together over delicious locally produced food to discuss LSP's legislative priorities. The meal was prepared by the Birchwood Café's executive chef, Marshall Paulsen (*pictured, top right*), and featured muffins (*below, left*) made from Kernza, a perennial wheat being researched by the University of Minnesota's Forever Green initiative. After the breakfast, LSP members took part in lobby training and walked to the Capitol to meet with lawmakers. A summary of the 2018 legislative session starts on page 8. (*LSP Photos*)







Shoptaugh Named LSP Operations & HR Mgr.

melia Shoptaugh has been named the Land Stewardship Project's Operations and Human Resources Manager. Shoptaugh joined LSP's staff in 2013 and has served as the organization's Director of Administration/ Twin Cities Office Manager. In that position, she spearheaded upgrading LSP's informa-

tion technology and telephone systems, and worked extensively to revamp the organization's personnel policies.

Shoptaugh recently received her master's degree in human resources management, and in her new position she is working closely with LSP's management team to create and



Amelia Shoptaugh

implement better processes for creating job descriptions and hiring. Shoptaugh is also developing an employee manual to build on LSP's personnel policy update. She can be reached at 612-722-6377 or ashoptaugh@ landstewardshipproject.org. □

Wasserman-Olin Leaves LSP

Rebecca Wasserman-Olin is departing the Land Stewardship Project to attend graduate school at Cornell University in New York. Since

2015, Wasserman-Olin has worked with the Chippewa 10% Project to develop economic decisionmaking tools for farmers. Through that work, she created the Cropping Systems Calculator (*see page 20-21*), an online tool for farmers and land managers who want to calculate the financial



Rebecca Wasserman-Olin

ramifications of various rotations involving small grains, cover crops and grazing systems. The Calculator has been utilized throughout the Midwest and was recently featured in a Union of Concerned Scientists "Reintegrating Land and Livestock" report. While at Cornell, Wasserman-Olin will study vegetable production economics and specialty crop supply chains.

Dwight Ault: 1930-2018

wight Ault, a pioneer in the development of sustainable agriculture policies as well as innovative swine production practices, passed away April 24. He was 87 and is survived by his wife Becky

and their four children: Kurt, David, Grant and Melissa. Ault was a long-time Land Stewardship Project member, and served as a key member of its Federal Policy Committee for several years. During that time, he helped develop



Dwight Ault

innovative federal policy initiatives such as the Conservation Stewardship Program. Ault frequently testified at public meetings and participated in LSP policy fly-ins to Washington, D.C., where he met with lawmakers and was often quoted by the media. Ault served on the board of the Minnesota Food Association and was active with numerous agricultural and environmental organizations, including the Izaak Walton League, Practical Farmers of Iowa, Minnesota Farmers Union, the Animal Welfare Institute and the Union of Concerned Scientists.

Ault obtained a degree in agronomy from Iowa State University and for a time he served as an assistant county Extension agent in southern Minnesota. He and Becky eventually launched a crop and livestock farm in the Austin, Minn., area.

Dwight was a leader in refining innovative farming systems related to, among other things, raising hogs on pasture. The farrowing of sows on pasture and in deep-straw systems was a focus of the farm for many years and in 1995 Dwight and Becky produced a publication called, A Gentler Way— Sows on Pasture: Reports from Sustainable Farmers from Minnesota & Iowa. Dwight's work with alternative swine systems took him to Europe, including Poland and the former Soviet Republic of Latvia.

Dwight Ault was also well known for his raucous sense of humor, which he expressed in a distinct baritone voice. Meetings and gatherings across the Midwest will never be the same without his presence.

As his son David wrote in a remembrance: "The world has gone a notch more somber without him to liven us all up." \Box



On April 24, the **Red Stag Supperclub** in Northeast Minneapolis hosted an Earth Day Breakfast through which it donated a portion of its proceeds to the Land Stewardship Project. During the breakfast, LSP staffers such as Eric Avery (*pictured*) talked about the importance of healthy soil and clean water in urban and rural areas. On June 11, the **LowBrow** restaurant in South Minneapolis donated part of its evening meal proceeds to LSP. LSP would like to thank the owners and staff of the Red Stag and the LowBrow for their support. (*LSP Photo*)

Policy & Organizing

2018 Minnesota Legislature

The People Push Back

LSP Members & Their Allies Made Their Voices Heard at the Capitol in 2018

By Amanda Babcock

From the beginning of the 2018 Minnesota legislative session, corporate interests and their legislative allies were pushing for special treatment at the expense of rural communities, smalland mid-sized farms, and Minnesota values.

As an example, six days into the legislative session, Dr. Marin Bozic, a dairy economist at the University of Minnesota, testified before a joint hearing of the Senate Agriculture Policy and Finance Committees. Stating he was testifying on behalf of the industry group Minnesota Milk as well as the U of M, Dr. Bozic said, "We are going to see a number of dairy farmers that are no longer competitive... We would be doing them a disservice by offering some handouts that would prolong their hope but really there is nothing there to hope for." He then lifted Riverview Dairy, an 8,000+ cow dairy in Morris, Minn., as the prime example of what type of operation our state resources should be focused on. (His full testimony can be found at https://bit.ly/2FB624E, starting at 1:06:15.)

Dr. Bozic's assertions that more factory farms are inevitable for Minnesota's future, that they should be supported by state resources, and that small- and mid-size family dairy farms are no longer viable, went unchallenged by Senators on the committees.

To counter this attitude that rural Minnesota should be sacrificed for the sake of corporate profits, the Land Stewardship Project had a strong presence throughout the 2018 legislative session. Through consistent, effective engagement, members and staff stood up for family farmers, healthy rural communities and Minnesota values.

LSP organizer Amanda Babcock helped lead a lobby training after the Family Farm Breakfast at the Capitol on April 12. After the training, LSP members held dozens of meetings with lawmakers where they discussed issues related to clean water, sustainable agriculture funding, local control, support for family farmers, and more. (LSP Photo) Here is a taste of how LSP members took action:

• Hundreds of members attended the LSP Family Farm Breakfast and Day at the Capitol on April 12, as well as Water Action Day on May 2.

◆ Josh Reinitz of Henderson and Darrel Mosel of Gaylord, both LSP farmer-members, testified in opposition to weakening the Minnesota Groundwater Protection Act.

◆ James Kanne, an LSP member and dairy farmer from Franklin, testified in support of increased funding for Minnesota Farm Advocates and Farmers' Legal Action Group, initiatives that aid farmers, including those facing financial stress.

♦ Hundreds of members made calls and sent messages urging their elected officials to stand by Minnesota values.

The LSP way is to promote the best and fight the worst. For the best, we worked for an improvement to the Beginning Farmer Tax Credit, increased funding for the Forever Green initiative at the U of M, and increased funding for the Farm Advocates program and Farmers' Legal Action Group.

Here's a summary of how LSP's priorities fared at the 2018 Legislature:



Legislature failed to increase funding for the Forever Green initiative. For the first time in five years, we were unable to secure funding for this program. 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. During the 2017 session, LSP worked with the Minnesota Environmental Partnership to secure \$750,000 per year for the program, which was not on par with the usual \$1 million per year in funding it had received previously. This session, \$500,000 in Forever Green funding was included in the House Omnibus Legacy Finance Bill. However, the Senate took no action and the Legacy Bill died.



No improvements to the Beginning Farmer Tax Credit. Passed last year after years of strong LSP membership engagement and active work at the Capitol, the Beginning Farmer Tax Credit

requires improvements to ensure a greater number of prepared beginning farmers qualify. This legislation was a part of the Omnibus Agriculture Policy Bill, which was vetoed by Governor Mark Dayton due to inclusion in the bill of a controversial provision weakening the state soil loss ordinance.



No funding for Farm Advocates or Farmers' Legal Action Group (FLAG). Family farmers across Minnesota are facing a crisis after several consecutive years of low prices.

Programs like Farm Advocates and FLAG assist farmers facing financial stress. These groups keep family farmers on the land by assisting those facing foreclosure and other crises. For example, the number of new monthly cases taken on by Farm Advocates doubled between January and March, and is likely to continue rising. A sum of \$30,000

Minnesota Legislature, see page 9...





LSP farmer-member James Kanne (second from left) called for strong groundwater protection during an "Our Minnesota Future" rally in front of Governor Mark Dayton's office. (Photo by Amanda Babcock)

Minnesota Legislature, from page 8

was included in the Legislature's budget proposal, although much more funding is needed. Even though it was considered in committee, the Legislature disappointingly did not include funding for FLAG. Since the massive Omnibus Funding Bill was laden with controversial provisions, Governor Dayton vetoed it on May 23. It's troubling that during a deep farm financial crisis, little time and resources were committed to this issue. Only a small amount of money was included in the supplemental budget for Farm Advocates. Priority and noncontroversial issues like this should have been moved as stand-alone bills, rather than as part of a controversial omnibus bill.

> **Defeated legislation that would have weakened the Minnesota Groundwater Protection Act.** LSP and our allies beat back legislation aimed to weaken the Minnesota Groundwater Pro-

tection Act's ability to regulate the overapplication of nitrogen fertilizer, which is a major contributor of groundwater pollution. Seventy-five percent of Minnesotans depend on groundwater for drinking water. Strong opposition from the Governor was key in getting this legislation dropped from omnibus bills, thus failing to pass.



Weakening of the soil loss law was defeated. Just days before the end of the legislative session, an unacceptable provision that severely undermined a law designed to address soil erosion

was inserted into the Omnibus Agriculture

Policy Bill. The intention of this law is to protect farmers and rural residents from excessive soil loss and erosion impacting their land. The law provides a mechanism for remediation overseen by the Board of Water and Soil Resources in cases where the county does not have its own ordinance. Due to the inclusion of the provision weakening the soil loss law, Gov. Dayton vetoed the overall bill. LSP supported that veto.

Unfortunately, the Omnibus Agriculture Policy Bill contained many other positive policies—the Beginning Farmer Tax Credit, for example—that were prevented from passage due to the inclusion of this "poison pill" provision.



Reduction in funding for urban ag & Farm-to-School programs was defeated. Despite a state budget surplus, the Legislature's supplemental budget proposal

would have cut funding for urban agriculture programs, the Good Food Access Program and the Farm-to-School Program by \$250,000. These programs support the local food movement and urban agriculture. Farm-to-School is good for farmers, kids and communities. LSP allies at the Institute for Agriculture and Trade Policy championed opposition to these budget cut proposals. These cuts were part of the massive Omnibus Budget Bill that was laden with other controversial provisions, and which was vetoed by Dayton.



Legislation to bypass the Public Utilities Commission, environmental review, and public comment to green-light Enbridge Line 3 was defeated. Corporate interests and their legislative allies attacked the core American values of respect for an open and democratic process by passing legislation that disregarded the public comment, environmental review and certificate of need process on the proposed Enbridge pipeline, a highly controversial project in northern Minnesota. The legislation would have simply granted Enbridge the authority to start building on its preferred pipeline route immediately. The bill was passed in both the House and Senate, but was vetoed by Dayton.



Outside corporate interests' attempt to weaken democracy with "Guilty by Association" legislation vetoed by the Governor. Legislation that would impose criminal and financial

liability on those who attend or support a peaceful protest where critical infrastructure is damaged by someone else was passed in the House and Senate.

This bill was being driven by outside corporate interests that want to chill dissent and prevent people from standing up to corporate power. Gov. Dayton insisted that this provision be removed from the Omnibus Supplemental Bill, and it was, but the Legislature passed it as a stand-alone bill. LSP and dozens of other groups called for a veto.

"Although this bill is called an act of public safety, its contents would have the opposite effect," wrote Dayton in his veto letter. "I would not support a bill that potentially holds Minnesotans responsible for other people's actions with which they had no direct involvement."

LSP organizer Amanda Babcock can be reached at 612-722-6377 or ababcock@ landstewardshipproject.org.

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Healthcare Legislative Update Theme at the Capitol: Undermine Coverage Even More

By Paul Sobocinski

The harshest reality of the 2018 session of the Minnesota Legislature was that there were no real attempts to fix some of the most serious problems faced by those who are in the individual market and are experiencing high premiums along with very high deductibles. In fact, legislation was proposed that would increasingly undermine healthcare for Minnesotans making use of public programs such as Medicaid and MinnesotaCare.

One of the worst pieces of legislation introduced this session was HF 3722, a proposal authored by Rep. Kelly Fenton in the Minnesota House, along with other key representatives, including Speaker of the House Kurt Daudt. The Senate companion to this bill, SF 3611, was authored by Sen. Mark Johnson. This legislation was designed to put a whole other group of Minnesotans in trouble with so-called work requirement pro-

visions designed to kick them off Medicaid. Fortunately, over 100 organizations, including Lutheran Social Services of Minnesota, Children's Defense Fund, Catholic Charities of St. Paul and Minneapolis, Catholic Health Association, Minnesota Nurses Association, SEIU Healthcare Minnesota and Land Stewardship Project, were successful in defeating this legislation by speaking out with a united voice. Our message? It's wrong to weaken healthcare coverage for the poor and vulnerable of Minnesota. As I pointed out in an LSP blog earlier this year (https://landstewardshipproject.org/posts/1055), healthcare has been the one stable thing these families could count on.

Instead of the Legislature expanding MinnesotaCare to parts of the state where there are limited healthcare plans being offered in the individual market, a proposal that would have prohibited the Department of Human Services from further work on designing a MinnesotaCare buy-in was proposed. We defeated that proposal as well.

A Physician's Perspective on Healthcare We Must Have Legislators Supporting True Reform

By Dr. Aleta Borrud

Healthcare is a crisis for most people across the U.S., particularly in our rural areas. People delay going to the doctor because of \$7,000 to \$13,000 deductibles. Local newspapers announce benefit events to finance a child's expensive cancer therapy. Beginning farmers limit their income growth to avoid losing MinnesotaCare, a public program for lowerincome residents. Rural clinics and hospitals close because caring for our older neighbors is not "cost effective." Maybe this is your story.

Ironically, people are hurting in a state like Minnesota, where there is an exceptional wealth of medical resources and a growing economy with full state coffers. But instead of using these resources to create reforms, which could provide everyone with quality care, legislative leaders are redirecting the public's gaze to our neighbors and trying to scapegoat the poorest among us those on Medical Assistance (MA). They imply that people on our public programs are getting something for nothing by not working, when in fact, most of the people on MA are working or in nursing homes. This scapegoating is a smokescreen.

We are told that healthcare is costing us too much. Yes, the U.S. spends a lot—about 50 percent more—than our peer countries in the Organization for Economic Cooperation and Development, according to an analysis conducted by the Kaiser Family Foundation. But we are not seeing the doctor as frequently, we have fewer doctors and hospital beds, and have worse outcomes with shorter life spans.

Most healthcare providers, especially those in rural areas, are not benefitting from these extra dollars spent. A study in the journal *Mayo Clinic Proceedings* found that more than half of the almost 7,000 U.S. physicians who responded to a survey reported professional "burnout." Part of the problem is that doctors are increasingly buried under immense paperwork and harassment from insurance company pre-authorization requests. All that money flowing through the Governor Mark Dayton's veto of the Omnibus Finance Bill stopped a provision that would put in place a third-party vendor eligibility verification for people enrolled in Medicaid, MinnesotaCare, Child Care Assistance Programs and the Supplemental Nutrition Assistance Program. This verification process would have been a nightmare considering that during the first few years of the MNsure insurance exchange, many Minnesotans had their billing tangled up in error-riddled red tape. Having private firms go through these records would have put people in a difficult and unfair situation.

Dayton's veto also stopped a Minnesota Chamber of Commerce provision that would have created a "Minnesota Health Policy Commission." Such a commission would have had the potential to basically benefit the healthcare industry, rather than create real solutions for Minnesotans feeling the pain of the current healthcare crisis.

There will be an LSP/Minnesota Nurses Association healthcare organizing meeting **July 10 in Marshall, Minn**. For details, contact LSP's Paul Sobocinski at sobopaul@landstewardshipproject.org or 507-342-2323. More information on LSP's **Affordable Healthcare for All** work is at www.landstewardshipproject.org.

U.S. healthcare system is not helping this situation.

So where is this money going? Experts estimate that upwards of 30 percent of our healthcare dollars are wasted on the billing and coding costs associated with our multi-payer insurance system while burdening our doctors with paperwork at the same time. During the 2017 legislative session, Minnesota lawmakers spent \$549 million to "stabilize the individual market."

This money went to corporate insurers to protect them from the high costs of a few patients who need more healthcare without requiring anything in return, such as the auditing of how dollars would be spent or promises of lower premiums. Yet, we could have rolled all these patients into a cost effective long-standing public program, MinnesotaCare, for less than \$50 million *and* used the extra half-billion dollars to keep our local clinics and hospitals strong.

It is time to ask: why are we wasting our tax dollars to support private insurance companies? Our private insurance companies are not providing people the choice to see the medical providers they want to see, the costs

Physician's View, see page 11...

Physician's View, from page 10

keep us from actually going to the doctor, and they are not making sure we have access to the care we need close to our homes. We are constantly being told that government is inefficient and takes away freedom of choice. Well, it is time to acknowledge that the private, profit-making "nonprofit" corporate model is failing nearly all of us.

I had the privilege of doing part of my medical training in Glasgow, Scotland, a poorer country than the U.S. and one with a government-run health system. I went out with the midwives to housing developments for the poor to bring young pregnant women addicted to heroin into the hospital to withdraw and keep them and their babies safe during the rest of their pregnancy.

In the long run, such a public health strategy saves money for everyone. Doc-

tors spent time seeing patients, instead of conducting endless charting for billing purposes. When I joined my husband in Scotland, pregnant with my first child, I just went to the clinic, no questions asked about my "status." I got excellent care, including home visits after birth, to make sure that my baby and I were doing well. And you should know that the Scots spend far less than we do for their healthcare, cover everyone and have better outcomes. The difference is that no one is profiting in the middle between patient and provider.

If this is the kind of system you believe we should have, then join us in demanding that we can no longer afford to have corporations profiting from healthcare, that everyone should have the dignity of care they need and that everyone should be in, no one left out, from access to care. Furthermore, healthcare should not be tied to employment. People should be free to start

Proposed House Farm Bill Fails on All Fronts

By Ben Anderson

2018 Farm Bill

For the past two years, Land Stewardship Project members and staff have been working hard to advocate for a better Farm Bill in 2018. The current federal agriculture legislation expires in September, and Congress has been working the past several months to develop a replacement law.

Meanwhile, LSP members and supporters have taken action through seven farmer trips to D.C., five lawmaker farm visits, eight testifiers at a House Agriculture Committee Listening Session, two LSP farmer-led Farm Bill town halls, and thousands of advocacy postcards sent. Our voices could not have been clearer or stronger.

Our message has been consistent and clear. We need a Farm Bill that responds to the current challenges in our farm economy and the growing crisis affecting farmers, our communities, our land and water. Our public dollars should stop supporting the growth of corporate agriculture and the dramatic land consolidation draining vitality from rural communities. Instead, the public needs to invest in effective conservation practices, new farmers and ranchers, and local food systems. We need a new policy vision for our food and farming system that builds healthy and just communities.

LSP's 2018 Farm Bill campaign is titled "Our Farm Bill" because we have been demanding that our lawmakers create a Farm Bill that originates from the people and reflects their needs.

Unfortunately, leaders in the U.S. House failed in their job to represent the needs and aspirations of people and their communities. This spring, the U.S. House Agriculture Committee drafted a Farm Bill that does not respond to the pressing challenges in agriculture that impact our communities, farmers, land and water.

The bill:

• Eliminated our nation's largest working lands conservation program, the Conservation Stewardship Program (CSP), and dramatically cut conservation funding over the next decade.

• Left untouched unfair and damaging aspects of the largest farm safety net, federal crop insurance, while creating new loopholes for commodity subsidy limits, rendering them ineffective. This will continue to tilt the playing field in favor of the largest corporate farm operations.

• Invested little or nothing in the next generation of farmers, rural development, local foods and programs that advance racial justice on the land.

• Created unneeded requirements for enrolling in the Supplemental Nutrition Assistance Program (SNAP), the largest support system for rural and urban communities that are food insecure. These unneeded requirements make it more challenging for millions to obtain the food they need and that farmers grow.

To top it off, this bill was created in secret and was rushed through the legislative

the business they dream their community needs and no one should leave the farm just for healthcare benefits. We can start by supporting the demand that everyone, regardless of income, should be able to be in a government run program like MinnesotaCare that works very well for those who have it. Tell your legislator this is what you want for Minnesota.

Dr. Aleta Borrud of Rochester, Minn., specializes in geriatric and hospital medicine and is a member of the Land Stewardship Project's Healthcare Organizing Committee, as well as the organization's board of directors. For more information on LSP's healthcare work, contact Paul Sobocinski at sobopaul@ landstewardshipproject.org or 507-342-2323. More information is also available at www.landstewardshipproject.org.

process. It is clear that our democratic system is weakened when backroom deals and political agendas are prized over the voices and participation of people. This is a characteristic of corporate-controlled politics, rather than government led by the people.

Fortunately, on May 18 the overall House voted down the proposed Farm Bill 198-213. As of this writing, there were plans to vote on the bill again later this summer. The U.S. Senate is crafting its Farm Bill language at this time, and the two bills will go through a number of steps before they are compared, combined and voted into law. During this process, LSP is continuing to work with Minnesota members of both the House and Senate Agriculture Committees.

While we continue our work on the 2018 Farm Bill, it is important to realize that the relationships, visions and power we have been creating during the past 24 months are not limited to this one piece of legislation. It is clear the Our Farm Bill campaign vision is bigger than this, and we must not let the current state of partisan politics at the federal level limit what we need to achieve. Family farmers, our communities and the land demand action, and we must continue our movement for a more just food and farming system. \Box

LSP federal policy organizer Ben Anderson can be reached at 612-722-6377 or banderson@landstewardshipproject.org. For updates on the 2018 Farm Bill, see the Federal Farm Policy web page under the Organizing for Change tab at www. landstewardshipproject.org.

Farm Bill 2018

LSP Members Spearhead Policy Work in Wis.

By Ben Anderson

and Stewardship Project members in western Wisconsin recently reached out to our organization's federal policy staff and initiated grassroots organizing efforts on the 2018 Farm Bill (*see page 11*). Led by LSP farmer-members Juliet Tomkins and Jody Lenz, two local organizing groups were started in different Congressional districts (the districts of U.S. Representatives Ron Kind and Sean Duffy), with over 30 members engaged.

The prevailing issues driving the two groups were many of the same concerns raised by Minnesota members around crop insurance reform, working lands conservation, beginning farmers and local food systems. The LSP members in western Wisconsin are also concerned about the mega-dairies that are growing across the region, in the process contaminating the groundwater and ruining rural communities. These large-scale operations are starting or expanding while the average family dairy farmer is feeling tremendous economic pressure in the face of low prices. LSP members are demanding that public policy is developed that stops subsidies to these mega-dairy operations and supports family farmers.

This spring, both organizing groups held meetings with staff from their Congressional offices on these topics. The southwestern Wisconsin group also met with Rep. Kind himself on Juliet Tomkin's farm near River Falls. Kind has been a champion of crop insurance reform and working lands conservation, and LSP members talked to him about these issues, as well as the problems associated with mega-dairies.

In a memorable moment, Tomkins gave Kind two glasses of water and asked him to choose which one he would drink. One was straight from her well that had been contaminated by nitrates from a nearby mega-dairy; the other was from her new reverse osmosis system, which removes pollutants.

It was a clear message that no one wants to drink contaminated water and that industrialized agriculture operations such as mega-dairies are hurting the land and our communities. Kind agreed to work with LSP members on these issues and reconsider his stance on a bill that makes agricultural operations like these mega-dairies protected from citizen lawsuits related to manure management. A meeting with Rep. Duffy has been requested and we hope to schedule it soon.

These groups are excellent examples of member-lead local organizing that LSP staffers are happy to support. If you are interested in working on federal policy in your area, contact me at banderson@landstewardshipproject.org or 612-722-6377. □

Our Minnesota Future

LSP Members Advance a 'Bold Vision' to Candidates for Minn. Governor

n April 29, the Land Stewardship Project co-sponsored a discussion with candidates for Minnesota Governor in Willmar in the west-central part of the state. The event was held in partnership with Clean Up the River Environment (CURE) and ISAIAH, and was part of an effort to share a vision for what political leaders should prioritize and how they should work with farmers and other people living in outstate Minnesota.

This was one of two major events put on by the "Our Minnesota Future" initiative, a long-term strategy to build the power to govern in Minnesota. Besides LSP, 21 people's organizations are part of this coalition, including faith groups, environmental groups, organizations that work in communities of color and immigrant communities, as well as labor unions and progressive organizations.

Both Republican and Democratic-Farmer-Labor candidates for governor were invited to the meeting. The three DFL candidates at the time—state Auditor Rebecca Otto, state Representative Erin Murphy and U.S. Representative Tim Walz—attended.

During the event, panels consisting of rural residents who are members of LSP, CURE and ISAIAH gave presentations to the candidates on "bold solutions" they would like to see the candidates take leadership on. They also asked the gubernatorial candidates how they would go about implementing such bold solutions. The discussion was moderated by Shafia Abdullahi, a leader with ISAIAH who lives in Willmar, and Audrey Arner, an LSP member who farms near Montevideo. Here are excerpts of some of the comments made by LSP farmer-members who participated in the panels.

Vibrant Rural Communities

→ Josh Reinitz, a farmer from Henderson, Minn., and a graduate of LSP's Farm Beginnings course:

"The farming system has a major impact on rural communities, and we have a farming system that is not working for farmers of all types...Many young people desperately want to farm, including people who grew up farming like I did, people new to farming and immigrants coming from farming backgrounds in other countries. The cost of land and the consolidation of agriculture into mega-farms are huge barriers for farmers who want to get on the land.

"Many of us are building creative businesses built around healthy and local food, rotational grazing or organic production, and are doing this on small plots of land. These efforts need real support in public investment.

"There are major challenges for farmers of all types as well as rural Minnesotans in general. We know clearly from our history that we prosper when the wealth generated by agriculture flows through small- and midsized family farms.

"So, we are asking for bold solutions that build the kind of farming system and rural communities we actually want—like major public investment in a nation-leading local food system. Also, we need market development for small- and mid-sized dairy and vegetable farms. We need more independent meat processing facilities. We need to address the consolidation of land. And we need a bold incentive program for cover crops and regenerative type farming.

"It's going to take standing up to some powerful interests, but if the next governor is determined to see more farmers on the land, and to promoting a family farm-based system of agriculture, and is willing to work with us to do that, it can happen."

Our Minnesota Future, see page 13...

Affordable Healthcare for All

→ Laura Frerichs, a farmer from Hutchinson, Minn., who serves on LSP's board of directors:

"We imagine a high-quality healthcare system that takes care of everyone, and frees us to pursue meaningful lives.

"In its current state, healthcare is one of the major limiting factors for starting new businesses. This is limiting economic development in our rural communities. I hear time and again from new farmers that one of their major barriers to farming is access to affordable healthcare. They aren't able to work for a farm, start a farm, or quit their current job to scale up their farm because they can't

afford to lose their employer health insurance benefits. Healthcare should not be linked to an employer.

"Our family recently qualified for MinnesotaCare with the birth of our youngest child William. This is a state program that serves many self-employed farmers and low-income Minnesotans. It has been affordable and fortunately we have accessible hospitals and clinics nearby.

"Before MinnesotaCare, we were spending about 20 percent of our family's annual income on insurance and medical expenses. Now, we have been able to invest that money back into our business to increase our farm's staff wages, and to save for retire-

ment. That money has gone back into our rural economy.

"Our bold solution is to establish a publicly-run, publicly-funded universal health insurance system in Minnesota. This would free up entrepreneurs and farmers to do what they do best—help bolster the rural and urban economies. A publicly-funded healthcare system would also cover and care for the unemployed, underemployed, students, and others that don't have access to quality, affordable coverage."

Making Our Voices Heard

→ Anna Racer, an LSP Farm Beginnings graduate who farms near Webster, Minn.:

"In the spring on our farm, we are getting our greenhouse started, fixing machinery, getting our fields ready to be planted. We have endless jobs.

"To get to the Capitol, we have to arrange

childcare, and make sure someone can water and take care of animals. Then we have to travel to the Twin Cities. We also need to hope our Legislators meet with us at the time scheduled. It's not impossible, but it feels daunting. And it can be easy for a lot of us to decide that it doesn't feel worthwhile.

"I've been getting much more involved and want to be part of shaping my community and our state, because I care about my neighbors, my family and our natural resources. I want to live in a state that takes care of its residents, and prioritizes protecting our shared natural resources. I want to feel proud of the state I live in.

"But I know there are corporate lobbyists at the Capitol every day. They know how the system works and how to make their interests heard. There's no way I can be there every day. engage with a number of LSP members and rural community leaders in the Chippewa River watershed about narrative. In workshops, we learned how narrative can be more powerful than facts, that changing the narrative is the key to bold solutions. Narrative, or the public story, shapes our opinions and actions, and defines what is possible.

"As an example, there is a piece of the dominant public narrative surrounding agriculture that says bigger is always better. This narrative drives what policies are being chosen, determines whose voice is given weight, and sets the course for our rural communities, leading to larger and larger farms, higher and higher land prices, and fewer and fewer farmers.

"With that bigger-is-better narrative in place, it is extremely difficult to make some of the changes that need to happen. But a

> shift in the public narrative to one that recognizes how we are connected to each other, and that is based on care for others and the land, will open up space for policies that value small farms, support beginning farmers, and build vibrant, rural communities.

> "Our organizations are seeking your help as governor to work with us to implement some bold solutions. But before these solutions can be implemented, work needs to be done to change or replace existing dominant narratives in order to make way for needed changes. This dominant narrative is so prevalent that we all get caught up in it sometimes, and we need to challenge it and lift up something different.

"What dominant narratives do you see that are working against the people of Minnesota, especially in rural communities, and how would you go about challenging those dominant narratives and lifting up a healthier story?"

Give it a Listen

Episode 211 of LSP's *Ear to the Ground* podcast features the full comments of LSP members Josh Reinitz, Laura Frerichs, Anna Racer and Bryan Simon: https://landstewardshipproject.org/posts/1085.

For more on the **Our Minnesota Future** initiative, see www.landstewardshipproject.org and click on the **Organizing for Change** tab. You can also contact LSP organizer Jonathan Maurer-Jones at jmaurer-jones@landstewardshipproject. org or 218-213-4008.

Farmer Anna Racer addressed candidates for Minnesota governor on April 29. "How will you equalize the power difference between people and corporate interests, and go out of your way to prioritize and connect with regular people?" Racer asked. (LSP Photo)

> "How do you plan to work for the wellbeing of the whole community, including those of us without a vote? Who do you see as the people you need to work with and represent? And how will you equalize the power difference between people and corporate interests, and go out of your way to prioritize and connect with regular people?"

Challenging the Narrative

→ Bryan Simon, an LSP Farm Beginnings graduate who farms near Barrett, Minn., and works as an LSP organizer:

"As an LSP organizer with the Chippewa 10% Project, my job is to meet with farmers and landowners and speak to them about ways to improve their stewardship practices using rotational grazing, cover crops and crop rotation. I also connect them with available resources and networks.

"Recently, I've had the opportunity to



which is based on the idea that everything is connected. "Nothing on the farm acts singularly," he said.

Practices like intense tillage and overapplication of chemicals set off a chain reaction that makes it so soil is increasingly unable to generate its own fertility and withstand extreme climate conditions. On the other hand, healthier microbial activity resulting from plants on top and roots underneath all year long builds the kind

of environment that allows the soil to develop self-sufficiency. Biologically active soil can do everything from work up its own fertility and build and store carbon, to manage moisture and weather extreme climate events.

Archuleta cautioned the farmers, conservation professionals and students that attended the sessions against fixating on "tools" rather than "systems" when managing soil. An isolated tool like cover cropping or no-till has limited long-term effectiveness if not utilized in conjunction with a more integrated farming system that puts soil health at the forefront.

"The moment you focus on a tool, you are lost," he said. "It's not organic, it's not cover crops. Emulate the ecosystem, emulate nature."

That means avoiding tillage whenever possible, integrating livestock as grazers to help cycle nutrients, and keeping the land covered in a diversity of plant species. Farmers' experience and research has shown that despite the conventional wisdom that different plants grown in the same area compete for moisture and nutrients, in fact in the right circumstances diversity creates a

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The Land Stewardship Letter

Naked, Hungry, Thirsty, Running a Fever

Archuleta Makes a Passionate Pitch for Seeing Soil as a Living Organism

t's been said that it all starts with soil. Spend any length of time listening to Ray Archuleta and one will come away with the sense that if agriculture is to survive and thrive, its practitioners must take this statement on as their mantra.

Soil Health

In a series of Land Stewardship Project Soil Builders' Network meetings held in four southeastern Minnesota communities in March, over 550 people packed into community centers and other venues to hear the so-called "Soil Guy" sing the praises of

farming systems that build biology, keep the land covered 365-days-a-year and generate sustainable profitability. After serving 30 years as a USDA Natural Resources Conservation Service soil conservationist, conservation agronomist and water quality specialist in different parts of the country, Archuleta retired in 2017 and launched Soil Health Consultants and the Soil Health Academy. He puts on trainings in the U.S. and Canada, and his passionate, entertaining presentations have become YouTube sensations. Utilizing hands-on demonstrations, videos and a high-energy PowerPoint presentation, he makes it clear that we ignore the health of our soil at our own peril.

"Sick soil. Sick plant. Sick animal. Sick human being. Sick climate," he said at the presentation in Lewiston while flashing through slides showing modern day dust storms and dire statistics about the state of climate change. "The soil is naked, hungry, thirsty and running a fever."

He also touched on the significant human impacts of ignoring or abusing our soilsthe demise of farming and farming communities.

"I drive all over and I see communities that are dying," said Archuleta. In the past, "all the money flowed through the soil to the farmer to the community. All the wealth now flows up through corporate America through input and equipment suppliers. The money has flowed out of rural American because we destroyed our soils."

To Archuleta, soil may be a basic resource, but its past and future is also wrapped up in a very big story. Forty-five minutes into his presentation in Lewiston, he had not only touched on basic soil science

and microbiology, but had addressed economics, world history, chemistry, religion, psychology, anthropology, engineering, media studies, biomimicry and geology.

His point? Humans have proven throughout history that they can be pretty good at getting themselves into trouble by abusing the environment, but they have also used innovation to fix such problems. The current interest in building soil health on farms is one such example of that can-do attitude.

"The beauty about this is we can get this



stability. (LSP Photo)

healed quickly once we change the way the human mind thinks," said Archuleta.

And that means changing the way farmers and soil experts like himself have usually viewed the soil: as basically a medium for holding up a plant while it's fed a steady diet of fertilizers. Such a reductionist view ignores the fact that soil is a part of a larger ecosystem, and, just as importantly, an ecosystem unto itself. Building healthy, selfreliant soil means "farming in nature's image" and utilizing the principles of ecology,

LSP's Soil Builders' Network

f 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 to establish an extensive collaboration of farmers interested in building back their soil using innovative crop and livestock systems. To join the network, sign up at https://landstewardshipproject.org/lspsoilbuilders, or contact LSP's Shona Snater at 507-523-3366 or ssnater@landstewardshipproject.org.

...Living Soil, from page 14

collaborative environment. Farmers in North Dakota have found that diverse cocktail mixes of cover crops make soil more resilient in the face of extreme weather.

Archuleta travels throughout the country, and gets frustrated when farmers tell him that soil smart practices like cover cropping or no-till will work elsewhere, but not in their region. Such thinking ignores the fact that building healthy soil starts with basic units of life that are present everywhere: microbes, arthropods, fungi, earthworms, etc.

"I love them because they don't complain, they show up to work on time and I don't need to put diesel in them. All you have to do is give them food in the form of carbon," he said of the various organisms soil teems with. He added with a sarcastic laugh, "I get it, microbes stop at the border of Minnesota."

After Archuleta's presentation in Lewiston, a panel of local farmers proved his point that building soil health is not something that takes place "somewhere else."

Everett Rolfing, who raises crops near Lewiston, said he started planting cover crops like winter rye two years ago and got an almost "instant response." The soil is better able to soak up hard rains and as a result his erosion problems have been slashed. He also has stopped plowing and now uses vertical tillage, which disturbs the soil less. Reducing the tillage and having soil that is easier to work cuts down on Rolfing's fuel expenses considerably. "It helps you show a profit with \$3 [per bushel] corn," he said.

Willie Erdmann of Ridgeway, Minn., has

been incorporating rye, winter wheat, barley, tillage radish and crimson clover into his notill corn and soybean system. He noted that, as Archuleta pointed out, building soil health has resulted in fields that are literally alive.

"You do have lots and lots of earthworm castings—it's like walking on a sponge, it's actually crunchy," Erdmann said.

A Guide to the Power of Soil

The Land Stewardship Project's *Soil Health, Water & Climate Change: A Pocket Guide to What You Need to Know* provides an introduction to the latest innovations in science and farming related to building soil health, and how implementing such practices on a wide-scale basis can make agriculture a powerful force for creating a landscape that is good for our water and our climate.

Utilizing easy-to-understand graphics and summaries, this pocket guide shows how building soil organic matter can sequester massive amounts of greenhouse gases. Combined with energy conservation and alternative energy sources, making agricultural soils a net carbon sink could play a major role in helping prevent disastrous changes to the climate. In addition, healthy, biologically active soil has been shown to dramatically cut erosion levels, as well as the amount of farmland fertilizer and other chemicals flowing into our rivers, streams and lakes.

An online app or pdf version of the guide can be accessed at **https://landstewardship-project.org/smartsoil**. Paper copies of the 50-page guide can be purchased for \$5 from LSP's online store at https://landstewardshipproject.org/store or by calling 612-722-6377.

Minnesota Institute for Sustainable Agriculture Turns 25 in 2018

Institute Works to Open Lines of Communication Between U of M & Sustainable Ag

By George Boody

n 1987, then-University of Minnesota vice-president Dick Sauer spoke at a statewide event organized by the late Ken Taylor of the Minnesota Food Association. Sauer derided opponents of industrial agriculture as wanting to "return to outhouses and hoes." Taylor followed up with a proposition to University administrators to take the opportunity to overcome their ignorance about sustainable farming. After a series of four tightly-structured dialogues to share information and viewpoints between agriculture faculty leaders, agriculture administrators and organizations like the Land Stewardship Project, an agreement was eventually reached to form the Minnesota Institute for Sustainable Agriculture.

Known as MISA, this institute turns 25-years-old in 2018. This partnership between the University of Minnesota's College of Food, Agricultural and Natural Resource Sciences (CFANS), University of Minnesota Extension and the Sustainer's Coalition has provided an important avenue of connection to U of M faculty. The Sustainer's Coalition consists of the Institute for Agriculture and Trade Policy, the Land Stewardship Project, the Minnesota Food Association and the Sustainable Farming Association of Minnesota; it also works with other partners.

Over the years, MISA, which is located on the Saint Paul campus of the U of M, has helped to address sustainable farmers' concerns that their needs were mostly being ignored by the University.

The institute has been a hotbed of activity and helped LSP, faculty, students and others launch initiatives that continue today at the University and in the community. MISA's impact has been felt in many ways. Over the past two-dozen years, it has led 14 interdisciplinary research and education teams comprised of University-community partnerships. MISA helped LSP launch a beginning dairy farmer project that eventually led to the Farm Beginnings Program (*see page 23*). Similarly, the Monitoring Team that was created in the 1990s led to LSP's work in the Root and Chippewa River watersheds.

MISA's Sustainable Agriculture Information Exchange was created with funding provided by the state of Minnesota. It has produced many helpful publications, such as "Food from Farms: Toolkit for Direct Purchasing of Local Food." MISA also manages the Sustainable Agriculture Graduate Minor and the U of M student organic farm, Cornucopia, which hosts faculty and student research projects. MISA's School of Agriculture Endowed Chair rotates among farmers, other leaders and faculty. MISA spawned the Regional Sustainable Development Partnership and hosts the Green Lands Blue Waters initiative, which focuses on continuous living cover. Green Lands Blue Waters itself helped catalyze the Forever Green Initiative.

MISA's goal is to make sustainable agriculture the operating principle for CFANS. Advances are possible with increased investment by the U of M and continued engagement by Sustainer's Coalition groups and their members, as well as farmers.

For more information on MISA, see www.misa.umn.edu or call 612-625-8235. □

Former LSP executive director George Boody is the organization's science and special project's leader and was deeply involved in early discussions that led to the creation of MISA. He can be reached at gboody@landstewardshipproject.org or 612-722-6377.

Soil Health

The Currency of Carbon

Protozoa, Pastures & Profits

Innovative Farming Requires an Innovative Approach to Soil Health

By Brian DeVore

t's a bright June day in southeastern Minnesota, and the hilly landscape is in full summer bloom. But as Chuck

Henry watches his dairy herd graze a mix of winter wheat and Sudan grass, he has numbers on his mind:

33,000 bites per day, per cow; 300 pounds of dry matter per inch; six inches of forage harvested during each grazing period; 10 to

15 minutes to string up a temporary grazing paddock. Along with animal science, Henry studied accounting at the University of Minnesota, and he does a quick calculation: during the growing season, he will produce \$500 worth of milk per acre during each 12-hour grazing cycle. His best paddocks can be grazed eight times from May through December. That generates a number that's important to any farm business: gross annual income-\$4,000 per acre in this case. After subtracting the cost of applying seed and manure, the bottom line result makes the farmer smile.

"When you take a look at it, what else can you do, and/or plant, that's going to yield \$4,000 an acre?"

Henry asks. He pauses a moment before adding with a laugh, "And still be legal?"

But Henry, who, along with his wife Sue, farms what is considered prime row-crop ground near Dover in Olmsted County, knows that all those numbers hinge on a figure that's almost too large to innumerate—billions of microbes in the soil. He's convinced life in the soil makes it possible to graze paddocks numerous times a year while maintaining good cover and living roots, the kind of continuous living plant regime that is building long-term resiliency, cranking up carbon and managing moisture.

"Every step of the way, I try to include biology," says Henry as he watches his mixed herd of Ayrshires, Dutch Belteds,



move through a four-anda-half-acre pop-up pasture he had created in under 15 minutes using a Polaris

Shorthorns and Holsteins

Ranger four-wheeler, a spool of polywire and lightweight fence posts. "I figure with the cows, I have mobile composters-digest-



Chuck Henry learned that switching his milking herd to a 100-percent forage based diet required paying close attention to soil health. "We were taking soils that had been literally farmed out, had not had enough organic matter, and we were trying to raise high quality pastures that were going to support a cow," Henry recalls. "It was impossible to do." (*LSP Photo*)

ers working for me."

Without a doubt, farming practices that build soil health—managed rotational grazing, cover cropping and no-till, for example—have been a boon to the environment by providing the kind of protection on top and aggregate stability below that keeps soil intact and reduces runoff, all the while sequestering greenhouse gases. But if soil smart farming is to become integrated into all types of operations on a consistent basis, the biological soil bank will need to pay back in financial terms. Fortunately, farmers like Chuck Henry are paving the path toward connecting profitability and protozoa, cash and carbon. But such linkages don't come naturally—sometimes, as in Henry's case, one doesn't realize just how sick the soil is until attempts are made to adopt an innovative farming system. *That's* when the weak links reveal themselves.

Getting Schooled

When Henry started farming his family's land in 1974 after graduating from the U of M, his focus was putting into practice what he calls "my so-called higher education." That involved taking milk cows off pasture, raising more grains and hay, and feeding the herd a high-energy diet. Manure was hauled out of the barn as a waste product. He expanded his dad's 40-cow herd and worked hard to put in place all the trappings of the "modern way," including building silos to store corn silage. But by the mid-1990s, Henry was looking for a different way to farm. His operation wasn't set up for feeding a harvested, grain-based diet to a growing

> herd, and he was on a treadmill of chasing ever-increasing productivity to stay profitable. He also noticed that his row crop acres were washing during rainstorms, sending soil and chemicals into the Whitewater River watershed.

At about that time, a growing group of dairy and beef farmers were taking cattle out of confinement and putting them back onto pasture. But instead of allowing the animals to roam at will in a manner that led to overgrazed, eroded pastures with stunted plant growth, these farmers were utilizing various forms of "managed rotational grazing." This system breaks bigger pastures up into smaller paddocks utilizing portable fencing, and the animals are moved frequently-sometimes as often as twice-a-day-from spotto-spot. This prevents overgrazing, extends the growing season and spreads nutrients in the form of

manure and urine evenly across the landscape. It can also significantly lower input costs for producing livestock.

Henry added increasing amounts of pasture back into his operation and by 2003, he was highly dependent on grass, with the cows receiving some supplemental grain. In 2006, he shipped his first load of certified organic milk.

Carbon Currency, see page 17...

... Carbon Currency, from page 16

Lack of a good infrastructure for feeding grain pushed Henry to increasingly experiment with producing milk on a 100-percent forage-based diet. Today he milks around 200 cows, and hasn't fed grain or corn silage since 2012. Some of the 600 acres of owned and rented land he farms has a corn yield history approaching 200-bushels-peracre, but Henry hasn't raised row crops for several years.

Per-cow productivity went down when Henry went to full forage, but because of his efficient milking parlor and the low costs associated with managed rotational grazing, he was able to add cows to make up for it. Plus, he had never liked cropping work anyway, so quality of life improved.

"This is fun, this is what dairying should be!" the farmer says excitedly as he guides the Ranger through a series of grazing paddocks, stopping periodically to check on the growth of the various grasses and small grains he utilizes for forage and pointing out how birds such as dickcissels, meadowlarks, killdeer, bobolinks and red-winged blackbirds have returned to the land.

Other critters appreciate the diverse mix of continuous living cover as well. In the spring of 2017, a beekeeper placed 20 hives on Henry's acres. By mid-summer, he had added another 30 hives because the bees there were out-producing their counterparts at other locations. By late summer, there were 100 bee hives churning out honey on the dairy farm.

Benefits of the forage-based system extend well beyond the farm. Three years ago, Henry began receiving a premium from Organic Valley for his 100-percent foragebased milk. Scientists have found that "grassmilk," as it's called, is nutritionally superior to conventional and even organic milk produced with the help of grains.

Research done by the U of M, among others, shows that cows fed a 100-percent grass- and legume-based diet produce much higher levels of omega-3, a heart healthy fatty acid, and lower levels of omega-6, which is an unhealthy fatty acid. And a full forage-based diet produces milk with elevated levels of conjugated linoleic acid (CLA), which is also good for human health.

Investing in the Soil Bank

When one turns an entire farm over to forages, soil—rather than machinery, fuel and chemicals—becomes the core mechanism driving success. In that case, if soil's needs aren't met, then all else fails. Henry concedes he learned this the hard way early on—simply planting grass, erecting fence and turning the cows out wasn't enough.

"Soil health wasn't a priority at first. We were taking soils that had been literally farmed out, had not had enough organic matter, and we were trying to raise high quality pastures that were going to support a cow," he recalls. "It was impossible to do."

Soil tests taken last fall on a farm Henry is transitioning showed organic matter levels of between 1.5 percent to 1.9 percent overall. Samples taken at the same time from his permanent, rotationally grazed pastures have levels that are more than double that, with some testing as high as 6 percent. This didn't happen by accident. During the past half-dozen years Henry has utilized a combination of rotational grazing, diverse seeding and manure management to build biology.

Henry has a mix of pastures made up of perennials—orchard grass, timothy, brome and white clover—and grazing areas that are

"I can't explain it. There's got to be something going on with the life of the soil, the flora, the worms, everything."

. . .

seeded every year with a cocktail blend of annual species such as rye and winter wheat. He also regularly renovates his permanent pastures by interseeding species such as rye grass, meadow fescue and festulolium grass, along with red and white clover. The farmer utilizes mixes of Sudan grass, vetch, cowpeas, red clover and forage radishes to produce high-moisture haylage, which is bagged up and fed to the herd during the winter; he calls it "total mix ration in a bale." The farmer says many of the new forage varieties are high in sugars, which is important since his cows need the energy they normally would get from grain.

Henry is the first to admit that he spends a lot on forage seed—as much as \$20,000 annually. But he sees that as an investment, rather than a one-off expense. Grazed forage plants are building soil health, which pays off years down the road in the form of increasing organic matter. In addition, when annuals are interseeded into permanent pasture, that extends the life of a perennial plant system. This means there is a living root in the soil 365-days-a-year, rather than just the four or five months of the conventional row crop farming season. That's 365 days of soil-building capacity added to the farm.

Mastering Manure

After the first grazing pass of the year and the forage is growing quickly, he spreads his herd's winter "bedding pack"—a mix of straw and manure—on his pastures. The vigorous growth of the recovering forages pushes through the bedding pack layer, and within 10 days there is little to no sign the manure was ever applied. With this system, instead of manure disposal being seen as an expense, it's a value-added product being integrated into the operation as a whole.

"It's my fertilizer, it's my soil amendment," says the farmer. "It's probably serving three or four different purposes. I know to some extent it feeds the grass right away. Then there's the soil biological activity after that. I can't explain it. There's got to be something going on with the life of the soil, the flora, the worms, everything. It's just crazy what happens and I don't get it through liquid manure."

Although Henry's bedding back is not fully broken down, the combination of manure and straw may be providing a similar biological benefit as adding fully composted manure to the soil. Research in northern California has shown that composted manure spread on the surface of grasslands actually kick-starts a process in which the plants started building up carbon underground, creating a self-perpetuating cycle of creating more organic matter, which is the center of a healthy soil universe. These composted acres retain more moisture and produce 50 percent more grass.

The bottom line: Henry feels improved soil health has allowed him to put more cattle on the same number of acres. In fact, he is grazing 200 cows on 140 acres of land that once only supported 70 bovines. Not only is his carrying capacity up, but he feels his milk production is much more profitable and the animals are healthier.

Indeed, research shows that healthier soil does equal more productive livestock. Scientists studying rotational grazing in England recently reported animal performance on individual fields was "positively associated with the level of soil organic carbon" in those fields. In addition, fields grazed more intensively had healthier soils and were less prone to water and nutrient losses, according to the researchers. Henry says he's seen a marked increased in his soil organic matter during the past seven years especially, a period that coincides with a significant increase in the number of cows he's rotationally grazing on each acre. More cows on well-managed paddocks means more manure and the kind of positive disturbance that supercharges the soil biome.

Research shows that on average a cow takes about 33,000 bites a day; there's a limit to how many mouthfuls of forage it can swallow. So, if each bite can be packed with

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Soil Health

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more nutrition, then the cow can produce more milk per grazing. Careful measurements have confirmed that he has paddocks that are producing as much as 2,700 pounds of dry matter per grazing, which is more than enough to support profitable milk production.

"These cows will probably graze off six inches before I move them," the farmer says, pointing to his herd, which has just been turned into a paddock after the morning milking. He will move them after 12 hours. "If you've got a good dense sward, you could have 300 pounds of dry matter per inch. That's 1,800 pounds right there, and that doesn't include what they're going to leave behind."

And what those cows leave behind is important. The key to utilizing a grazing system based on soil health is to make uneaten, often stomped down, biomass a part of the plan, not only to reduce overgrazing, but to feed the soil.

Striking a grazing balance that provides adequate nutrition to the animals aboveground and the critters below requires close observation. The amount of milk going into his bulk tank is an obvious indicator of how things are going in the paddocks. But Henry is also constantly studying the grazing habits of his cows. He also notes how many earthworm castings there are, the rate at which manure—both the applied bedding pack and what he calls the cows' direct deposit (cow pies)—breaks down, and, of course, the re-growth rate of the forages. But the farmer also notices landscape-wide changes. For example, in an area where crowns of sloping row crop fields have a pale, almost yellowish complexion, a sign that the rich, dark topsoil has been skimmed off, Henry's fields have a uniform color.

Sometimes one uses unconventional means to monitor soil health. Henry is proud that after a heavy rain he's able to drive one of his Buick sedans out into the pastures without getting stuck. "Two inches of rain should be absorbed by the land," he says.

When Opportunity Knocks

At one point on this June day, the farmer drives his Ranger down to a field he's raising hay on and ponders its near-term future.

"This is kind of a wonder field—I wonder what's going to happen," he jokes. Some of the alfalfa stand has suffered from winter kill. Earlier in the season, he had interseeded some grass and crimson clover, which did well, but there are still several bare spots. Henry wonders out loud what his options are, including re-planting the whole thing to

Climate Conversation

Stewarding a Gift in the Midst of Turbulent Change

By Alex Baumhardt

Jody Lenz calls the 16-acre vegetable farm she and her husband, Mike, bought a decade ago near the western Wisconsin community of Star Prairie a "gift."

"It's just in my soul, this whole idea that we're given this gift of this land for right now," she says.

Lenz grew up on a fifth-generation dairy farm, and while it's no longer in her family, she carries the ethos of a multigenerational farming family with her: leave the land you farm better than how you found it.

"What those people did before me is why I got that experience. I want to make sure that seven generations from now, somebody can still be farming this. That the land is still usable, that it's taken care of and made better," she says.

Part of Lenz's effort to leave the land better is to focus on building healthy soil, and being proactive about the impacts of climate change.

"Our general philosophy is to work with nature, and to always be building soil, so that we are more resilient; to always have more cover cropping and trying to keep the soil in place," Lenz says. "Hopefully those things will, in turn, help us to weather climate change things that come up."

It's not always easy operating as an organic operation surrounded by conventional, monoculture farms, and as a small-scale operation that receives little benefit from federal farm programs. Still, Lenz sees farming organically, and ethically, as essential to both the environment and her bottom line.

Farming With Nature

By the time Jody was ready to farm on her own, her parents had sold the dairy operation she grew up on. Dairy farming was too expensive an endeavor to take on as a 20-something.

"The cost of land for all of those cows-

a different kind of forage. He's faced with a similar situation in the case of a grazing paddock that's not doing as well as he'd like. If corn and soybeans were the focus of his operation, his options would be severely limited this late in the season.

"There are so many things you can do. It leaves you with a spot to put manure on, or if it's grazed back hard, you could interseed something into it to beef up the stand," he says. "There's opportunity in everything you do, and if you're not constantly thinking, you're going to miss those opportunities."

Taking advantage of such opportunities means experimenting and adjusting on the fly. Henry mixes and matches forage varieties, and experiments with various ways of interseeding pastures. He adds amendments to his manure to increase the biological activity and has even talked about breaking it down completely via composting.

And the farmer, who's 68, has a longterm goal of making that ultimate connection between soil health and a healthy community by adding another family to the operation.

"It would be nice to get the next generation cooking down here," says the former realtor while watching his grazing herd, mindful that he often sees crop farmers driving by, eyeing his acres with envy. "Can we actually support two generations on this farm without plowing anything up?"

the whole thing for a dairy farm—we just couldn't see how that was ever going to happen," she recalls.

Jody was interested in starting a vegetable Community Supported Agriculture operation. Known as CSA, this system allows eaters to buy a "share" in a farm prior to the growing season, and in return they receive regular deliveries of food. CSA appealed to Lenz because she wanted to grow food and have a relationship with the people who were eating it. She wanted to meet these people, and to connect them to the land where their food comes from. An important component of the CSA concept is that farm "members" don't just enjoy the benefits of agriculture, they also share in the risks posed by extreme weather and other problems.

To get started, she signed herself and Mike up for the Farm Beginnings course through the Land Stewardship Project (*see page 23*). Mike, who initially had little interest in farming, went into the course "kicking and screaming," she says. "But first class in he was like, 'This is awesome!' hook, line

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and sinker."

The Lenzes went on to found Threshing Table Farm (http://threshingtablefarm. org) in 2008, and from the start focused on learning how to build healthy soil. Establishing a diverse range of crops, and cover cropping—seeding small grains and other non-cash crops to protect the soil during the off-season—was the easiest, most obvious way to ensure they had a rich bed to grow their vegetables in for years to come. "Ideally, cover cropping happens on as much of it as we can," she says of their farm.

Cover cropping is not only good for the soil but can help the land absorb greenhouse gasses such as carbon dioxide through

photosynthesis. And scientists have found farming methods such as cover cropping build soil organic matter to the point where it can serve as an underground carbon sink, fueling a healthy environment for plant development for years. Cover cropping also reduces vulnerability to erosion, manages moisture during rain and drought, and helps soil retain its nitrogen as the Earth becomes warmer, according to the international nonprofit Centre for Agriculture and Bioscience.

The Lenzes are so emphatic about keeping cover on the ground, that if late fall rolls around and they can't get a cover crop into an area in time, they'll just leave their vegetable crops standing rather than harvesting every last plant. For example, some of the broccoli they planted last summer was left out in the fields until spring. "Just because, we don't want the soil to go away, and we want to make sure there's some type of vegetation left on it," says Jody.

Talking Climate Change

The Lenzes farm differently than their neighbors. "We are on a tiny island of diversity that's completely surrounded by a sea of monoculture," Jody says. "I mean, it's all corn, on all sides of us."

She says that not all of her neighbors are in agreement on climate change, and just talking about it can be tricky. When she told one neighbor that she was being interviewed for an article about climate change, the neighbor rolled her eyes. For Lenz's part, she trusts the scientists: "The people who go to the polar ice caps and say, 'Yeah, they're melting.'"

While conversations about climate change can be difficult, talking about innovative farming techniques can be a way to push beyond stigmatized language.

"We definitely talk farming techniques with our neighbors," Lenz says. "One neighbor, who's a big grain farmer, has begun to do some cover cropping because of stuff he's seen us do, and they get their vegetables from us. We talk everything from GMOs, to organics, to herbicides. There's a lot of really good conversations and learning from each other."

Lenz sees the reluctance of some farmers to agree with scientists on human culpability in climate change as a two-tiered problem. For one, people see it as political language used to leverage regulation.



Dealing with climate change has required a balancing act on the part of Jody Lenz. (*Photo by Ilisa Ailts Photography, www.ilisaailts.com*)

"I would say people are hesitant to talk about climate change because it has become such a polarizing political topic," she says.

The second issue, as she sees it, is that it involves having bigger conversations about industrial agriculture. During the past 50 years, as food systems have become more globalized, worldwide greenhouse gas emissions from agriculture have nearly doubled, according to the United Nations Food and Agriculture Organization.

Talking about agriculture and global warming means acknowledging how detrimental pesticides have been to soil and water, as well as how monoculture crop production has depleted soil of its nutrients, allowing it to release carbon into the air as it loses structure. It means talking about how concentrated animal feeding operations, or CAFOs, have disrupted traditional livestock operations, creating fierce competition for commodity crops to feed more and more animals, all the while producing massive ecological problems as a result of liquid animal waste.

"It's hard to know that what you are doing — what you put your heart and soul into — isn't good, isn't right, or could be a lot better," Lenz says of big, conventional farms. "And I think that stops people from looking harder, and really thinking about those deeper topics."

Looking Ahead

Jody Lenz's big picture plans involve sustainable growth of their farming enterprise. In 2017, she and Mike doubled their production and sales, and they are renting a little more land from a neighbor in order to keep up with demand. Today, 75 percent of their CSA members are from the local area

and the region surrounding the bigger community of New Richmond. The rest of their produce goes to folks in Stillwater, Minn., to the cafeteria at the school their daughter attends, and to chefs that work out of the Twin Cities.

In order to keep producing food for these customers in a sustainable manner that doesn't take on too much risk, Jody knows she needs to look after her gift, the land. That's why she will continue to get better at cover cropping, and will work on farming with nature whenever possible. Jody sees being a farmer who focuses on soil health as being somewhat of a climate hero who is proactive about the issue of global warming. And as a business, she says, it just makes sense to take care of an asset as valuable as soil.

"If it's good for my soil, it's good for my plants, it's good for my bottom line and it's good for us," she says. □

Former Land Stewardship Project journalism intern Alex Baumhardt is a radio producer and reporter. She has written for the Washington Post, Los Angeles Review of Books, Vice and Minnesota Monthly.

Video: Talking Climate Change

In *Farmers Talk About Climate Change*, a Land Stewardship Project video, farmers discuss the challenges posed by extreme climate conditions and how building soil health can help make their operations more resilient. View it at **www.youtube. com/user/lspnow**.

Putting Numbers to those Soil Losses

Cropping Systems Calculator Updated to Include Erosion Numbers

By Rebecca Wasserman-Olin

wo years ago, the Land Stewardship Project released the Cropping Systems Calculator (CSC), a "what-if" tool to examine the costs and returns of various crop rotations. This tool includes scenarios that involve row crops and grazing, and provides important information for farmers as they consider integrating soil building practices into their rotations.

The original Calculator was based on default figures for the Chippewa River watershed in west-central Minnesota. Since the Calculator's initial launch, LSP has periodically released updates that include default financial figures for more geographical locations. We've also made it possible for more crops to be considered as part of the mix. All along, we've been thinking about how the tool could show the added value of building soil health. I consistently heard comments from farmers that only looking at short-term financials wasn't showing the longterm economic impacts of soil loss.

"To me, soil erosion has been greatly overlooked when it comes to penciling out the economics of a given farming practice," says LSP staff member Bryan Simon, who farms in west-central Minnesota. "Looking at the exposed clay subsoil on my farm's hilltops makes me wonder how much productivity and profitability has been lost due to the way this land has been farmed. I think accounting for soil loss helps us get closer to assessing the true costs of production agriculture."

We are now able to offer a tool to begin looking at the soil health benefits related to diversifying a farm's rotation. Using a geographic information system (GIS) mappingbased tool, former LSP staff member Steve Ewest was able to add a soil erosion calculator component to the CSC. Using the Revised Universal Soil Loss Equation (RUSLE), users can utilize numbers to visu-



The Cropping Systems Calculator can show erosion amounts in pounds, truckloads and inches. (LSP Photo)

alize erosion potential.

As the example on page 21 shows, by entering the crop rotation, tillage method, slope factors, farm location and planting direction, a farmer can estimate how much soil could be lost from fields annually as a result of water runoff. By including the percentage of organic matter present in the soil, the user can gather data on not just how much soil is being eroded, but the amounts of nutrients—carbon, nitrogen, phosphorus and sulfur—being lost with that soil.

It should be noted that this version estimates soil erosion by water only, and doesn't account for soil loss from wind. It also does not measure soil built because of conservation farming practices. While we know soil building does in fact happen on farms, we are not aware of equations that have been developed yet to reasonably estimate amounts. You could theoretically be building

soil overall with cover crops and other practices, but the Calculator will only show the impact of soil loss by water.

The erosion results are provided as pounds, truckloads and inches. Giving results in multiple forms ensures that there is a measurement that everyone can identify with.

While this latest Cropping Systems Calculator addition doesn't fully account for the positive and negative benefits that result from various farming practices, it is an important step in moving the conversation forward on how to build healthier soil.

Rebecca Wasserman-Olin, who developed the Cropping Systems Calculator, recently departed LSP to pursue a graduate degree in applied economics at Cornell University. Questions and feedback related to the Calculator can be directed to the Land Stewardship Project's George Boody at gboody@landstewardshipproject.org or 612-722-6377.

Give the Cropping Systems Calculator a Try

See page 21 for a sample soil erosion calculation using the Cropping Systems Calculator. To download the Calculator as an Excel spreadsheet, see the Land Stewardship Project's web page at https://landstewardshipproject.org/ chippewa10croppingsystemscalculator. On that web page you can check out the updated Cropping Systems Calculator to compare the financial pluses and minuses of various crop rotations. Besides a soil erosion calculator, it includes expanded crop options and recent figures for various regions. It has organic and non-organic crop options. A companion version has also been released specifically for Illinois figures, including defaults for the northern, central and southern portions of that state. We have developed versions that can be used on Microsoft Windows or Macintosh operating systems.

By the way, a recent report from the Union of Concerned Scientists, "Reintegrating Land and Livestock," uses the Cropping Systems Calculator to look at the potential economic and environmental benefits of grazing, including, "increased soil carbon, reduced on-farm emissions from fertilizers, and reduced water footprints." Read the whole "Reintegrating Land and Livestock" report at www.ucsusa.org.

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Seeking Farmers-Seeking Land Clearinghouse

A re you a beginning farmer looking to rent or purchase farmland in the Midwest? Or are you an established farmer/landowner in the Midwest who is seeking a beginning farmer to purchase or rent your land, or to work with in a partnership/employee situation? Then consider having your information circulated via the Land Stewardship Project's *Seeking Farmers-Seeking Land Clearinghouse*. To fill out an online form and for more information, see https://landstewardshipproject.org/morefarmers/seekingfarmersseekinglandclearinghouse. You can also obtain forms by e-mailing LSP's Dori Eder at dori@landstewardshipproject.org/morefarmers/seekingfarmersseekinglandclearinghouse.

Seeking Farmland

◆ Kalvan Schmidt is seeking to purchase farmland in *Wisconsin*. Land with 20 pasture acres and 50 tillable acres, and that has not been sprayed for several years, is preferred. Land with outbuildings and a house is also preferred. Contact: Kalvan Schmidt, 920-861-6000, sandgnaturalsolutions@gmail. com.

◆ Rickeya Brown is seeking to rent farmland in *Minnesota, Wisconsin, South Dakota, Nebraska, Iowa, North Dakota or Illinois*. Land with a house is preferred. Contact: Rickeya Brown, 248-636-3241, rickeyabrown3@yahoo.com.

◆ Kevin Stancliff is seeking to purchase 20+ acres of farmland in *Minnesota, South Dakota, Nebraska or Missouri*. Land that is certified organic and that has 3 tillable acres, 10 pasture acres and 5 forest acres is preferred. Land with fencing, water, fruit trees, power and a house is preferred. Contact: Kevin Stancliff, 206-355-2125, kstancliff@gmail.com.

◆ Amanda Koskela is seeking to purchase 40+ acres of farmland in *Minnesota*. Land that has not been sprayed for several years and that has forest is preferred. Contact: Amanda Koskela, 218-979-9152, m.koskela2014@gmail.com.

◆ Justin Remus is seeking to purchase 40+ acres of tillable farmland in *southern Minnesota's Brown, Nicollet, Renville, Watonwan, Redwood or Blue Earth County.* Contact: Justin Remus, 507-766-5529, Justin.remus@me.com.

◆ Heidi Harrabi is seeking to rent or purchase 1 acre of tillable farmland in *Minnesota*. Harrabi is interested in starting a small vegetable and herb operation and would like land that has not been sprayed for several years. Access to water is required. She would consider buying the land if there is a house on the property. Contact: Heidi Harrabi, 507-433-2545, heidiharrabi@yahoo.com.

• Nick Weidenbenner is seeking to purchase 5-10 acres of farmland in *Minnesota*. Land with 5 pasture acres and 5 forest acres is preferred. A house is also needed. Contact: Nick Weidenbenner, 309-212-5454, nick. weidenbenner@gmail.com.

◆ Tynille Rufenacht is seeking to purchase 20-100 tillable acres of land in

Wisconsin or Nebraska. Land that has not been sprayed for several years is preferred. Contact: Tynille Rufenacht, 406-239-2456, tynille@gmail.com.

◆ Christiaan Breedt is seeking to rent 40 acres of farmland in *Minnesota*, *South Dakota or North Dakota*. Land with 30 tillable acres, 30 pasture acres and 5 forest acres is preferred. Land with water, a barn and sheep shelter is preferred. No house is required. Contact: Christiaan Breedt, breedt91@gmail.com.

◆ Kate McColl is seeking to purchase a few acres of farmland in *western Wisconsin's Trempealeau County*. Land with pasture and a house is preferred. Contact: 507-460-2465, katolah@gmail.com.

◆ Andrea Carpentier is seeking to rent tillable farmland in *Minnesota*. Carpenter would prefer land with woods and some garden space. She is flexible on the number of acres. Contact: Andrea Carpentier, 507-301-8292, atcarpentier@gmail.com.

◆ Rebecca Fisher is seeking to rent 3-5 tillable acres of farmland in *Wisconsin*. Land that has not been sprayed for several years is preferred; sandy soil is okay. A house is required. Contact: Rebecca Fisher, 503-893-8818, beadedfish@gmail.com.

◆ Katelyn Olgren is seeking to purchase 2-15 acres of farmland in *Minnesota*. Land with 5 tillable acres and 5 forest acres, and that has not been sprayed for several years, is preferred. Contact: Katelyn Algren, 507-990-2396, katelynaleshire@gmail.com.

• Cody Hager is seeking to rent 40-80 acres of tillable farmland in *southeastern Minnesota*. No house is required. Contact: Cody Hager, 507-696-4765.

◆ Rebecca Masterman is seeking a sunny pasture/farmland for a small-scale honey bee operation apiary site *within 45 miles of Minnesota's Twin Cities*. Easy vehicle access preferred; yard rent can be paid in honey. Contact: Rebecca Masterman, 763-656-3156, tombecmaster@gmail.com.

◆ Theresa Skrzynski is seeking to rent 1 acre of certified organic farmland in *Wisconsin*. Land with 1-2 outbuildings and access to water is preferred. Contact: Theresa Skrzynski, 262-239-0930, 10goo5do@gmail.com.

Farmland Available

◆ Mark Rieland has for rent up to 5 tillable

acres (to start) of certified organic farmland in *central Minnesota's Wright County* (*near Howard Lake*). The farm site includes 75 acres, all of which is certified organic. Rieland currently has an organic hay operation, which will continue. There is a house available. The asking price is \$1,250 per month for the house and garage; land is extra. Contact: Mark Rieland, 952-380-6644, msrieland@hotmail.com.

◆ Stacy Cushenbery has for rent 65 acres of farmland in *southeastern Wisconsin's Kenosha County (near Somers)*. The land includes pasture and Cushenbery is willing to invest in improvements on the farm as needed by the tenant. Access to light equipment is available; a list can be provided. There is a barn but no electricity or water. A house is available. A rental fee based on a sliding scale is available. Contact: Stacy Cushenbery, 872-301-1361, info@ solutionsintheland.com.

◆ Joel Cannon has for rent 40 acres of farmland in *southeastern Minnesota's Goodhue County (near Frontenac)*. The land has not been sprayed for several years, and Cannon is interested in renting part of it for a specialty crop like industrial hemp. During the past five years the land has been in prairie grasses, which are cut once a year for hay. Cannon is willing to work with a farmer to learn about raising a specialty crop; he is willing to do a no rent/profit share deal. Contact: Joel Cannon, 612-801-7002, joelrcannon@gmail.com.

◆ Ed Lysne has for rent 10 acres of farmland near *Northfield, Minn., south of the Twin Cities*. The land consists of 5 acres pasture and 5 acres tillable. The land has supported a few hogs, as well as poultry and produce, the past two years. It has not been sprayed for several years. There is a house and a garage. Lysne is seeking someone who utilizes organic methods and can help sustain adjacent wildlife habitat. Contact: Ed Lysne, 612-790-7873, edriclysne@gmail.com.

◆ Judith Driscoll has for sale a 10-acre farm in *western Wisconsin (near Balsam Lake)*. There are 8 tillable acres, and it hasn't been sprayed in 15 years. The land includes a fenced goat/sheep pasture. There are 11

Clearinghouse, see page 23...

...Clearinghouse, from page 22

young apple trees, as well as blueberry and raspberry bushes. There is a two-bedroom house. Additional electric fencing, a chicken tractor and other supplies are negotiable. Driscoll would like to sell to a beginning farmer. The asking price is \$154,900. Contact: Judith Driscoll, judithadriscoll@gmail. com, 612-961-2199.

Farm Beginnings

The Land Stewardship Project's Farm Beginnings Program is accepting applications for its 2018-2019 class session. Classes will be held in the Rochester, Minn., region.

LSP's Farm Beginnings program is marking its second decade of providing firsthand training in low-cost, sustainable methods of farm management. 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, and innovative marketing techniques.

This 12-month course provides training and hands-on learning opportunities in the form of classroom ◆ Kurt Schulz has for sale 7 acres of farmland in *south-central Minnesota's McLeod County (near Glencoe)*. Four acres have been in hay for 17 years; no chemicals have been applied to the farm during that time. There is a house and outbuildings. The hayfield could easily be fenced for pasture. The asking price is \$140,000. Contact: Kurt Schulz, 320-510-2147, ayerstein@gmail.com.

♦ Jonathan Lindstorm has for sale 81

acres of farmland in southern *Minnesota's Rice County (near Le Sueur County line and Montgomery)*. There are 17 pasture acres, 38 tillable acres and 5 forest acres. The land has not been sprayed for at least 10 years. There are two run-down barns and a shed. There is a marginal house. The asking price is \$375,000. Contact: Jonathan Lindstorm, jonathan@emmanuelfarm.com, 507-291-4099.

Applications Open for 2018-2019 FB Course Minnesota-Wisconsin Region Class to Begin in Fall 2018

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 twicea-month beginning in the fall of 2018, run until March 2019, followed by an on-farm education component that includes farm tours and skills sessions.

Over the years, approximately 800 people have graduated from the Minnesota-

Farm Beginnings in Other Regions

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

For information on Farm Beginnings courses in other parts of the country, see the Farm Beginnings Collaborative website at www.farmbeginningscollaborative. org. More information is also available by contacting LSP's Amy Bacigalupo at 320-269-2105 or amyb@landstewardshipproject.org.

Wisconsin region Farm Beginnings course. Graduates are involved in a wide-range of agricultural enterprises, including grassbased 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. You can also contact the Land Stewardship Project's Karen Benson at 507-523-3366 or karenb@ landstewardshipproject. org. □

LSP's Farm Dreams: Is Farming in Your Future? Find Out July 29

Farm Dreams is an entry level, fourhour, 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 workshop is scheduled for Sunday, July 29. The workshop will run from 1 p.m. to 5 p.m., and will be held at LSP's office in Minneapolis.

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. □

Tax Credit Now Available for Passing on Assets to Minnesota Beginning Farmers

The new Minnesota Beginning Farmer Tax Credit (see the No. 3, 2017, Land Stewardship Letter) went into effect in January. Under this initiative, there is now a Minnesota state tax credit for owners of agricultural assets—land, livestock, facilities, buildings or machinery used for farming—who agree to sell or rent those assets to a beginning farmer who is not a family member. There is also a Minnesota state tax credit available for beginning farmers who participate in a financial management program.

For details on the Beginning Farmer Tax

Credit initiative and to sign up for the Land Stewardship Project's Tax Credit Update List, see https://landstewardshipproject.org/ beginningfarmertaxcredit.

More information is also available by contacting LSP's Karen Stettler at 507-523-3366 or stettler@landstewardshipproject.org. **□**

Never, Ever, Ignore the Problem

An LSP Panel Offers Advice on Dealing with Tough Financial Times

hen bad news arrives, especially the kind that can threaten the future viability of a farm, it's tempting to not open that registered letter, return telephone calls or even attend a key meeting with the banker. There are numerous ways to handle financial problems, but the one strategy that never works is to pretend they don't exist, especially when the legal system gets involved.

"There is *no* legal problem—repossession, delinquency, default, any of this stuff—that will get better if you ignore it,"



"There are just a lot of good resources, and we have to remember that we're all in this together." – Jack LaValla, Farm Business Management Program

said Stephen Carpenter at a recent Land Stewardship Project workshop. "It will only get worse."

Unfortunately, a whole lot of bad news is arriving on farmer's doorsteps these days. LSP held the workshop in Rochester, Minn., for farmers at a time when agriculture is in the midst of a full-blown financial crisis. As a result of numerous factors, including market control by a handful of corporations and over-production brought about by, among things, government policy, prices paid to farmers for crop and livestock products have been sent into a nosedive. In Wisconsin, 500 dairy farmers went out of business in 2017 alone. Couple low commodity prices with the fact that input costs are steeper than ever-this planting season fuel prices for farmers were 8 percent higher than last year, according to Reuters-and it's clear the situation has become desperate.

As bankruptcies rise and the threat of wide-scale foreclosures increases, calls are flooding into farm crisis lines. Some farmers are finding the stress too much to bear. Much has been made of how the farmer suicide rate jumped during the financial crisis of the 1980s. In fact, the latest figures from the Centers for Disease Control and Prevention show that the suicide rate for male U.S. farmers is 50 percent higher than it was during the 1980s. American farmers now have a suicide rate that may be as much as double that of military veterans.

During the LSP workshop, Carpenter and other experts made it clear that there are many effective resources available for farmers who are in the midst of a personal, professional or financial crisis. And it should be pointed out that in the case of farmers, since they often live and work on farms that they may have grown up on themselves, it can be extremely difficult to differentiate where the personal stops, and the professional and financial begin. Farming *is* their identity.

One way to be proactive about avoiding extreme financial stress is to develop a good system of record keeping, said Jack LaValla, who works with the Farm Business Management Program at Riverland Community College. The Farm Business Management Program is a statewide initiative that works with farm families to help them meet their business and personal goals by developing solid financial records. Good record keeping using systems such as PcMars or QuickBooks can be a form of risk management, since it can give a farm a complete picture of which marketing, borrowing or other management decisions will produce good, sustainable cash flow. Good records are also invaluable when a farmer does get into financial trouble, said LaValla, since they can be used to determine what options a farm has for managing the problem.

Connie Dykes seconded LaValla's point about the importance of good record keeping. As a Minnesota Farm Advocate, Dykes, who farms with her family near Lake City, Minn., has gone through the finances of countless farmers, seeking ways to help them out of financial trouble. Started



"And you have to primarily farm, whatever you're doing, for your loved ones, for your family." — Tim Gossman, Merchants Bank

in the 1980s, the Minnesota Department of Agriculture's Farm Advocates Program is a statewide initiative that provides one-on-one assistance for Minnesota farmers who face a crisis caused by either a natural disaster or financial problems. Farm Advocates like Dykes are located throughout the state, and have proven to be an invaluable asset for farmers over the years.

Dykes often deals with farmers who have gotten to the point where bad financial news has made them feel they have no choices, which leads to situations like Carpenter alluded to: avoiding contact with lenders, officials and the legal system. The Farm Advocates Program can pull in other financial and legal advisers to go through a farmer's records and determine what options are available. Getting a notice from the county sheriff or a registered letter related to a financial or legal problem can be the kind

Financial Stress, see page 25...



"We have ideas and we can help the banker see things through the viewpoint of the farmer, because a lot of times it gets to the point where they can't talk to each other anymore."—Connie Dykes, Minnesota Farm Advocates Program

...Financial Stress, from page 24

of frightening experience that leaves farmers feeling they have few options. It turns out they do, including an opportunity to rene-

gotiate, restructure, or resolve farm debt through farmer-lender mediation.

Having a Farm Advocate involved in negotiations can help re-open communications that have come to a standstill.

"We have ideas and we can help the banker see things through the viewpoint of the farmer, because a lot of times it gets to the point where they can't talk to each other anymore," said Dykes.

Such negotiations go much better if a farmer has a long-term relationship with a lender and keeps in mind that local,

community banks should want to see their farm customers succeed, said Tim Gossman, who is a commercial and agricultural banker with Merchants Bank in St. Charles, Minn. Farmers also need to step back from dayto-day decision making once in a while and consider the big picture, such as what equity they may have available, even though they are "cash poor." Such big picture thinking also involves keeping in mind why you are farming in the first place, said Gossman.

"You have to primarily farm for your loved ones, for your family," he said. "You're not doing it for generations past, you don't have to live up to those expectations. You don't have to live up to your neighbor's expectations. When you look at it that way, it opens up more options."

Carpenter said no matter who farmers are dealing with—from a lender to a government agency to the local sheriff's department—during a crisis situation, it's key that farmers be aware of their rights. And that means opening that registered letter when it comes in the mail and acting on it.

"Many times, people let the rights they have escape them, because they don't use them," he said. "And one of the easiest ways to lose your rights is to ignore bad news."

It's also easy to overlook or undervalue personal resources a farmer may have at her or his disposal when in a crisis situation, according to Dori Eder, an organizer for LSP's Farm Beginnings Program (*see page* 23). During the Farm Beginnings Course, students are taught to assess what assets they have in order to not only start farming, but maintain a viable enterprise in the long term. That requires going beyond looking at the financial equity one may have in land, buildings or livestock.

"Other assets you have are your creativ-



"Many times, people let the rights they have escape them, because they don't use them. And one of the easiest ways to lose your rights is to ignore bad news."—Stephen Carpenter, Farmers' Legal Action Group

ity, your family and your community," Eder said. "You can draw on those other assets when trying to figure out what to do. Many times people are limited by the fear of going down a path that might end with having to sell something, or having to move, or having to change something significant about what you're doing. Don't be afraid of that; look at all the assets you have, and all the possibilities that are in front of you." 🗖



"It's not just your equity in your land or your buildings or your livestock. Other assets you have are your creativity, your family and your community." — Dori Eder, Farm Beginnings Program

Give it a Listen

Episode 210 of LSP's *Ear to the Ground* podcast features excerpts of the recent farm financial stress panel discussion: https://landstewardshipproject.org/ posts/podcast/1077.

Need Help? Check Out these Resources

→ Minnesota Farm Advocates: Farm Advocates, which are located throughout the state, provide one-on-one assistance for Minnesota farmers who face crisis caused by either natural disaster or financial problems. To find an advocate near you, see www.mda.state.mn.us/ about/commissionersoffice/farmadvocates.aspx. The Advocates hotline is 1-800-967-2474.

→ Minnesota Farm & Rural Helpline: Free, confidential, 24/7. Calls are answered by trained staff and volunteers. If you or someone you know is struggling with stress, anxiety, depression or suicidal thoughts—call. Sometimes it's easier to talk to somebody you don't know. The telephone number is 1-833-600-2670 (extension no. 1).

→ Farmers' Legal Action Group (FLAG): FLAG is a nonprofit law center dedicated to providing legal services and support to family farmers and their communities in order to help keep farmers on the land. FLAG provides basic advice as well as numerous printed and online resources. Check out FLAG's website at www.flaginc.org or call 651-223-5400.

→ Minnesota Farm Business Management Program: This program, which is offered through the Minnesota State Colleges and Universities system, offers individualized farm management assistance and access to educational opportunities throughout the year. Farm Business Management instructors work with farmers to improve record keeping and provide in-depth financial and profitability analysis of agricultural operations. For a list of instructors throughout the state and other details, see www.mda.state.mn.us/grants/fbmprograms.aspx.

→ The Minnesota Farmer-Lender Mediation Program: Contact the program through its website at www.extension.umn.edu/agriculture/farmer-lender-mediation, or at 218-935-5785.

→ University of Minnesota "Dealing with Stress" website: This website contains fact sheets and tips on dealing with stress, as well as links to other resources. For details, see www.extension.umn.edu/family/live-healthy-live-well/healthy-minds/dealing-with-stress.

When Nature Bites Back

Blending the Domestic & the Tame in Farming is Not a One-Way Street

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 earlier installments in the series, see the No. 1, 2, 3 and 4, 2017, editions of the *Land Stewardship Letter*: https://landstewardshipproject.org/about/landstewardshipletter.

By Brian DeVore

Tyler Carlson farms a few miles north of "Gopher Prairie," the fictional setting for Sinclair Lewis's 1920 novel, *Main Street*. In the book, Lewis, who grew up in the real Gopher Prairie, otherwise known as Sauk Centre, used biting satire to poke fun at small town life. But on a recent summer day, Carlson is less than amused at the havoc burrowing rodents are raising in his part of central Minnesota.

"Some of the vision of this farm is really trying to make agriculture work alongside wildlife and wild ecosystems," he says while examining a three-foot-tall white pine tree that's listing to its side in a pasture, its roots having been gnawed off by the chisellike teeth of gophers. "But wildlife are pests in certain instances. The gophers, of all the pests, they're the ones I don't know if I can live with. On this working farm, the problems with gophers far outweigh the benefits."

That's quite an admission for someone who studied restoration ecology at the University of Minnesota before coming to this 200-acre mix of fields and woodlands in 2012 to launch an operation that includes practices like "silvopasturing"—an agroforestry system that combines tree production with the raising of livestock. Carlson had high expectations for the silvopasturing system: he saw it as an economically viable way to re-build soil, combat climate change, contribute to cleaner water in the Sauk River watershed, and support habitat for wildlife and pollinators. And he wanted to create a "beautiful" working landscape in the process.

Six years later, the 32-year-old farmer is still committed to producing numerous eco-

system services, but reality checks like rootchomping rodents, weather extremes and marketing headaches have tamped down his enthusiasm a bit, prompting him to readjust how he will reach his environmental as well



as economic and quality-of-life goals. He's learned hard lessons about creating an ecologicallybalanced farm; introducing the elements of natural habitat into a

domesticated landscape can be frustrating. But what if one reverses the flow, and injects a little of the domesticated into the wild?



Tyler Carlson feels cattle, grass and trees can interact in a way that improves the environment on a working landscape. (*LSP Photo*)

Function Over Form

While studying restoration ecology at the U of M, Carlson perceived a pattern in the field where some seemed obsessed with returning parts of the landscape to an Eden-like habitat untrammeled by humans, and then taking a hands-off approach. The reality is, in farming country we no longer have parcels of land that are unaffected by human activity. If they aren't managed in some way, even the best ecological re-builds can be undermined by invasive species, runoff and other impacts that don't respect field borders.

"How many native grasslands have been planted and you come back 10 years later to find brome and reed canary grass?" Carlson asks rhetorically. "I feel like at this point, we need to be more concerned about the way a landscape functions than what it looks like."

While in college, Carlson was influenced by the late Bud Markhart, a horticulture professor who focused on organic farming systems and who showed students how food could be produced in an ecologically sound manner. Carlson also took a class in agroforestry, where he learned about silvopasturing, which is used more in the Southeastern U.S. and many other regions of the world, but has yet to catch on in the Midwest. Such a system involves using controlled grazing of livestock to maintain a grassland habitat amongst trees, creating a savanna-like habitat. Silvopasturing can involve grazing existing woodlands, or planting trees in open areas and seeding forage species amongst them. Besides providing income in the short term (livestock products) and long-term (wood), silvopasturing generates numerous environmental benefits, including wildlife and pollinator habitat, erosion control and better nutrient cycling. Ecologists are particularly excited about silvopasturing's potential for sequestering greenhouse gases. In a sense, a savanna habitat provides the

perfect balance of short-term carbon cycling via the grasses and forbs, and long-term storage provided by the trees. Such a system can benefit livestock farmers because the trees provide the kind of intermittent shade that keeps the animals cool while extending the grazing season for coolseason grasses, according to U of M Extension educator Diomy Zamora.

Carlson also took the Land Stewardship Project's Farm Beginnings course (*see page 23*) and interned on Moonstone Farm in western Minnesota. Over the years, Moonstone's Audrey Arner and Richard Handeen have shown how livestock can be used in a managed rotational grazing system to

not only add value to perennial plant systems like grass, but improve the environmental health of the land. Carlson saw how he could use livestock to support a savanna habitat in an economically viable manner.

He purchased his grandparents' farm near Sauk Centre, and seeded its hay and crop ground to pasture grasses. Using financial support from the USDA's Natural Resources Conservation Service and a U of M silvopasturing research initiative, Carlson

Ecological Agrarians, see page 27...

... Ecological Agrarians, from page 26

established approximately 6,500 red pine, white pine and red oak seedlings on 14 acres of pasture. He planted the trees in rows and set up a fencing system that allows him to graze cattle in 50-foot "alleys" between the lines of trees. Eventually the trees will be big enough that the protective fencing can be removed and livestock will be able to graze in the shade.

Over the years, Carlson and his partner Kate Droske's Early Boots Farm (www. earlyboots.com) has almost tripled the size of its original Low-line Angus herd of 15 brood cows and 15 yearlings. They direct market grass-fed beef, as well as sell animals through other farmers supplying

the market. After weathering a few droughts and figuring out pasture seeding rates, rotations, fencing systems and herd health, Carlson feels the grazing part of the enterprise is hitting its stride.

On a day in late June the farmer walks through a paddock where, he says, "it's all working." The cow-calf herd is moving through a diverse mix of grasses and forbs, and the animals are thriving on the lush growth.

When he moved here, the farm's soils were showing the results of decades of intense cropping. These days, there are indications that the land is on the mend. Dung beetle populations are high enough that within 24-hours of a cow

pie being deposited, it is thoroughly populated by these key players in the nutrient cycle. The soils soak up and store precipitation better, and the forages recover quickly after each grazing. Bluebirds and dickcissels, which rely on grasslands, are flourishing. Carlson says the fact that he is supporting around 80 adult animals on 60 acres of grazing land (he supplements those pastures with managed woodland grazing) shows that the restored pasture is resilient and productive.

The "silvopasture" part of the farm, on the other hand, has had a rocky start.

Potential Nipped in the Bud

Carlson knew that deer would be a problem, and even though they did feed on some of his tree seedlings, he was able to use bud caps and a blood-based repellent to keep that issue under control. What he did not foresee, however, was the problems underground denizens would cause at the other end of the seedlings. The red oak plantings did not survive the first winter, mostly because rodents fed on the roots or girdled the stems. The pines have done better, but have not escaped completely the depredations of the Gopher Prairie plunderers.

As he guides an electric golf cart down a field road, Carlson points out gaps in the rows of planted pines where seedlings never even got started. Even more disconcerting is the number of trees that are several feet tall, but are leaning to the side, dead or quickly dying, their roots clipped by gophers. After further investigation, Carlson learned that trying to get new tree plantings to grow in open pasture is difficult, given the prevalence of pests like rodents. In fact, gophers follow the furrow created by tree planters to laser right in on the succulent roots. "I've

"It shows that if you let it, nature can be pretty forgiving," says Carlson of a woodland on his farm that he is reviving thanks to his use of a chainsaw and careful grazing management. (*LSP Photo*)

tried to trap that gopher 15 times—he's beaten me," Carlson says at one point, point-ing out a freshly dug gopher mound.

As a result of the rodents and a flaw in the design that resulted in more trees per acre than necessary, Carlson estimates there are about 2,500 trees left from his planting. But he hasn't given up on silvopasturing. After all, the survivors are doing well.

The farmer walks up to a white pine that's approaching seven-feet-tall. Looking down the line, he sees other pines that are also thriving. In fact, with the protective fencing and the grass growing up between the rows of trees, one gets a sense of what a silvopasturing system in full bloom would look like on this farm in 10 to 20 years.

"This tree was this tall in 2012," says Carlson, holding his hand a few inches off the ground. "That's awesome! Right? That's why we're here. For all the disasters that we had, that was worth it."

Carlson is also excited about another variation of agroforestry, called alley-cropping, that he's launched on one corner of his farm. In a fenced-in enclosure, he's planted a row of shrubs growing honey berries. He shows off a honey berry bush that's already producing blueberry-colored fruit with a distinct kiwi-like flavor. In six years the honey berry shrubs will form a solid hedge six-feet tall. Carlson describes a future where there are double rows of the shrubs with 100-feet of pasture separating them, forming an alley system that provides a windbreak as well as significant fruit production-he estimates up to 10 acres of fruit could be produced off the farm using this system. The farmer says such a set-up would provide flexibility, since rather than grazing between the hedgerows, he could grow vegetables or other crops, de-

pending on market opportunities.

Given that supporting wildlife and other ecosystem services in and of themselves has been insufficient to attract a large enough customer base for the grass-fed beef, staying nimble enough to respond to different market situations is a key financial strategy for Early Boots.

Carlson sees the hedgerow system as another way to combine profitable food production—fruit, beef and possibly vegetables—with habitat that's wildlife friendly and, frankly, "a more interesting landscape to look at."

It has a lot of potential, but is yet again an example of a farmer trying to introduce the workings of a natural habitat—namely diversity—into a domesticated

farm field. What really gets the restoration ecologist in Carlson excited is what's happening in a stand of trees a few yards away from the fenced-in honey berries.

A Forgiving Nature

As was mentioned, silvopasturing can take two major forms: planting trees in pastured land, or introducing a grazing system into an already existing forest. One hundred acres of Early Boots Farm is in forest cover of some kind, providing plenty of opportunities to try out the latter model of silvopasturing. Simply turning livestock out into a woodlot and allowing them free rein is not silvopasturing, says the U of M's Zamora. The same rules, with some modifications, that apply to managed grazing of an open grassland should apply to grazing a woodland: move the animals frequently, moni-

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... Ecological Agrarians, from page 27

tor impact and be willing to seed forages in open areas to keep the grassland habitat healthy, for example. Zamora says such a way of melding livestock and forestry has great potential in a state like Minnesota—an estimated 650,000 acres of the state's farm woodlands are being grazed by livestock in an "unmanaged" manner. The same innovations that have helped make rotational grazing viable on more lands than ever—quality, portable fencing, for example—can also make a woodland a good source of forage.

Carlson is proving that. He steps over a fence and into a nice stand of bur oak, ash, ironwood, elm and aspen on a small hill that slopes down to a pond. Invasive buckthorn is growing as well, but has been set back considerably by some chain-sawing Carlson has been doing (he has also thinned out



The Driftless Reader

Edited by Curt Meine & Keefe Keeley 2017; 388 pages University of Wisconsin Press https://uwpress.wisc.edu

Reviewed by Jason Abraham

ike a braided backwater, *The Driftless Reader*, a nearly 400-page publication from the University of Wisconsin Press, twists and turns through an eclectic and, at times, moving collection of histories, poems and images from areas of Minnesota, Wisconsin, Iowa and Illinois untouched by the last glaciers.

As might be expected, selections lean heavily toward tales originating in Wisconsin, but stories of people connected by ridges, valleys and rivers can't help but cross borders and even generations. Editors Curt Meine and Keefe Keeley, both with strong ties to conservation and sustainable agriculture, present a thoughtfully curated compendium that begins before the Pleistocene, winds through the present day and into what might someday await this region.

Broken into 12 chapters that advance chronologically, the book contains more than 40 works by Native Americans, explorers, scientists, historians, farmers, novelists bigger trees to create more gaps for sunlight to enter). In open glade-like spots between some of the trees, red clover and orchard grass Carlson had seeded are making use of the sunlight. For the past few years, this woodland has been a part of his rotational grazing system. As a result, the cattle not only have a cool place to graze during hot weather, but they are helping control the buckthorn. Opening up the woodland hasn't just benefited the forages—earlier this year Carlson noticed numerous oak seedlings sprouting in spots where sunlight was hitting the ground; in 2012 there were few oaks under 75-years-old here.

This stand of trees had been either abused or neglected for over a century. But through the introduction of innovative farming practices, in a few short years it is being revived as a key ecological component of a working landscape. Grazing among the trees isn't nearly as productive as running cattle

and many others. There is also a collection of paintings, photographs and maps.

In selecting material, the editors clearly took great pains to sample the multitudes of voices and cultures that make up the Driftless region. They begin on the ground, literally—interspersing poems with excerpts from scientific journals to describe Drift-

less geology, providing ample contrast with its glaciated surroundings.

Moving from geology to human habitation, the editors introduce ancient voices through archeological evidence and the story of Red Horn, a Ho-Chunk Nation hero known through oral tradition and depicted in a thousand-year-old cave painting at a place in Wisconsin known as the Gottschall site. Explorations and photographs of earthworks, including those shaped as animal effigies, are also included.

Detailed descriptions of the region's ecological history provide a backdrop for how the landscape appeared when Europeans arrived, and reflect how the relationship between people and the land changed over time. The editors spare nothing in their selections describing the treatment of Native Americans. Stories of spurious treaties, forced relocations, starvation and disease echo through chapters on early trade and settlement. But interspersed in this collection is evidence of understanding and coexistence, particularly in the day-to-day descriptions of early explorers through open pastures, but it is a low-impact way of attaining some of Carlson's ecological goals in a financially viable manner. Injecting a little bit of nature into tame pastures had been surprisingly difficult, but reversing things and introducing domesticated beasts into a wild corner is paying off.

Such a spot can also serve another important purpose for a farmer who has been humbled more than once by a natural ecosystem's resistance to adhering to the rules of farming. Carlson says such a savanna-like habitat on a farm gives him peace of mind that, with a little guidance here and there, sometimes the land can take care of itself.

"It shows that if you let it, nature can be pretty forgiving," says the farmer as he walks among the trees in the dappled sunlight. "As much as you learn on a farm how quickly, how easily, things find ways to die, it's also kind of amazing how tenacious and resilient the land can be."

and settlers.

CURT MEINE AND KEEFE KEELEY

THE

In selecting voices for these chapters, Meine and Keeley frequently excerpt from original source material. A harrowing description of the tragic 1832 Battle of Bad Axe, fought south of La Crosse, Wis., comes from the autobiography of Black Hawk, the leader of the Sauk tribe. The autobiography

> was written while Black Hawk was in captivity. A description of the Upper Mississippi River upon the arrival of Europeans comes from the 1674 account of French explorer Jacques Marquette.

> Between original accounts, however, the editors illustrate landscape and people with iconic writings as well as hidden gems from across time. An excerpt describing the scenery as viewed from the Mississippi River between Iowa and Saint Paul comes from Mark Twain's *Life on the Mississippi*. Another iconic, although

slightly lesser-known piece from Ben Logan provides a portrait of farm life around Gays Mills, Wis., in the early twentieth century. In an excerpt from his 1975 memoir *The Land Remembers*, Logan describes the difference between ridge farms and valley farms.

"They found the people were different on ridge and valley farms. Some were happier down below where the days were shorter,



Driftless, see page 29...

... Driftless, from page 28

the wind gentle, storms hidden by steep hillsides," Logan writes. "Others were happier on the hilltop, where you could prove yourself by standing against the summer storms and winter blizzards, enduring the stony fields and loneliness, with other ridges beyond yours like great rollers on the sea."

In later chapters, the editors focus on conservation, community and the future of the Driftless. The chapter on conserving lands begins with a reflection on native prairies, followed by deep dives into the inner-workings of sustainable agriculture and architecture as provided in accounts by Aldo Leopold and Frank Lloyd Wright.

Letter to a Young Farmer

How to Live Richly without Wealth on the New Garden Farm

By Gene Logsdon Foreword by Wendell Berry 2017; 232 pages Chelsea Green Publishing www.chelseagreen.com

Reviewed by Dale Hadler

ompleted just a few weeks prior to his 2016 death, Gene Logsdon's *Letter to a Young Farmer* is part biography, part how-to manual and part social commentary written by someone who lived a remarkable life as a journalist and a seminary student, but who discovered his true calling as a "contrary farmer."

Besides being a farmer innovative enough to make a living on 20 acres of Ohio land for four decades, Logsdon was a friend of Wendell Berry, another icon among contrary farmers who believes in gut level common sense as opposed to the excesses of Big Ag and well-intentioned, but frequently poorly-informed, critics of even sustainable livestock production such as the group People for the Ethical Treatment of Animals. Like Berry, Logsdon deeply influenced the sustainable agriculture movement. But he is not as widely known by the general public, likely because, unlike Berry, he often wrote more about the basics of fence-building and animal care than the overall state of society and agriculture.

In fact, Letter to a Young Farmer is similar in tone to Wendell Berry's recent The Art of Loading Brush: New Agrarian Writings. For material describing the present-day Driftless, the editors selected a poignant piece in which Robert Wolf documents the after effects of an immigration raid on Mexican and Guatemalan meat processors in Postville, Iowa. Meine and Keeley write that they included this piece to reflect communities in flux, subject to national and global trends involving immigration, labor, economic disparity and cultural and demographic change.

The book ends with several pieces dedicated to the future of the Driftless, including an uplifting look by Ted Leeson at the positive impacts of conservation practices on trout streams. Finally, there is an extensive list of sources and references to further reading on the region.

In that book, Berry, who is in his eighties, reflects on his life and his concerns for the future of society, especially agriculture. But whereas Berry addresses such issues by, among other things, using the fictional character Andy Catlett, Logsdon relies on a first-person narrative and a philosophical tone reflecting his seminary background. As a seminary graduate myself, I appreciate this approach to discussing issues and challenges, both on the farm and personal level, as well as on a bigger, worldwide scale.

Logsdon was a prolific writer, penning more than two dozen books and contributing to various magazines and other publi-

cations. His engaging writing style—succinct, well-informed and often hilarious—is in full display in what Berry calls Logsdon's "valedictory statement."

It is hard to read this book without thinking about the way the author must have reflected on the completion of his own life, which he knew was coming soon. This creates a sadness that permeates the reading experience.

But Logsdon's acerbic wit still manages to shine

through, especially when he's critiquing a farming system that ignores nature, history and plain old common sense. At one point he describes a neighbor who planted nothing but soybeans. The first year it was a financial success. The second, the cyclical nature of the market caught up to him.

"...his bottom line was appropriately named because it sank to the bottom," writes Logsdon wryly.

The author uses his nail-on-the-head hu-

Those of us lucky enough to have lived in the Driftless know that its overwhelming beauty and landscape can somehow hide in the day-to-day rush of life. Thanks to works and writings like those found in this collection, we are reminded of our good fortune to know towering bluffs, deep shady valleys and coursing streams and rivers. Those still unfamiliar with the Driftless will find ample reason for further exploration in the pages of this collection.

Land Stewardship Project member Jason Abraham grew up fishing and hiking the shores of Lake Pepin in the heart of the Driftless. He frequently returns to the area with his family.

mor to discuss everything from how to load livestock and his own family's dynamics, to the history of industrial agriculture and the latest food trends.

Throughout it all, he displays the confidence of a man who feels that he has much to pass on to a generation of future farmers who may wish to produce healthy food and a sustainable living on a small scale. But Logsdon is also experienced enough to know that there is no secret to success when it comes to farming.

"The biggest mistake in getting into farming ventures is the assumption that, if you know how to do it and follow the know-how

strictly, you will succeed," he writes. No matter how many farm books or classes one digests, in the end factors like weather can make you look

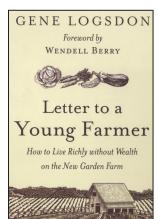
like, as Logsdon puts it, "a loser." As a result, his list of suggestions for being successful in farming are, as the author defines it, more a collection of "philosophical" how-tos. There is nothing new here: "Don't go overboard on anything," is one of the suggestions, for example. But sometimes old advice takes on a new life when it's passed on by a fun, entertaining and well-reasoned mentor.

Overall, *Letters to a Young Farmer* has a reflective feel of someone

passing knowledge and experience on to a younger farmer. As Berry points out in the foreword: "In it an old farmer is talking to a young farmer, who will become an old farmer talking to a young farmer."

Thus a key agricultural cycle is perpetuated. \Box

Land Stewardship Project member Dale Hadler lives in Winona in southeastern Minnesota.





Membership Update

LSP Volunteer Opportunities this Summer

The Land Stewardship Project will be putting out calls this summer for volunteers to help with the annual Twin Cities Potluck Cookout on Thursday, July 26. We will also be seeking volunteers for a membership telephone bank, large mailings and more.

If you are interested in helping or just want to get on LSP's volunteer e-mail list, contact Clara Marcus Sanders at 612-722-6377 or cmarcus@landstewardshipproject. org. For details on volunteering in LSP's other offices, call 507-523-3366 in south-

Breakfast Volunteers

For the 13th year in a row, volunteers helped make the Land Stewardship project's Family Farm Breakfast and Day at the Capitol (*see page 6*) a success. Besides helping prepare and serve food, cleaning up and arranging tables, volunteers also signed-in almost 300 participants and made sure everyone knew where they were going.

Interested in volunteering? See the article above for details on ways you can help out. (*LSP Photo*) eastern Minnesota (Lewiston) or 320-269-2105 in the western part of the state (Monte-video).

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 e-mail Clara Sanders Marcus at cmarcus@landstewardshipproject.org.

Get Current With

LIVE ANNINN 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. □

Land Stewardship Talk

The Land Stewardship Project's award-winning *Ear to the Ground* podcast features over 210 episodes focused on everything from beginning farmer issues and soil health, to policy and local food systems. Check them out at www.landstew-ardshipproject.org/posts/podcast. *Ear to the Ground* is also available on Stitcher and iTunes.



Support LSP in Your Workplace

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

- \rightarrow promote the sustainability of our rural communities and family farms;
- \rightarrow protect Minnesotans from health hazards;
- \rightarrow educate citizens and our youth on
- conservation efforts;
- \rightarrow 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 LSP's Amelia Shoptaugh at amelias@landstewardshipproject.org or 612-722-6377.

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 Honor of Leona Grosse & Her

- Dedication to the Land
- ◆ Anthony & Nancy Hilleren

In Honor of Erica Sandstrom

Walt Seibert

In Memory of Dwight Ault

♦ The Ault Family

In Memory of Joe Morse

- ♦ Eileen Hanson
- All Are One Catholic Church in Winona
- Denise & Michael Bernatz
- ♦ Michael Bowler
- ♦ Jane Cowgill

- ♦ Cherie Hales
- ♦ Mike Kennedy
- ♦ Brian & Betsy Neill
- ♦ Barb & Martin Nelson
- ♦ Judi Nelson
- ♦ Debi Niebuhr
- ◆ Wayne Purtzer & Joan Redig
- ♦ William & Gloria Rose
- ◆ Jennifer & Mike Rupprecht
- Ron & Diane Stevens
- ◆ Ed & Bobbi Walsh
- ◆ Keith & Virginia Laken
- ◆ Dale Hadler

In Honor of Johanna Rupprecht

♦ Adam Sneyd

In Honor of Walt Seibert

◆ Spencer Seibert

In Memory of Bud Markhart

♦ Beth Markhart

In Memory of Mark &

- Katie McManus
- Richard & Marjorie McManus

In Memory of Lawrence Eide

♦ Anonymous

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

LSP Meeting Room Available



The Land Stewardship Project's meeting room at our office in South Minneapolis is often used by allies of ours who are working for a just and sustainable world. For example, this spring, organizers (*pictured*) from across the country gathered for a two-day strategy session about building people power to stop factory farms and advance regenerative farming and food systems. If you are interested in using the room—it seats 24 with tables—for a meeting to advance stewardship and justice on the land, good food and farming, or similar purposes, call LSP at 612-722-6377, and talk to a staff member about what you're planning. (*Photo by Mark Schultz*)



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STEWARDSHIP CALENDAR

→ JUNE 24—LSP Vegetable Farm Tour & Potluck, Basic Place Farm, 12:30 p.m.-3 p.m., Rochester, Minn. Contact: Dori Eder, LSP, dori@landstewardshipproject.org, 612-578-4497

→ JUNE 28—Dairy Grazing Apprenticeship Summer Fling Pasture Walk, 10:30 a.m.-3 p.m., Haugen Farm, Canton, Minn. Contact: Bonnie Haugen, 507-421-7170

→ JULY 9—MFA Organic Vegetable Farm Tour, Uproot Farm, Princeton, Minn. Contact: Laura Hedeen, MFA, 651-433-3676, laura@ mnfoodassociation.org, www.mnfoodassociation.org

→ JULY 10-LSP workshop on Cover Crops, 9 a.m.-noon, Stegeman Farm, Benson, Minn. Contact: Robin Moore, rmoore@ landstewardshipproject.org, 320-269-2105 → JULY 10-LSP/Minnesota Nurses

Association Healthcare Organizing

Meeting, 7 p.m.-9 p.m., St. Stephen Lutheran Church, Marshall, Minn. Contact: Paul Sobocinski, LSP, sobopaul@landstewardshipproject.org, 507-342-2323

→ *JULY 10*−**Cover Crops Field Day**, 1 p.m.-4 p.m., Cotter Family Farm, Austin, Minn. Contact: Toby Cain, 563-447-0462

→ JULY 16—MFA Summer High Tunnel Farm Tour, Calla Farm, Balsam Lake, Wis. Contact: Laura Hedeen, MFA, 651-433-3676, laura@mnfoodassociation.org, www. mnfoodassociation.org

→ JULY 19—LSP workshop on Tillage & Soil Health, 9 a.m.-noon, Benson, Minn. Contact: Robin Moore, rmoore@ landstewardshipproject.org, 320-269-2105 → JULY 20—MOSES Workshop on Wholesale Vegetable Production on a Small Scale, Seed-to-Seed Farm, Balsam Lake, Wis. Contact: https://mosesorganic.org → JULY 24—LSP Grazing & Soil Health Farm Tour, Earth-Be-Glad Farm, 5 p.m.-8 p.m., Lewiston, Minn. Contact: Doug Nopar, LSP, 507-523-3366, dnopar@landstewardshipproject.org

→ JULY 25—Dairy Grazing Apprenticeship Summer Fling Pasture Walk, 10:30 a.m.-3 p.m., Wagner Organic Dairy Farm, Brandon, Minn. Contact: Bonnie Haugen, 507-421-7170 → JULY 26—LSP 17th Annual Twin Cities Summer Potluck Cookout, 5:30 p.m.-8:30 p.m., LSP Minneapolis office, 821 E. 35th St. Contact: LSP, Elizabeth Makarewicz, emakarewicz@landstewardshipproject.org, 612-722-6377

Farm Beginnings Application Deadline Sept. 1

The 2018-2019 edition of the Land Stewardship Project's Farm Beginnings course will be holding its classes in the southeastern Minnesota region, beginning this fall. The early bird discount deadline for applying is Aug. 1; Sept. 1 is the final deadline. For details, see page 23.

\rightarrow JULY 26-MOSES In Her Boots:

Organic Vegetable CSA, Humble Hands Harvest, Decorah, Iowa. Contact: https:// mosesorganic.org

→ JULY 29-LSP Farm Dreams Workshop, 1 p.m.-5 p.m., LSP office, Minneapolis (*see page 23*)

→ JULY 30—Practical Farmers of Iowa Small Grains Con., Mankato, Minn. Contact: www.praticalfarmers.org, 515-232-5661

→ AUG. 1-Early Bird Discount Deadline for 2018-2019 LSP Farm Beginnings Course (see page 23)

→ AUG. 1-MFA/NRCS Workshop on High Tunnel EQIP Applications, Good Acre, Falcon Heights, Minn. Contact: Laura Hedeen, 651-433-3676, laura@mnfoodassociation.org, www.mnfoodassociation.org

→ AUG. 7—LSP Workshop on Integrating Livestock Options, 4 p.m.-7 p.m., Kerkhoven (Minn.) Civic Center. Contact: Robin Moore, rmoore@landstewardshipproject.org, 320-269-2105

→ AUG. 7—MOSES Field Day on Kale Variety Trial, Riverbend Farm, Delano, Minn. Contact: https://seedalliance.org

→ AUG. 30-LSP/NRCS/The Nature Conservancy Grazing & Cover Crops Field Day, 5 p.m.-8 p.m., Clear Springs Cattle Company, Starbuck, Minn. Contact: Bryan Simon, LSP, 320-492-2526, bsimon@ landstewardshipproject.org

→ SEPT. 1—Final Deadline for 2018-2019 LSP Farm Beginnings Course (see page 23) → SEPT.7—LSP Farm Beginnings Orchard Production Field Day, 1 p.m.-4 p.m., Kalliroe Farm, Montevideo, Minn. Contact: Dori Eder, LSP, dori@landstewardshipproject.org, 612-578-4497

 \rightarrow SEPT. 11-LSP workshop on

Conservation Legacy & Working Lands, 4 p.m.-7 p.m., Kerkhoven (Minn.) Civic Center. Contact: Robin Moore, rmoore@ landstewardshipproject.org, 320-269-2105

→ SEPT. 15—LSP/NYFC Land Access Workshop for Beginning Farmers, 9 a.m.-4 p.m., Rochester, Minn. Contact: Karen Stettler,

p.m., Rochester, Minn. Contact: Karen Stettler, LSP, 507-523-3366, stettler@ landstewardshipproject.org

→ SEPT. 30—LSP Farm Beginnings Land Access/Starting from Scratch Field Day, 1 p.m.-4 p.m., Oxheart Farm, Hager City, Wis. Contact: Dori Eder, LSP, dori@ landstewardshipproject.org, 612-578-4497 → OCT. 2-3—Nobel Conference 54—

Living Soil: A Universe Underfoot, Gustavus Adolphus College, Saint Peter, Minn. Contact: https://gustavus.edu/events/nobelconference/2018

→ OCTOBER—Classes for 2018-2019 LSP Farm Beginnings Course begin meeting in southeastern Minnesota (see page 23)