

The Land Stewardship Letter

40 Years of Keeping the Land & People Together



Volume 40

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Photo by Maura Curry

The naked truth about the power of soil health (page 7).



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 - Lorraine Redig's Words of Wisdom*—
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Mike McMahon Picked as New LSP ED

Land Stewardship Project Marks 40th Year With New Leadership

As the Land Stewardship Project celebrates its 40th year of “keeping the land and people together,” a veteran grassroots organizer has been selected as its new executive director, the group’s board of directors announced in January. Mike McMahon took over the helm at LSP on Jan. 18. At that time, he also became the head of the organization’s 501(c)4 advocacy action arm, the Land Stewardship Action Fund, also known as LSAF (see page 15 for more on LSAF).

McMahon brings to this position over a quarter-century of experience working with nonprofit, grassroots, rurally-focused organizations — the majority of that time has been spent with LSP. After working with Iowa Citizens for Community Improvement as a rural organizer in the mid-1990s, he joined LSP’s policy and organizing team in 1998, where, among other things, he organized hog farmers around the national pork checkoff campaign, which eventually went all the way to the U.S. Supreme Court. McMahon went on to work extensively with building LSP’s membership program, eventually becoming director of membership and individual giving. He served in that position until July 2020, when he left to work as the advancement director for Iowa Citizens for Community Improvement.

Members of the LSP and LSAF boards say they are impressed with McMahon’s wealth of organizing, fundraising, and management experience, as well as his dedication to and knowledge of the group’s mission and goals. Before leaving LSP in 2020, McMahon played an integral part in the development of the group’s current five-year plan, which plays a key role in guiding the organization’s work for creating a resilient and just farm and food system.

“As we move forward with the work of LSAF in relation to the mission of LSP, I am excited for Mike’s leadership and vision,” says Anna Racer, a member of the LSAF

board who operates a Community Supported Agriculture farm in Minnesota’s Rice County. “His experience with member-led organizations is integral to strengthening our



“The Land Stewardship Project means a lot to me, and its work to keep the land and people together is as needed today as it was 40 years ago,” says Mike McMahon, LSP’s new executive director.

rural communities through the mission of this organization.”

LSP was originally launched in 1982 as a Midwestern-based soil stewardship advocacy organization. The organization still works extensively in the area of soil health and farmer-to-farmer education, but over the years has broadened its work into areas such as beginning farmer training, generational transfer of farmland, policy reform, local democracy, and regional food systems development. McMahon is the sixth executive director to lead the group since organizers Ron Kroese and the late Victor Ray founded LSP in the depths of the 1980s Farm Crisis. Since May 2021, Julie Emery has served as LSP’s interim executive director. This winter, she assisted in passing on leadership responsibilities to McMahon.

“We want to express our deepest appreciation to Julie Emery,” the LSP and LSAF boards said in a joint statement. “Her presence, professionalism, and dedication to LSP’s

mission has made it possible for us to reach this point as we move boldly forward in 2022 and beyond.”

Darrel Mosel, an LSP board member who raises crops and livestock in Minnesota’s Sibley County, says having someone with McMahon’s background leading the organization comes at an exciting time as he and other members dig deep into areas of work such as how to develop local, state, and federal policy that supports small and medium-sized regenerative farmers.

“Of all the farm organizations in the state, LSP is probably in the best position now to have a positive impact on policy,” says Mosel, who has worked extensively on state and federal policy issues. “I am so glad Mike is heading our organization. His experience and dedication to LSP’s values and goals will assure that our voice will be heard on policy issues at all levels.”

McMahon says it is an honor to lead an organization that has a rich history of fighting for farmers, rural communities, and the land, and that he looks forward to working with the group’s talented staff.

“I’m very grateful for this opportunity,” he says. “The Land Stewardship Project means a lot to me, and its work to keep the land and people together is as needed today as it was 40 years ago. LSP’s innovative programs and organizing are essential to meeting the challenges and opportunities farmers and rural communities face today. I’m excited to be a part of LSP’s future.” □

Mike McMahon can be contacted at mcmahon@landstewardshipproject.org or 612-400-6346.

LSP’s Long Range Plan

The Land Stewardship Project outlined its long range goals and how we will go about achieving them in *Vision for the Future: 5 Year Plan 2019-2024*. A pdf of the plan can be downloaded at landstewardshipproject.org/long-range-plan. For a paper copy, call LSP’s Twin Cities office at 612-722-6377.

Tell Us a Story

As part of the Land Stewardship Project’s 40th Anniversary celebration year, we are collecting stories from our members about how they’ve been impacted by the organization. Maybe your inspiration for sharing a tale is an energizing organizing meeting, an insightful field day, or a workshop that blew your mind. Or maybe it was simply a conversation you had with another LSP member. See page 32 for details on submitting your story. □

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“[McMahon’s] experience and dedication to LSP’s values and goals will assure that our voice will be heard on policy issues at all levels.”

— LSP board member Darrel Mosel

• • •

Lorraine Redig: 1929-2022

By Doug Nopar

I believe there is only one individual whose consistent involvement spanned the entire, yes the entire, 40-year history of the Land Stewardship Project. That would be Lorraine Redig, who died in January. Lorraine would have been 93 in March, and lived at home on her family's Winona County farm in southeastern Minnesota until the last couple weeks of her life.

Lorraine last called me in October, asking for a ride to LSP's protest against the mega-dairy being proposed by Daley Farm near Lewiston. Much of my time with Lorraine these past 10 years happened in the car, accompanying her to rallies at the Minnesota Capitol, LSP meetings on corporate accountability, or public hearings where she testified against the ills of industrialized agriculture and for an economy based not on greed, but on justice and love for all.

It's fitting that Lorraine would pass in LSP's 40th year. It's quite possible that no one member — along with her extended family — had as much impact on our organization as she did.

In LSP's earliest days, before we actually were an official organization with tax-exempt nonprofit status, we were a joint project of National Farmers Union and the National Catholic Rural Life Conference (NCRLC). Having been deeply involved in both Farmers Union and Catholic Rural Life, it was only natural that Lorraine and her longtime husband, Art, would welcome the arrival of LSP. Indeed, as LSP's founding executive director, Ron Kroese, toured the Midwestern countryside gauging farmer interest in the fledgling organization, one of his first visits was with Art and Lorraine on their farm, where he ate well and spent the night.

The Redigs' commitment to conservation was stellar. Art had been one of the earliest adopters of soil conservation practices in the region when the Gilmore Creek Watershed Project, where the Redigs farmed, became the second watershed in the U.S. to implement contour strip cropping, terracing, and crop rotations during the Dust Bowl.

And in 1979, Lorraine and Art were enthusiastically involved in NCRLC's rural discussions related to *Strangers and Guests*:

Towards Community in the Heartland. This eloquent booklet, signed by every Midwestern Catholic bishop, was a call for stewardship and justice in farm and rural communities. LSP board member emeritus, Sister Mary Tacheny, worked extensively on that publication, and facilitated numerous parish-level discussions.

LSP's very first public informational meeting was held in Lewiston in 1983, and



It's quite possible that no one member had as much impact on our organization as Lorraine Redig did. (Photo submitted by the Redig family)

Lorraine and Art were there for it, along with dozens of other conservation farmers in the area. In fact, it's quite likely that Lorraine participated in one kind of LSP organizing meeting or other in every one of our organization's first 40 years (typically accompanied by Art, who died in 2013).

Lorraine and Art were on LSP's very first organizing committee, the Winona Model County Program Steering Committee. I was hired by that committee of farmers and pastors to replace LSP's very first organizer, the late, great Steve O'Neil, who was moving to Duluth to establish the Loaves and Fishes house of hospitality with his wife, Angie Miller. As Lorraine used to say every now and then when she wanted to keep me in line, "Don't forget, Doug, we hired you!"

Lorraine and Art also participated in the Farmland Investor Accountability Program in the 1980s. This was the LSP initiative that held life insurance companies and other corporate lenders accountable to soil conservation standards. It turns out that dur-

ing the 1980s Farm Crisis, the Redigs found themselves facing foreclosure, and with the assistance of LSP, the soon-to-be U.S. Senator Paul Wellstone, Sister Mary Tacheny and the Minnesota Catholic Rural Life Conference, among others, they were able to save the farm.

Lorraine and Art were also driven to learn about the lives of others, particularly those facing oppression or misfortune. They travelled to the Philippines in the 1980s on a fact-finding tour to explore connections between the U.S. farm crisis and hunger in developing countries. On a more personal level, they hosted countless exchange students and were foster parents for 20 teenagers. That's on top of their own 11 children.

One of their daughters, June Redig Peterson, worked as an LSP staff member before being killed in a tragic auto accident in 1994. Another daughter, Ramona, is an LSP member. A son, Nick, still farms the Redig land and maintains the family's strong interest in conservation.

Publicly, Lorraine was best known for the dozens of letters-to-the-editor she published in local newspapers. She endlessly railed against injustice in all its forms, insatiable corporate greed especially, and called for a social and economic system based simply on "loving our neighbors."

"Lorraine was such a strong and clear writer and wrote in a prophetic voice that couldn't be ignored," wrote former LSP policy and organizing program director, Bobby King, recently. "Lorraine was, quite literally, the public conscience of the Winona community."

She was a voice for justice, stewardship and democracy."

Up until the end, Lorraine touched many LSP members and staff — even those people who didn't work directly with her. Her ability to influence so many people sets a standard for anyone hoping to improve their community and the wider world.

"I know she lived a life committed to her values and community," says LSP programs director Shona Snater. "Most heroes do not wear capes, but they are just as astounding as our fictional role models." □

Doug Nopar wrapped up over three decades of work with LSP in 2020. During his tenure, he launched numerous initiatives, including, most recently, the soil health program.

Lorraine's Words of Wisdom

For a selection of letters written and testimony given by Lorraine Redig over the years, see page 30.

Myth Buster Box

An Ongoing Series on Ag Myths & Ways of Deflating Them

→ Myth: Carbon Trading is Ag's Climate Change Silver Bullet

→ Fact:

At first blush, it seems like a match made in heaven:

just as we are learning more about the ability of certain farming practices to increase soil health, the government and industry are proposing paying farmers for building organic carbon, a key element in healthy soil. The idea is that the more carbon we capture and store under our farm fields, the less will end up in the atmosphere contributing to climate change.

A “carbon market” sets a cap on allowable greenhouse gas emissions, and in order to stay below that cap, major polluters such as utilities, factories, and fuel producers can buy “credits” to offset their own emissions. The concept behind such an arrangement is that when a price is placed on pollution, polluters have an economic incentive to reduce emissions. There are only so many “Get Out of Jail Free” cards even the wealthiest polluter can afford to buy, goes this thinking.

Now enter farming and the buzz being generated by the ability of practices like no-till and cover cropping to build and store organic carbon. In 2021, the U.S. Senate passed the Growing Climate Solutions Act, which would help create a voluntary market in which polluters would offset their emissions by paying farmers to use practices that store carbon in their soils and/or reduce emissions in the first place. Backers of the bill, which hasn't been passed by the U.S. House, say it has the potential to make agriculture a major player in the fight against climate change.

This has some farmers excited. Of the 1,095 farmers who completed the 2021 Iowa Farm and Rural Life Poll, 53% said they would participate in “programs that pay farmers to capture carbon through soil health practices.”

Unfortunately, there are indications that, as they currently stand, carbon markets may not benefit farmers or the environment as much as hoped. It turns out emissions credit trading has had an extremely spotty record in terms of reducing greenhouse gases. For example, Carbon Market Watch has documented how the “Clean Development Mechanism,” which was set up under the 1997 Kyoto Protocol to allow developed countries to buy emissions reductions from developing countries in the form of credits, has produced few environmental benefits

since most of the credits were issued from projects that would have gone forward anyway. In addition, since polluting facilities are often located near low-income residents — many of which are communities of color — carbon trading can cause social justice problems. The polluter may still be emitting lots of pollutants close to home, even if they are buying credits to sequester greenhouse gases elsewhere.

The World Bank estimates that to meet the climate goals set out in the Paris Agreement, emissions credits need to be between \$40 and \$80 per credit (one credit permits the emission of one ton of carbon dioxide or the equivalent in other greenhouse gases). Compare that to the going price for credits in the Regional Greenhouse Gas Initiative, a carbon market encompassing nine states in the Northeast United States. Credits there sold for between \$5 and \$6 in 2019; most recently, emissions credits were valued at \$13.50 per ton by the Initiative, according to the *Associated Press*.

With credits trading at such low prices, it's clear who will benefit most from the carbon market: polluters who can afford to keep polluting, and large cropping operations that can make use of economies of scale to cash in on yet one more low-margin commodity.

And it's extremely difficult to consistently measure just how much carbon a farm is storing. It was only relatively recently that scientists were able to determine that some farms were building soil organic carbon at all, and now they're grappling with just how much is being created and stored using particular practices. Various measurement tools produce widely varying results. It turns out, for example, that because soil samples are often not taken deep enough, practices like no-till are given inflated credit for the amount of carbon they can sequester.

Finally, the kind of carbon sequestration taking place as a result of practices like cover cropping and no-till can be fleeting. These practices aren't creating the kind of deep, long-term carbon sink that perennial plant systems like grasses and trees can provide.

Part of the problem with the current excitement around carbon markets and farming is that it's centered on how specific practices can provide a specific amount of trapped carbon. This commodification of carbon ignores the overall benefits an integrated, regenerative system can provide — both to individual farmers and the environment.

Earlier this year, a paper in the *Proceedings of the National Academy of Sciences* reported that an ongoing 29-year-old field experiment in Wisconsin showed that perennial pastures managed with rotational grazing accumulated 18% to 29% more soil organic carbon than annual cropping systems, even when cover crops and minimum tillage were used in the annual systems. Building such a consistent, reliable carbon sink requires supporting integrated systems over the long term, rather than rewarding farmers with low payments for isolated practices that may or may not be present on the land from season-to-season.

Soil health expert Ray Archuleta argues that utilizing carbon payments to promote soil health practices is too restrictive for a natural resource that is one of the most diverse on the planet. “Instead, we should do biodiversity payments,” he says.

The Land Stewardship Project and its allies are pushing for a 2023 Farm Bill (see pages 8-12) that supports proven conservation initiatives like the Conservation Stewardship Program and the Environmental Quality Incentives Program. Such programs can give farmers the incentive to build healthy soil over the long haul, rather than produce a low-margin commodity in a marketplace ruled by short-term thinking.

→ More Information

- The Institute for Agriculture & Trade Policy/National Family Farm Coalition fact sheet, “Why Carbon Markets Won't Work for Agriculture,” is at iatp.org/documents/why-carbon-markets-wont-work-agriculture.

- The *Proceedings of the National Academy of Sciences* paper, “Persistent soil carbon enhanced in Mollisols by well-managed grasslands but not annual grain or dairy forage cropping systems,” is at pnas.org.

Myth Buster Series

Tired of accepting “conventional wisdom” as gospel? Check out the Land Stewardship Project's long-running *Myth Buster* series on a variety of topics at landstewardshipproject.org/myth-busters. If you have an idea for a *Myth Buster* topic, contact Brian DeVore at bdevore@landstewardshipproject.org or 612-816-9342.



LAND
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LSP News

LSP Staff Update

Bairret Eiter has wrapped up a two-year stint as an organizer with LSP's Bridge to Soil Health Team. During her time with the organization, Eiter helped coordinate grazing hubs, as well as facilitated workshops and field days on various practices related to building soil health. She also helped launch LSP's on-farm research related to the Johnson-Su Bioreactor composting system (see page 26).



Bairret Eiter

Jessica Kochick

has stepped down as an LSP policy organizer. Since joining LSP's staff two years ago, Kochick has organized farmers around policy issues related to conservation program funding, consolidation, promotion of soil-friendly farming practices, local meat processing, and fair access to USDA programs for farmers of color, Indigenous farmers, and women. Most recently, she coordinated LSP's work on the 2023 Farm Bill, including organizing meetings between LSP members and members of Congress (see page 8).



Jessica Kochick

Heidi Nybrotten has joined LSP's staff as a finance, executive management, and operations specialist. Nybrotten, who uses the they pronoun, graduated from Western Washing-

ton University with majors in law, diversity, and Justice/Spanish language and literature. While in college, they supported migrant farmworkers in forming one of the first Indigenous-led farmworker unions in the country — Familias Unidas por la Justicia. Nybrotten also spent several years working in public defense, is involved with the abolitionist movement, and is a 2020 graduate of LSP's Farm Beginnings Program (see page 16).

At LSP, they support the infrastructure of the organization by handling day-to-day financial responsibilities as well as assisting the executive director and governing boards. Nybrotten can be contacted at hnybrotten@landstewardshipproject.org or 612-400-6358.

Pilar Ingram is LSP's newest Farm Beginnings organizer. She has a bachelor's degree in psychology, with minors in English and music from City University of New York: Hunter College.

Recently, Ingram has worked to lead facilitation for the Highlander Research and Education Center's BIPOC (Black, Indigenous, and people of color) Caucus. She collaboratively produced the "Elephant in the Room" series — virtual discussions about whiteness in a 21st century context. Ingram has also worked as a network coordinator and liaison for Movement in Faith and as an independent contractor managing logistics for retreats involv-



Pilar Ingram



Heidi Nybrotten

ing Black women executive directors.

Ingram is enrolled in LSP's current Farm Beginnings class and will be helping facilitate the course. She can be contacted at pingram@landstewardshipproject.org or 612-400-6349.

LSP organizer **Robin Moore** has been named LSP's land access/land legacy manager. Moore joined the organization's staff in 2013, initially doing outreach work with farmers as part of the Chippewa 10% initiative.

In her new role, Moore is building upon the work she's been doing in recent years to support stewardship of farmland by building connections between landowners and renters. She is also leading LSP's land access and land gifting initiatives.

Moore can be contacted at rmoore@landstewardshipproject.org or by calling 612-767-9480. For more information on LSP's work with landowners and renters, see page 17. □



Robin Moore

Get Current With

LIVE  WIRE

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

Want Someone to Speak about LSP's Work to Your Group?

Would others in your community or a group you're a part of be interested in learning about the Land Stewardship Project's programmatic, policy, or electoral work?

Staff members are available to speak about our various initiatives. Contact us at info@landstewardshipproject.org to learn more and to get something set up.

For details on other ways to connect with LSP, see landstewardshipproject.org/connect-with-lsp.



Billboard Campaign Publicizes the Power of Soil

When isn't farming naked a good idea? This winter, a Land Stewardship Project billboard campaign promoting the power of building healthy soil on southern Minnesota farms answered that question and more. The billboards, which made their debut in February near the Minnesota communities of Austin, Spring Valley, Fountain, Preston, Dexter, Grand Meadow, and Minnesota City, utilized striking photos, inspiring quotes, and, in the case of one revealing sign, a little bawdy humor, to get across the benefits of utilizing cover cropping, managed rotational grazing, no-till, and diverse rotations to build resilient, biologically healthy soil.

Shona Snater, who directs LSP's soil health program, said the campaign was inspired by the eight farmers who sit on the group's Soil Builders' Network steering committee. The Soil Builders' Network is made up of over 800 farmers and others located across southern Minnesota, as well as in northeastern Iowa and southwestern Wisconsin. Members of the Network regularly come together via field days, workshops, pasture walks, and Zoom calls to discuss various ways of building soil profitably.

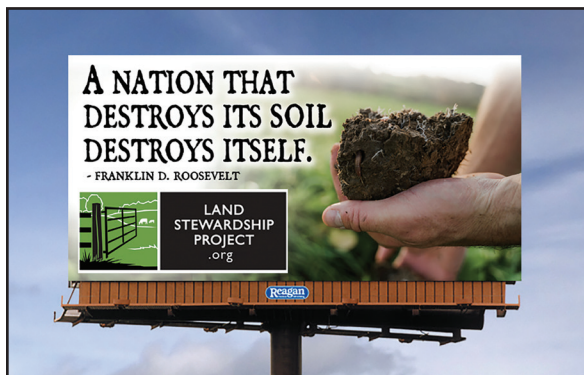
This farmer-to-farmer networking, combined with other efforts on the part of government agencies and nonprofit organizations, has led to an increase in the number of acres in the region that are managed utilizing methods such as cover cropping. During one recent five-year period, cover cropped acreage in Minnesota increased almost 42% to 579,147 acres, according to the U.S. Census of Agriculture. According to a Minnesota Department of Agriculture 2020 report, the majority of southeastern Minnesota counties in the heart of LSP's Soil Builders' Network are showing cover crop adoption on over 10% of the farms.

"This increase in the use of soil healthy practices didn't happen by accident," says Snater. "There's no doubt that farmers are inspired by and learn best from other farmers when it comes to innovative practices like cover cropping and rotational grazing." Despite the impressive increase in the use of soil building practices, in total only around 3% of Minnesota's farm ground is cover cropped on a regular basis. "We have a lot more room to grow when it comes to acres that would benefit from these practices. During the 2022 growing season, we're hoping these billboards will spark more connections between farmers seeking to build soil profitably," Snater adds.

In one case, a billboard that was posted near Austin and Minnesota City spawned a little laughter as well. The sign, which was posted in collaboration with Practical Farmers of Iowa, featured a farmer's bare legs and the phrase, "Don't Farm Naked: Plant Cover Crops."

"Part of the message we're trying to get across is that building healthy soil is not only good for the land and a farmer's bottom line, but is a fun way to take control and build resiliency when it comes to raising crops and livestock," says Snater.

See pages 23-27 for more on LSP's soil health work. □



Federal Farm Policy

Making Our Voices Count on Ag Policy

The 2023 Farm Bill Will Have a Huge Impact on Farming, Food & the Land

By Jessica Kochick

In late January, over 60 Land Stewardship Project members participated in LSP's virtual event to kick-off discussion of perhaps the most influential piece of farm/food/rural community legislation on the horizon: the 2023 Farm Bill. Farmers from our newly launched Farm Bill Organizing Committee led discussions based on the following question: What would you consider to be a Farm Bill victory?

Some of the responses included:

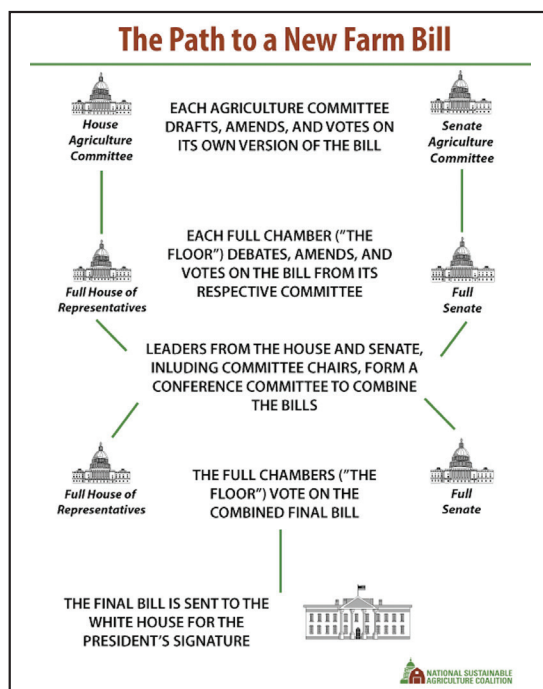
- Support for small farmers, BIPOC (Black, Indigenous, and people of color) farmers, and new farmers through infrastructure development, land access, insurance reform, and more.
- Fewer or no subsidies for large cropping operations or concentrated animal feeding operations (CAFOs).
- Direct Conservation Stewardship Program (CSP) and Environmental Quality Incentives Program (EQIP) funding toward small and mid-sized farmers, including those implementing managed rotational grazing, agroforestry, and perennial crops.
- Support food security and strong local food systems, both urban and rural.
- Promote people power to counterbalance corporate interests.

And a question was asked back to the group: How is LSP going to have a voice that counts?

The year 2023 may seem like a long way off, but lawmakers, lobbyists, Big Ag, and commodity groups are already discussing what the next federal Farm Bill will look like. And that's why we need to get involved now. The Farm Bill is a comprehensive piece of legislation reauthorized every five years that dictates which food is produced, how it is grown and distributed, and who makes money off it. It has lasting implications for soil health and water quality, rural

community growth and investment, racial equity, and climate resilience. Key sections of the Farm Bill, known as "titles," include Conservation, Nutrition, Credit, Trade, Rural Development, Research, and Crop Insurance. In short, this legislation has a huge impact on the land and people. We can't afford to let Big Ag and its supporters drive this law's destiny.

The upcoming Farm Bill cycle (*see the graphic below*) provides an opportunity for LSP and its members to influence the direc-



While the current Farm Bill does not expire until September 30, 2023, the process of reauthorization has already begun. (*Graphic courtesy of the National Sustainable Agriculture Coalition*)

tion of federal ag policy—and hundreds of billions of dollars in spending—for years to come. But our ability to influence policy at the federal level depends on all of you; organized people power is our greatest strength.

LSP & Past Farm Bills

LSP has advocated for federal farm policy that supports small to mid-sized farmers and rural communities since the

organization's inception 40 years ago. Major policy and organizing campaigns of note in recent Farm Bill cycles include:

1) Conservation: LSP farmer-members advocated — along with coalition partners — for CSP, which was originally known as the "Conservation Security Program" when it was established by the 2002 Farm Bill as a revolutionary way to support farmers utilizing regenerative/conservation production methods. In subsequent Farm Bills, we met with Congressional Agriculture Committee members to push for CSP improvements and expanded mandatory funding. LSP member lobbying efforts played a role in saving the CSP program from being cut out of the 2018 Farm Bill. In addition, members have advocated for EQIP funding to support small and mid-sized farmers employing soil health and rotational grazing practices and to disqualify factory farms from receiving EQIP funding or USDA guaranteed loans.

2) Beginning Farmers and Ranchers: LSP also played a key role in making the Beginning Farmer and Rancher Development Program (BFRDP) part of the 2008 Farm Bill. It provides mandatory funding for state, tribal, and local groups that are assisting beginning farmers and ranchers with training, planning, and technical assistance, as well as assisting them in overcoming barriers they may be facing in acquiring land, accessing credit, or meeting other farming needs. LSP's Farm Beginnings program now serves as a model for BFRDP-funded projects across the country. During the 2018 Farm Bill cycle, LSP members advocated for the Farming Opportunities Training and Outreach (FOTO) program and expanded funding for BFRDP and "socially disadvantaged" farmers.

3) Crop insurance reform: Under the current federally subsidized crop insurance program, public dollars in the form of premium subsidies go disproportionately to the largest operators using the most harmful monocropping practices. Studies show that crop insurance subsidies increase land prices and undermine conservation, cutting smaller scale and beginning farmers out of the market (*see "The Crop Insurance Conundrum" on page 11*). During the 2018 Farm Bill cycle, LSP advocated for two crop insurance reforms: a premium subsidy limit of \$50,000 per year per farmer, and a risk management system that rewards farmers who use cover crops and other conservation practices.

2023 Farm Bill Timeline

While the current Farm Bill does not expire until September 30, 2023, the pro-

Farm Bill, see page 9...

cess of reauthorization has already begun. Agriculture Committees in the U.S. House and Senate are holding formal hearings to gather input from constituents and food and farming stakeholders. Over the next few months, members of Congress will continue to engage constituents as they scope out priorities, determine issues they want to champion, and draft or sign on to marker bills. Marker bills are introduced in order to build support for specific issues; they aren't meant to pass on their own, but rather to win enough support in Congress for inclusion in Farm Bill legislation. Many important marker bills will be introduced in 2022.

Midterm elections in November will likely change the composition of the Agriculture Committees, which will lead to another push from Committee members in the new Congress to reintroduce marker bills in early 2023. If things go as planned, during the spring and summer of 2023 the U.S. House and Senate Agriculture Committees will draft initial Farm Bill text, which will be hammered out in conference committee before being sent to the President for signing. In short, LSP members and our allies have plenty of opportunities to have a say in what the next Farm Bill looks like.

You Can Advocate for a Better Bill

The COVID-19 pandemic and climate catastrophes that our communities have weath-

ered these past few years have deepened public awareness that something is wrong with our food system. We have an opportunity to fight for a Farm Bill that supports local farmers and regional food systems that protect the soil and water, instead of exacerbating the advantages of corporate agribusinesses that exploit workers.

This spring, hundreds of LSP farmers and ranchers responded to the "Farm Bill Survey" LSP launched earlier this year in collaboration with the National Young Farmers Coalition and Midwest Farmers of Color Collective. We aimed to reach thousands of farmers nationwide, and LSP collected close to 700 surveys in the Upper Midwest alone. The purpose of the survey is to paint a fuller picture of how the Farm Bill impacts farmers and ranchers in our communities — especially farmers who are often overlooked in U.S. Census of Agriculture data collection efforts. The survey seeks to identify the needs and programmatic barriers for beginning farmers, farmers of color, and small to mid-sized farms across the country. The data will become the backbone of LSP's advocacy efforts to create a Farm Bill that works for our communities.

LSP's Farm Bill Organizing Committee, made up of farmers, ranchers, and food system business owners, is organizing a series of Farm Bill listening sessions in coming months for LSP members. Listening sessions will be offered in a virtual format for now, but in-person sessions may happen later in the spring and summer. Whether

you are a farmer, a food system worker, or a concerned community member, please join a listening session to share your perspective and knowledge. LSP's policy team will develop our Farm Bill platform and policy priorities through member engagement on the issues. You can help drive LSP's grassroots approach. Building power by raising farmer and community member voices has been essential in past Farm Bill wins.

Another way to join LSP's Farm Bill campaign is to attend meetings, farm tours, or field hearings in your Congressional district this summer. These are powerful opportunities to share your story and to join your community in advocating for a Farm Bill that promotes racial equity, conservation, and community investment. You can advocate for key marker bills by calling and e-mailing your members of Congress.

Join LSP's Farm Bill campaign today by visiting our federal policy page at landstewardshipproject.org/federal-policy. Together, we can win food and farm policy that benefits communities, farmers, and the Earth. □

Before departing LSP in March, Jessica Kochick organized around federal policy issues. For more information on LSP's work related to the Farm Bill, see landstewardshipproject.org/federal-policy or contact LSP organizer Sarah Goldman at sgoldman@landstewardshipproject.org, 612-400-6341.

Why Should You Care About the Farm Bill?

Ag Policy's Past Does Not Have to be its Future

By Jessica Kochick

In order to determine what kind of positive path we can take the Farm Bill on in 2023 (see page 8), it's useful to examine where it originated from and what impacts it's had on the land, people, and communities in past decades. The history of the Farm Bill has its roots in the Agriculture Adjustment Act of 1933, but farm policy's influence over what our country looks like began long before that.

The Color of Land Ownership

For example, during westward expansion of the United States in the 19th century, land theft and genocide of Indigenous populations was government sanctioned policy. As Janie Simms Hipp and Colby Duren described in a 2017 Farm Bill assessment for the Shakopee Mdewakanton Sioux Com-

munity, forced removals and assimilation requirements stripped Indigenous peoples of their food sovereignty, making Indian Country's relationship with farming and ranching a "tale of two worlds." They write:

"We were told to be 'farmers' in our early treaties, yet forced to ignore the food systems that existed in this country for centuries in favor of establishing farming and ranching practices more familiar to the new settlers... These new federal policies led to significant disconnections between us and our existing food systems, and the sheer act of feeding ourselves, which was the embodiment of self-determination and self-governance in food we had exercised for so long, was lost."

Another influential moment in U.S. farming history was the passage of The Homestead Act, signed by Abraham Lincoln in

1862. This bill gave away 270 million acres of land in 160-acre parcels, almost entirely to white people, in the greatest land transfer in U.S. history. The generational wealth set in motion by this policy continues to impact who owns farmland today, as families amassed wealth through land and passed it along to their descendants.

During that same era, enslaved African-Americans in the South were promised 40 acres and a mule upon emancipation at the end of the Civil War, but that promise was broken after Andrew Johnson became President and returned the land to former plantation owners. Despite that betrayal, Black farmers amassed 19 million acres of land — 14% of farm owner-operators were Black by 1910 — only to see that percentage drop to 1.5% by 2012, according to Megan Horst, an assistant professor of urban studies and planning at Portland State University. A 2020 policy brief by the Union of Concerned

Farm Bill History, see page 10...

...Farm Bill History, from page 9

Scientists and the HEAL Food Alliance describes how Black farmers lost land in large part due to the impact of heirs' property laws as well as documented and systemic USDA discrimination when it comes to making available the loans necessary to operate their farm businesses.

Unequal Acres

Given this history, it is understandable why, when the Agriculture Adjustment Act was established in 1933, its impact was not shared equally. Led by then-President Franklin Roosevelt, this nascent Farm Bill was an essential piece of the response to the Great Depression and to the environmental catastrophe known as the Dust Bowl. It subsidized farmers to cut production and increase prices at a time when they were suffering and in need of economic relief. At the same time, because landowning farmers no longer needed their labor, sharecroppers and tenant farmers were left out and often displaced by the new policy. It codified the structural inequities in land and capital already in place.

Another development to come out of the Dust Bowl era was the USDA's establishment of the Soil Conservation Service (now the National Resources Conservation Service), meant to combat soil erosion and to create soil conservation districts to support farmers at the local level. Since then, many

National Sustainable Agriculture Oral History Archive

Interested in learning more about the history of federal sustainable agriculture policy in the U.S.? Land Stewardship Project co-founder Ron Kroese has created the "National Sustainable Agriculture Oral History Archive," a Minnesota Institute for Sustainable Agriculture initiative which documents the development and evolution of public policies to advance sustainable and organic agriculture going back to the 1970s.

The more than 40 women and men — including many LSPers — featured in these video interviews are among the key leaders

and advocates who played significant roles in devising and promoting the laws and government programs that continue to undergird efforts to achieve a sustainable farm and food system in the U.S. Earlier this year, the Center for Rural Affairs, an LSP ally, made the oral history interviews available via podcast platforms.

To view the interviews, see misa.umn.edu/publications/sustainableagoralhistoryarchive. The Center for Rural Affairs podcast series can be found at cfra.org/sustainableag-podcast or on major podcast platforms.

important conservation programs have been created through the Farm Bill, and they continue to benefit farmers implementing much-needed soil-friendly practices today. Unfortunately, these programs are increasingly benefiting factory farms and large-scale monocropping operations. For example, conservation funding is subsidizing CAFO manure lagoons and methane digesters. This is propping up a system with huge environmental consequences and prolonging the use of production practices that degrade soil and water quality. Short-sighted policy threatens to make the Dust Bowl not just something that happened in the distant past.

In the decades following the Great Depression, the Farm Bill has transformed the government's approach to risk, abandoning the supply management style of price supports in favor of risk management through federally subsidized crop insurance. This public-private partnership has exacerbated a transfer of wealth away from small and mid-

sized farms, as well as rural communities, and into the pockets of insurance companies (see page 11).

In general, for most small to mid-sized farmers, the Farm Bill makes social, economic, and environmental conditions worse.

Not Repeating Past Mistakes

But the Farm Bills of the past aren't fated to be the Farm Bills of the future. LSP is working with its allies to build a campaign for federal agriculture policy that promotes racial equity, that centers soil health and climate resilience, and that invests directly in the farmers, ranchers, and food system workers that make up our communities.

As we witness unprecedented climate change disasters, supply chain disruptions, and economic crises in rural communities, the task of transforming future agriculture policy is more critical than ever. □

Farm Bill Conservation: Why Not Invest in What's Already Working?

The idea that regenerative farming practices can be used to mitigate climate change is gaining traction in Washington, D. C. One idea is to pay farmers "carbon credits" for sequestering greenhouse gases (see page 5). But rather than create a new, untested program that may only benefit polluting industries while producing questionable environmental results, why not fully support existing, proven initiatives?

That's the argument behind a report by the Institute for Agriculture and Trade Policy (IATP), a Land Stewardship Project ally. IATP analyzed USDA data from 2010 and 2020 and found that just 31% of farmers who applied to the Environmental Quality Incentives Program (EQIP) and 42% who applied to the Conservation Stewardship Program (CSP) were awarded contracts. In some major agricultural states, the number

of awarded contracts for the two programs was well under 20%. In 2020, Minnesota awarded CSP contracts to only 223 farmers, or 14% of those who applied. Only 611 farmers won EQIP contracts in Minnesota that year — representing 17% of those who applied. Iowa didn't fare much better, with only 21% of farmers being successful when applying for CSP and EQIP contracts.

The news that a small percentage of farmers are being allowed to participate in these two popular programs is particularly unfortunate when one considers how effective they've been at helping farmers put in place soil healthy practices that build organic carbon, among other things. In the case of CSP, it rewards the use of innovative practices. EQIP provides cost-share funds to put systems such as managed rotational grazing in place.

At the request of the Trump Administra-

tion, Congress reduced appropriations for both programs in the 2018 Farm Bill, vastly reducing their ability to meet demand. LSP and IATP, along with other member groups of the National Sustainable Agriculture Coalition, argue that rather than create a new conservation program based on something like carbon credits, the 2023 Farm Bill could simply make it possible for existing initiatives like CSP and EQIP to meet demand by providing the funding they need.

"They got it figured out, how to help farmers," northeastern Minnesota livestock producer Hannah Bernhardt recently told the *Star Tribune* newspaper. She serves on LSP's Farm Bill Organizing Committee and was lucky enough to recently receive an EQIP grant to put in fencing and water lines for a rotational grazing system. "But if everyone can't access it, it's not doing what it could."

The Crop Insurance Conundrum

More Evidence that a 'Safety Net' has Weaved its way into a Web of Destruction

By Brian DeVore

When one sees the word “unambiguously” used in a carefully researched academic paper, it’s time to take notice. For example, a recent *Journal of Policy Modeling* study reports results that are “...unambiguously suggestive of a crop insurance policy regime that is biased in the direction of increasing consolidation in crop farming...” That conclusion is based on an analysis of 426 counties from five corn and soybean producing states: Minnesota, Iowa, Nebraska, Illinois, and Indiana. The study, which covers the crop years 1992 to 2012, makes one thing clear, according to the authors: “...subsidized crop insurance can only accelerate the trend toward further consolidation, with consequences for sustainability and depopulation of rural communities.”

Rough translation: there is little doubt our country’s biggest tax-funded agricultural safety net program is destroying farmers and the rural communities that rely on them, which is polar opposite of what its creators had in mind over 80 years ago. Compound that with the fact that it’s long been known the current crop insurance program encourages an environmentally harmful duo-culture of corn and soybeans, and the argument for major reform is more powerful than ever.

This study is one of the first to ask a blunt question: Does subsidized crop insurance affect farm industry structure? The answer is yes, and mostly in a negative way. This falls in line with other research that shows how, in general, our agricultural subsidy system benefits the biggest, most well-financed players to the detriment of everyone else. This latest study puts hard numbers to what Land Stewardship Project farmer-members have been reporting over the years — the

way federal crop insurance is implemented is having major unintended consequences.

The *Journal of Policy Modeling* analysis, which takes into account other factors that might affect consolidation such as technological advances, points out that, on average, the counties studied by the economists lost almost 24% of their farms after 2000.

This is why, for the past decade, LSP has been working with allies across the country to return crop insurance to its roots as a way to shield farmers from major weather



Federally subsidized crop insurance has played a major role in reducing the diversity of Midwestern agriculture. Recent research shows it is also depopulating the countryside. (LSP Photo)

disasters. In fact, LSP has issued several reports that outline the negative impacts the program is having on small and mid-sized farmers, beginning farmers, and the land itself (*see sidebar on page 12*).

These reports relay concerns voiced by farmers who are seeing firsthand how large cropping operations are using the benefits they receive through subsidized insurance to outbid average-sized farmers on land purchase and rental rates, creating fewer, and bigger operations. This has repercussions all the way to rural Main Streets, which are increasingly being depopulated. This hits beginning farmers and diverse operations particularly hard, since they are more likely to be involved in enterprises that don’t qualify for extensive insurance coverage, such as vegetables or pasture-based livestock.

In addition, because of the guaranteed income these mega-operations can glean from even the most marginal of farmland, corn and soybeans are being raised on acres normally considered too

low-producing to bother tilling. That inflates the bushels of crops sent to market, deflating prices. This is particularly ironic given that crop insurance now offers a way for farmers to not only be protected against weather disasters, but from drops in crop prices. This produces counterintuitive situations where even when the weather cooperates and there are bumper harvests of corn and soybeans, farmers receive tax-funded payouts through their insurance. This encourages more production of corn and soybeans, particularly on land that maybe shouldn’t be row-cropped in the first place, which perpetuates the cycle of record harvests and thus higher indemnity payments.

What’s particularly troubling is that those marginal acres — too wet, too dry, too hilly, low fertility, etc. — that now produce guaranteed income for large cropping operations have been in the past the only real estate beginning farmers could afford to rent or buy. On top of that, when a weather disaster triggers big payouts to large cropping operations, they have even more money in their war chest to take control of land, particularly in areas where acres haven’t historically produced high yields. Indeed, the *Journal of Policy Modeling* study found that crop insurance premium subsidies paid to farmers have the biggest effect on consolidation in counties where production is the riskiest.

What Happened?

How did a system what was launched in 1938 to keep farmers from being wiped out by catastrophic weather disasters such as the Dust Bowl become such a negative determiner of how the landscape and our rural communities look? Farming is inherently risky, given the vagaries of weather and markets, and that’s part of the reason programs like crop insurance were created. But there’s a difference between cushioning the blow and fueling endeavors that have widespread negative consequences,

The insurance program is administered by the USDA as a quasi-private initiative, with policies sold and serviced through some 14 private companies. For decades, it was relatively straightforward — if yields were severely cut or wiped out, farmers who bought a policy received an indemnity.

The program underwent a dramatic shift

• • •
“...subsidized crop insurance can only accelerate the trend toward further consolidation, with consequences for sustainability and depopulation of rural communities.”

— *Journal of Policy Modeling*

• • •

Crop Insurance, see page 12...

...Crop Insurance, from page 11

in the 1990s. Following the devastating floods of 1993, Congress sought to increase crop insurance enrollment by ratcheting up how much of the farmer's premium cost the government would cover.

Premium subsidies were increased again in subsequent years and today the federal government takes on around 60% of the farmer's premium cost (depending on the level of coverage), which is almost double what it was in 2000. Even more significantly, it was in the 1990s that "revenue insurance" options were added to the program. For the first time, crop producers were able to assure themselves a target level of income based on projected prices and historic yields.

In an attempt to increase farmer participation even more, the government made another key change to crop insurance in the mid-1990s by no longer requiring farmers to undertake basic soil conservation practices in order to qualify for indemnities. The 2014 Farm Bill tried to correct the problem by adding "conservation compliance" to eligibility requirements for crop insurance. Conservation compliance requires farmers to put in place certain soil-friendly practices in order to remain eligible for enrollment in government farm programs. Unfortunately, conservation compliance has been inconsistently enforced, if at all.

Insuring Resilience

In addition, crop diversification, cover cropping, and other methods that build soil health and thus create more resilient farms in the face of extreme weather have traditionally not been recognized by USDA officials as "good farming practices" and thus have, ironically, long been considered too risky to qualify for government subsidized insurance coverage.

It's more important than ever to return resilience to farmland, given the havoc climate change is playing on crop acres. One Stanford University study estimated that between 1991 and 2017, \$27 billion — or 19% — of the national-level crop insurance losses were caused by climate change.

Farmers received more than \$143.5 billion in federal crop insurance payments between 1995 and 2020, according to the Environmental Working Group's recent analysis of USDA data. (That doesn't even count the \$103.5 billion in subsidies that went toward covering farmers' insurance premiums.) Just under two-thirds of indemnity payments were for damage caused by excessive moisture and drought — two problems that will only get worse as climate change creates more extreme weather events. Indemnities for drought were \$325.6 million in 1995 and rose to \$1.65 billion in 2020, a 400% increase. Insurance payouts for soggy fields were \$685.4 million in 1995 and increased to \$2.6 billion in 2020, a 300% rise.

Path to Reform

Should we dump crop insurance? No. It's critical to have a safety net that's true to its roots as a tool for managing risk in a way that benefits the land and communities and

doesn't depopulate the countryside.

LSP has long called for reform of crop insurance. Limiting the payouts mega-operations can receive, recognizing the risk-reducing benefits of soil health practices, and making it easier for organic/regenerative farming operations to get insured are good places to start. As the biggest player in agricultural crop policy, insurance could go a long ways toward encouraging regenerative farming.

Farmers participating in LSP's Soil Builders' Network (*see page 25*) are proving that cover cropping, managed rotational grazing, no-till, and diverse rotations can make agriculture less of a gamble in the long run, and an improved crop insurance system could help producers make the transition into these innovative systems.

Fortunately, the USDA's Risk Management Agency is starting to recognize the climate mitigation benefits of regenerative agriculture and, thanks to the work LSP and others have done in recent years to highlight the benefits of soil health, have adjusted the crop insurance program's rules to make it more accommodating to practices like cover cropping.

Crop insurance falls under the purview of the federal Farm Bill, which is up for renewal in 2023 (*see page 8*). Discussions around the development of this massive legislation have already begun, and LSP is seeking input from our members and allies on how to transform it into the kind of public policy that benefits family farmers, the land, and communities — not corporate Big Ag and its boosters.

It's time to transform crop insurance from a web of destruction to a true safety net. □

LSP Crop Insurance Special Reports

Over the years, the Land Stewardship Project has issued several reports that outline the negative impacts federally subsidized crop insurance in its current form is having on small and mid-sized farmers, beginning farmers, and the land itself:

Crop Insurance: How a Safety Net Became a Farm Policy Disaster

- White Paper #1: Crop Insurance — The Corporate Connection
- White Paper #2: Crop Insurance Ensures the Big Get Bigger
- White Paper #3: How Crop Insurance Hurts the Next Generation of Farmers
- Principles of Reform
- Why Investigate Crop Insurance?
- Fact Sheet: How Federally Subsidized Crop Insurance Works

Crop Insurance: A Torn Safety Net

- Why the Farm Bill's Biggest Agricultural Program is a Boon to Corporations and a Bust for Family Farmers & the Land

The reports can be downloaded at landstewardshipproject.org/publications.

Crop Insurance: A Torn Safety Net



Why the Farm Bill's Biggest Agricultural Program is a Boon to Corporations and a Bust for Family Farmers & the Land



A Land Stewardship Project Special Report

March 2018

www.landstewardshipproject.org/organizingforchange/cropinsurance

Soil Health, Local Foods & Emerging Farmers Gain Ground

As this issue of the *Land Stewardship Letter* went to press, several initiatives pushed by Land Stewardship Project members were moving through the 2022 session of the Minnesota Legislature ([see bit.ly/37gvBdz](https://bit.ly/37gvBdz) for details), which was “officially” scheduled to adjourn May 23. Below is a short summary of what was still alive as of mid-May. For a complete report on where LSP’s initiatives landed after adjournment, check landstewardshipproject.org.

Soil Health & Climate Change

- \$6.725 million for a healthy soils grant program through the Minnesota Department of Agriculture.
- \$5 million for a healthy soils grant program through the Board of Water and Soil Resources.
- Voluntary statewide soil-healthy farming goals of reaching 5.75 million acres by 2030, 11.5 million acres by 2035, and 23 million acres by 2040.
- Creation of a statewide soil health action plan.
- \$9 million to develop continuous living cover supply chains.
- \$6.5 million for the Forever Green Initiative.
- \$22 million for Soil and Water Conser-

vation Districts.

- \$1 million for the University of Minnesota to evaluate, propagate, and maintain the genetic diversity of oilseeds, grains, grasses, legumes, and other plants — including outreach to small farmers and Black, brown, and Indigenous farmers.
- Various pollinator protections.
- \$10 million for incentives for the federal Conservation Reserve Program.

Meat & Poultry Processing

- \$100,000 to reimburse small meat processors for food safety and business planning trainings.
- An additional \$3 million for AGRI Meat, Poultry, Egg, and Dairy Processing Grants.
- \$500,000 for livestock processing technical education at Central Lakes College and Ridgewater College.
- \$1 million for grants to secondary career and technical education programs for meat cutting and butchery instruction.

Emerging Farmers & Land Access

- \$1 million for urban and youth education or urban agriculture community development, including up to \$10,000 for the emerging farmer account.

- \$2.6 million to provide technical and culturally appropriate services to emerging farmers and related businesses.
- \$300,000 for farm business management tuition assistance with priority to specialty crop farmers, urban farmers, and farmers facing mediation; support for new urban and specialty crop instructor positions, including translation and outreach.
- \$3 million for a down payment assistance grant program
- \$141,000 to administer the beginning farmer tax credit.

Local & Regional Markets/Hunger Relief

- Additional \$1.6 million for the farm-to-school grant program.
- \$250,000 to develop a program to support direct marketing producers.
- \$1 million for farmers’ markets.
- \$2.5 million for Second Harvest Heartland.
- \$500,000 for the Good Acre’s Local Emergency Assistance Farmer Fund (LEAFF) program.
- \$10,000 to produce a report on the state of regional and local food systems in Minnesota.
- \$1 million for the Good Food Access Program.

Sharing Stories from the Land

LSPers Give Decision-Makers a Ground Level View of the Need for Positive Policy

A key component of the Land Stewardship Project’s work to advance its public policy priorities at the state and federal level is to share the stories of members who are deeply involved with various issues. The 2022 session of the Minnesota Legislature was no different: during the session, we held virtual town hall meetings with Senate Majority Leader Jeremy Miller, Speaker of the House Melissa Hortman, and Governor Tim Walz. During those Zoom events, several LSP members from throughout the state shared their stories to illustrate why policy is needed that supports, among other things, soil health, regional food systems, and resilient farms and communities. Here are excerpts of some of those stories:

Soil Health & Climate Resiliency

Rachelle Meyer’s family raises 100% grass-fed beef, along with pastured pork and poultry, near Caledonia in southeastern Min-

nesota. They also milk 150 cows. The rented and owned acres they farm are extremely steep and erosion-prone. During the past few years, they have used methods such as cover cropping and managed rotational grazing to convert 300 acres of cropland into perennial pasture. In making that conversion, they benefited greatly from cost-share funds and technical assistance they received through the USDA’s Natural Resources Conservation Service (NRCS) and their local Soil and Water Conservation District (SWCD).

She told Senator Miller that the assistance available through natural resource agencies can play a key role in jump-starting soil healthy practices. Increased legislative support for SWCDs in particular could lead to even more sustainability for farmland, as well as farmers, in the state, Meyer added.

“When we started, not a lot of the farmers in our area were doing the rotational grazing like we are, and cover crops weren’t super popular,” she said. “I’m just super thankful

to the Soil and Water Conservation District and how they helped us through that process. It was really beneficial to our land’s resiliency and produced a better quality of life as well.”

Matthew Fitzgerald raises organic grains such as corn and soybeans, as well as specialty crops like black beans and field peas, near Hutchinson in east-central Minnesota. He has dealt with numerous extremes in weather over the years. These extremes can be particularly troublesome for an organic operation.

“We don’t have the option to spray, so I have to be out there every week doing something to raise a good crop,” he told Representative Hortman. “I need 22 working days in June to accomplish all the things we need to do. And in 2019 we had only nine working days, because the conditions were so wet. We experienced record 50-year, 100-year rain events all month long. As a result, we had greatly diminished yields and greater pest and disease issues.”

In contrast, in 2021 Fitzgerald had the

MN Legislature, *see page 14...*

...MN Legislature, from page 13

driest growing season the region had seen since 1988. His field pea crop was decimated by a string of 100-degree days in June that year.

The key way farmers can make their operations more resilient in the new climate reality is by building soil health, which makes public support for cost-share programs and technical assistance more critical than ever, said the farmer.

"I view farmers as being on the front lines of climate change, and my number one defense, or offense — depending on how you think about it — is soil health," Fitzgerald said. "To have a healthier soil does allow for more resilient crops, and then it helps us be a more sustainable business."

Meat Processing

Lindsey Fulton owns Blondie's Butchers in Wanamingo, Minn. She says when she bought the business 10 years ago, she didn't have it passed on to her by the previous owner. "I walked into it completely blind," Fulton told Senator Miller. "I didn't have a clue what I was doing."

Since the COVID-19 pandemic hit, there has been a skyrocketing demand for locally produced meat, and smaller facilities like hers simply can't keep up. That's why legislative support for a state "navigator" position that would guide meat processors through the steps for expanding or even getting into the business in the first place would be extremely helpful, she said. Fulton added that funding to help provide training for the next generation of local meat cutters is critical.

"We're a hot commodity right now and I need trained employees."

Anneliese Walker of Walker Farms in Princeton, Minn., raises grass-fed beef, grass-finished lamb, pastured pork, chicken, turkeys, and eggs — all for direct sale to consumers. She told Representative Hortman that providing funding at community colleges for meat cutting courses is key to making it possible for regenerative livestock producers like herself to thrive and expand.

Support for processors to put in place facilities that produce a safe, clean product is important for farmers and local economic development, she said. During the call with Hortman, Walker displayed a map showing meat processing facilities in Minnesota.

Once mega-processors like Jennie-O are removed from the picture, only four poultry processors are left in the state to service farmers like Walker.

"If we want to have USDA-processed birds, I have to drive two-and-a-half hours one way — so five hours there and back — to drop off the birds. And then five hours there and back to pick them up," she said.

It's a "national security" threat to be so invested in consolidated, vertically-integrated meat processing facilities, the farmer said, adding that investing in many smaller processors would mean that having one plant go out of business "would not shut down the entire supply chain."

Regional Food Systems

Kathy Zeman farms near Nerstrand in southeastern Minnesota and is the executive director of the Minnesota Farmers' Market Association. She told Representative Hortman that there are 350-360 farmers' markets in the state. That adds up to 5,000 to 6,000 vendors, which contribute greatly to local economies.

"Farmers' markets tend to act as small business incubators and peer support networks for farmers, and we support community wellness through access to healthy foods," she said.

Zeman said legislative proposals that support local meat processing, as well as

provide support for emerging and beginning farmers, would go a long way toward supporting the producers that supply farmers' markets.

"We need programs that support farmers who aren't just producing the traditional widget crops like corn and soybeans."

Christopher Abbott is the founder and president of Perennial Pantry in Burnsville, Minn. He buys the perennial grain Kernza, processes it, and ships it across the country. Kernza is a product of the University of Minnesota's Forever Green Initiative, which is working on developing crops that help diversify the farming landscape while building soil.

Abbott told Governor Walz that there are over a dozen other crops in development that could bring environmental and economic benefits to the state's landscape. But developing those crops does little good if there is no storage, processing, and transportation infrastructure in place to get them to market. That's why it's key to support legislative proposals like the one that would develop "continuous living cover supply chains," said the business owner.

"We have an incredible opportunity to reimagine the future of agriculture and to keep Minnesota at the forefront of that future. But to bring these benefits to life, we need supply chains and markets to pull them onto the landscape." □

Gov. Walz Proclaims March 11 'LSP Day'

Minnesota Governor Tim Walz has proclaimed March 11, 2022, "Land Stewardship Project Day." Walz made the declaration while participating in a Land Stewardship Project virtual town hall with over 200 members of the organization. During the meeting, LSP members from across the state shared stories with Walz illustrating the need for state policies that support soil healthy farming practices, regional food systems, and climate change mitigation. During the 2022 session of the Minnesota Legislature, LSP members pushed several bills focused on supporting regenerative food and farm systems in the state (see page 13).

Gov. Walz's Land Stewardship Project Proclamation

Whereas: The Land Stewardship Project was founded in 1982 to foster an ethic of stewardship for farmland, to promote sustainable agriculture, and to develop healthy communities.

Whereas: The Land Stewardship Project works to unite 4,400 member households to advance positive change and build healthy and vibrant communities for everyone in right relationship with the land.

Whereas: The Land Stewardship Project is focused on building the infrastructure needed by small and mid-sized farms and by rural and urban communities to create functioning local and regional food systems that support regenerative farming and provide all people with the nourishing foods they want and need.

NOW, THEREFORE, I, TIM WALZ, Governor of Minnesota, do hereby proclaim Friday, March 11, 2022, as: Land Stewardship Project Day across the state of Minnesota.

What's LSAF & Why Should You Get Involved?

This Electoral Tool's Role in Spawning Positive Change Extends Beyond November

By Emily Minge

It's become clear in recent years that sitting on the sidelines during elections greatly hampers the Land Stewardship Project's mission to achieve victories that reflect our values of stewardship, justice, and democracy, as well as healthy, vibrant communities. Our members have expressed a desire for us to identify and support candidates for elected and appointed offices who can help move our collective vision forward.

As it happens, as a 501(c)(3) nonprofit organization, we are limited in our ability to get involved with electoral work. That's why in 2018, LSP's board of directors, working with our staff and member-leaders, decided to create a 501(c)(4) nonprofit organization, which is allowed by law to participate in political leadership development and extend policy organizing during election seasons. Thus, the Land Stewardship Action Fund (LSAF) was born.

LSAF is based on the idea that all too often elected officials representing rural areas are either actively working against us or failing to stand with us. This happens at all levels of government. Our work is to change this status quo by identifying and supporting candidates for office — from within or outside our membership — who share our core values, will champion our issues, and commit to collaboratively govern with our members. We have committed to only support candidates who fully align with our vision for rural Minnesota and will work to make this vision a reality. The following principles guide LSAF's work:

→ **Engagement:** LSAF seeks to create positive experiences in politics that build power and engagement for the long-term, in contrast to the approach that wrings people out in exchange for the short-term outcome of winning the current election being contested.

→ **Integrity:** LSAF will remain rooted in LSP's values, vision, and mission, staying authentic to who we are and how we lead.

→ **Inclusivity:** LSAF is inclusive in our approach by inviting and bringing people into conversation and not adding to the polarization that is prevalent in our

current politics.

→ **Power:** LSAF seeks to grow our base through elections so we have the power to achieve the long-lasting, far-reaching change we need. We want everyone to see the power they hold in collaboration with our elected officials, as part of an "us" and "we" — as opposed to "they" — relationship.

Deep Canvass Trainings

The Land Stewardship Action Fund will be offering "deep canvass" training during the next several months. Deep canvassing is a system of candid, non-judgmental, two-way conversations where canvassers ask voters to share their relevant, emotionally significant experiences and reflect on them aloud. It is one of the most durable and proven forms of persuasion when talking to people who might hold differing beliefs than you and is going to be critical in creating the world we want and need.

Join the Land Stewardship Action Fund to learn about deep canvassing, what it is, and why it's important, and get trained on how to put these important skills to use in your community. Training dates are **June 8, June 22, July 12, July 27, Aug. 11, Aug. 23, Sept. 8, Sept. 23, and Oct. 5.**

For details and to register, see bit.ly/3PhGcG6 or contact Emily Minge at eminge@landstewardshipproject.org, 612-400-6353.

It is with these principles in mind that we focus LSAF's work on electing leaders — from a local township officer to Minnesota's governor — who share our values. However, we also know that for people-powered change to be long-lasting, our organizing work needs to go beyond just the next election. It needs to be deep, strategic, and authentic for the long-term.

We are working to build a political system where our priorities are recognized and championed year-round, not just during key election seasons. While winning elections produces the short-term results we want, LSAF remains grounded in our main purpose: building the long-term infrastructure we need to elect homegrown champions in rural communities. This means shifting the political landscape toward our values

— tending to the soil — over the long-term. LSAF aims to "go slow to go far." It may take an election cycle, or two, or maybe even more, to see our efforts come to fruition. We must remain patient about what we don't know and excited about what's to come as we move forward.

That being said, there is an important election coming up this November and it has the potential to build power. In Minnesota, all statewide seats are up for election, including Governor, Secretary of State, and Attorney General, along with the entire House and Senate and local positions at levels ranging from Soil and Water Conservation District officers to county commissioners. The large number of seats up for election is just one reason to pay attention to who's running. This November is also an opportunity to start building towards our long-term vision: educating ourselves and our communities on the issues and the candidates, connecting with neighbors over shared values, and mobilizing others to step into their political power.

A critical step toward making our vision for Minnesota a reality starts with your vote. Vote in this year's upcoming elections and encourage others to do the same. You can connect with LSAF to learn about the various voter education tools available.

Voting is a critical way to get leaders in office at all levels of government who are ready and willing to take responsibility for the shared future of our state. We need leaders who act as our advocates and take our crises — from the lack of accessible healthcare to the decimation of small and mid-sized farms and local rural economies — seriously. We need leaders who look to us for the solutions because they know we hold the key to transformational change.

That's why we need you in this work. We need you to be talking with your neighbors, your community members, your elected officials, your candidates. They, too, need to know what's at stake for our food and farm system, for the people, and for the land. □

Emily Minge is a political organizer for the Land Stewardship Project.

Connect with LSAF

For various election resources, check out the Land Stewardship Action Fund's website at landstewardshipaction.org. While there, you can sign-up for an e-mail list to stay informed and get involved in LSAF's work.

More information is also available by contacting LSP political organizer Emily Minge at eminge@landstewardshipproject.org or 612-400-6353.

LSP's Farm Beginnings Accepting Applications for 2022-2023 Class

The Land Stewardship Project's Farm Beginnings class is accepting applications for its 2022-2023 session.

Beginning and prospective farmers are invited to apply to the course, which is a year-long training program that focuses on the goal-setting, marketing, and financial skills needed to establish a successful farm business. The Farm Beginnings course creates a space for students to name their vision, acquire the tools and skills needed to make it happen, and become part of a community of support to help them succeed.

The 2022-2023 session will be a hybrid, taking place mostly online via Zoom, but also including some in-person sessions in

the Twin Cities, Minn., area. The course will run from November 2022 through March 2023, with some additional educational opportunities to take place later in 2023.

Farm Beginnings is:

- **Farmer-led:** Class participants will hear from regional farmers about their farms and how they've implemented goal-setting, marketing, and financial management practices.

- **Community based:** Applicants from Minnesota, western Wisconsin, and northern Iowa will be given priority

because LSP is best able to provide resources and connections in this area. If you are located elsewhere, check out the Farm Beginnings Collaborative website (farmbeginningscollaborative.org) to see if there is an organization near you offering Farm Beginnings.

- **Focused on Sustainable Agriculture:** All farmers are encouraged to create a farm plan that is economically, socially, and ecologically sustainable.

The deadline for applications is Sept. 1. The cost of the class is \$1,000 for up to two participants per farm. Early bird applications submitted by Aug. 1 will receive a \$100 discount if you are accepted into the class. Scholarships will be available.

For details and to register, see bit.ly/farm-beginnings22. If you have any questions, contact LSP Farm Beginnings organizers Pilar Ingram (pigram@landstewardshipproject.org, 612-400-6349) or Annelie Livingston-Anderson (annelie@landstewardshipproject.org, 612-400-6350).

Journeyperson Course

LSP's **Journeyperson Course** is designed to support people who have several years of managing their own farm under their belt, and are working to take their operation to the next level. The course involves advanced farm business planning, a matched savings account, and a mentorship, as well as guidance on balancing farm, family, and personal needs. Farm Beginnings is a good prerequisite to taking Journeyperson, but non-graduates of Farm Beginnings are welcome to apply to Journeyperson.

For more information, see landstewardshipproject.org/new-farmers. Questions? Contact Ingram or Livingston-Anderson. □

'Fresh Voices' Podcast Series

Interested in hearing directly from the next generation of innovative farmers? Check out the Land Stewardship Project's *Ear to the Ground* "Fresh Voices" podcast series: landstewardshipproject.org/fresh-voices. In addition, you can read profiles of Farm Beginnings grads at landstewardshipproject.org/category/farm-beginnings-profiles. □



Cella Langer and Emmet Fisher, shown with their son, Otis, took Farm Beginnings and Journeyperson to help build business skills on their Wisconsin vegetable and livestock operation. For more on Oxheart Farm, see page 18. (LSP Photo)

Is Farming in Your Future?

The desire to farm is powerful — sparked by love of food, the land, community, entrepreneurship, and more. But it is a complicated undertaking, and the list of questions that need to be addressed before diving in is long. If you are dreaming of farming and puzzled about how to get started, the Land Stewardship Project's Farm Dreams initiative may be for you.

Farm Dreams is designed to help people clarify what motivates them to farm, get their vision on paper, inventory their strengths and training needs, and get perspective from an experienced farmer. To get started, go to landstewardshipproject.org/farm-dreams-workshop and download the Farm Dreams visioning exercise in pdf format. For more information, contact LSP Farm Beginnings organizers Pilar Ingram (pigram@landstewardshipproject.org, 612-400-6349) or Annelie Livingston-Anderson (annelie@landstewardshipproject.org, 612-400-6350).

Seeking Farmers-Seeking Land Clearinghouse

Are 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 landstewardshipproject.org/farmland-clearinghouse. You can also obtain forms by e-mailing LSP's Karen Stettler at stettler@landstewardshipproject.org, or by calling her at 612-767-9885. Below are a few recent listings. For the latest listings, see landstewardshipproject.org/farmland-clearinghouse.

Farmland Available

◆ Dan Takkunen has for rent 10 acres of farmland in *northwestern Wisconsin's Barron County (near Graytown)*. The property has not been farmed, mowed, or sprayed in four years. Corn was the last crop planted. It may be good for organic farming. It is located on a dead end road. There is no house available. The rental price is negotiable. Contact: Dan Takkunen, dan@takkunen.org.

◆ Rena Esposito has for sale 110 acres of farmland in *northeastern Wisconsin (near De Pere)*. It is close to a highway and schools, and was organic until two years ago. It is currently being leased for crops. No housing is available. It is about two miles from housing developments and may be developed in the future. The asking price is \$2,420,000. The land is divisible for the right opportunity. Contact: Rena Esposito, 917-826-1154, ravst8@yahoo.com.

◆ Melissa Row has for sale 120 acres in *west-central Wisconsin's Jackson County*. It is open land that was certified organic until 2020 and could be re-certified today. There are tillable, pastured, and forested acres. The land is on a blacktop township road. Some adjoining land is organic and some is woods. There is a creek that runs through the larger 60-acre parcel. Row desires a neighbor who believes and practices (or is very committed to practicing) regenerative/organic agriculture principles. The 60-acre parcel is \$400,000 firm; call for price on rest. Contact: Melissa Row, 715-533-1994 (text is best), row-clan@hotmail.com.

◆ Sylvester Wetle has for rent 40 acres of farmland in *central Wisconsin's Adams County*. There are pastured and forested acres. There is an operation shed, and electricity and water will be available; no house is available. Contact: Sylvester Wetle, smwetle@att.net.

◆ Mercedes Tuma-Hansen has for rent

6 tillable acres of farmland in *southeastern Minnesota's Rice County (near Faribault)*. The land consists of an additional 5 acres of pastured and forested land. The land has not been sprayed in 2+ years; there is a loafing shed and machine shed. There is water and electricity on the property. There is a spare bedroom in the house, or the renter can bring their own camper to live in. Contact: Mercedes Tuma-Hansen, tumah010@gmail.com.

Seeking Farmland

◆ Dianna Myles is seeking to rent 10 acres of farmland in *Minnesota, within 20 miles of the Twin Cities* — as far west as Mound, as far north as Andover, as far east as Lake Elmo, and as far south as Lakeville. Myles and a group she works with are seeking a suitable location to start a farm school and are looking for landowners who would be willing to lease space on their land to operate the farm school. Land that is certified organic or that has not been sprayed for several years is preferred. Land that has tillable, pastured, and forested acres is preferred. A barn and water access would be good. Contact: Dianna Myles, 314-603-9728, dianna.myles@theangeladayschool.org.

◆ Jill Sobel is seeking to rent farmland in *Wisconsin*. Land with forested, pastured, and tillable acres is preferred. Barns and fencing for goats is preferred — Sobel runs a goat weed mitigation service and is relocating from Colorado. Land with fenced property, water, electricity, and a house is preferred. Contact: Jill Sobel, 303-241-8751, fetchinfarms@gmail.com.

◆ Evan Callan is seeking to rent or purchase 5 acres of farmland in *Michigan*. Land with at least 4 tillable acres and 1 pastured acre is preferred. Ideally, the land would have a south-facing slope with good drainage. Access to electrical and water hookup ideal; no house required. Contact: Evan Callan, 989-798-1982, evancallan89@gmail.com.

◆ Liz Hacker is seeking to purchase 40 tillable acres of certified organic farmland in *Minnesota*. Land with forest and a house is preferred. Contact: Liz Hacker, 507-227-1514, liz.ann.hacker@gmail.com.

◆ Caleb Trainor is seeking to purchase tillable farmland in *Wisconsin*. Land with a house is preferred. Contact: Caleb Trainor, 262-689-9938, caleb@winterspringcsa.com.

◆ Thomas Clark is seeking to purchase 200 acres of farmland in *Wisconsin*. Land that is certified organic, and that has 100 pastured acres, 25 tillable acres, and 50 forested acres is preferred. Land with water is preferred. No house is required. Contact: Thomas Clark, 516-754-8855, thomasmartinclark@gmail.com.

◆ Craig Fischer is seeking to buy or rent 280 acres of farmland in *Minnesota*. Land with 160 tillable acres and 120 pastured acres is preferred. No house is required. Contact: Craig Fischer, 507-766-1405, sleepybisonacres@gmail.com.

◆ George Walker is looking to move his farm base to more land, preferably *north of State Highway 95 in east-central Minnesota*. He currently farms in Sherburne County and is interested in options north of that area. Land with a house would be good, but is not a necessity, depending on situation. He is interested in renting or buying. Contact: George Walker, 715-821-6775, george.g.walker@outlook.com.

Benjamin Tsai is seeking to buy arable land *near Duluth in northeastern Minnesota* for a CSA farm. He is seeking 5 or more acres suitable for perennial fruit and berry crops, annuals and/or pasture. Some additional forested land preferred. Tsai is open to buying up to 80 acres total, including some non-arable land (low/rocky, etc). A house on the property is preferred but not required. Contact: Benjamin Tsai, 612-888-2653, benjamin.h.tsai@gmail.com.

Want to Continue Your Stewardship Farming Legacy?

Whether you are a new farmer looking for farmland or a retiring farmer looking to transition your operation to the next generation, the Land Stewardship Project's website has resources for you at landstewardshipproject.org/new-farmers or landstewardshipproject.org/retiring-farmers-landowners. To discuss various land access/transition options, contact LSP's Robin Moore (rmoore@landstewardshipproject.org, 320-269-2105) or Karen Stettler (stettler@landstewardshipproject.org, 507-523-3366). □

Small, Complex & Focused

Not Doing Everything Makes Minding the Little Things Even More Crucial

By Brian DeVore

Smaller doesn't always mean simpler. Consider Cella Langer and Emmet Fisher's foray into being a Grade A micro-dairy — one that produces, processes, packages, markets, and sells pasteurized milk and yogurt. In a state that has lost 40,000 dairy farms in the past four decades, they are a tiny push in the opposite direction. How tiny? This year, Langer and Fisher are milking three Ayrshire cows on a seasonal basis in a small parlor on their 35-acre farm in western Wisconsin's Pierce County. Their bulk tank could fit into a walk-in closet, and the creamery is designed to handle 50 gallons of milk a week; a typical 100-cow dairy can churn out roughly 4,900 gallons of milk weekly.

But when it comes to marketing milk and yogurt straight off the farm, complexities remain, whether it involves three cows, or 3,000. Langer and Fisher's Oxheart Farm (oxheartfarm.com) even has a milk haulers license, even though the distance between the cows and the processing plant is measured in footsteps, not road miles.

"I need to learn to drive a truck," Langer says with a laugh while sitting in the March sun near the processing plant and milking parlor.

It hasn't only been the milking enterprise that has made for some complications. Besides the dairy, this farm is now home to a 75-member vegetable CSA as well as a direct marketing egg and meat business.

During the past five years, Langer and Fisher have been able to cut through the complexity thanks to the business planning and goal setting foundation they received through the Land Stewardship Project's Farm Beginnings and Journeyperson courses. Do the farmers, who are in their early 30s, have plans to add more enterprises?

"No," Langer says without hesitation. "I

think Farm Beginnings was the first place we realized we literally couldn't do everything."

A Whole Picture Approach

The couple could be forgiven for taking on a bushel basket of enterprises. After graduating with environmental education degrees from North Carolina's Warren Wilson College, they set out to gain as much hands-on farming experience as possible, and during that time they saw how small operations were making a living utilizing a variety of enterprises, including vegetable and dairy



"I think Farm Beginnings was the first place we realized we literally couldn't do everything," says Cella Langer, shown here with Emmet Fisher on their farm in western Wisconsin. (LSP Photo)

production. Both had a good base to work from: Langer grew up on a farmstead where her mother grew a big garden, milked goats, kept chickens, and raised fruit. Fisher's parents own and operate A-Z Produce and Bakery, a vegetable CSA in Stockholm, Wis. Besides raising vegetables, A-Z has a "pizza night" where the food served is made from numerous ingredients produced right on the farm, including the flour and meat.

While working on farms on the East Coast and in the Midwest, Langer and Fisher became enamored of the idea of providing eaters a "whole diet CSA" experience. That sparked their interest in producing not just

vegetables for subscribers, but products like milk, meat, and eggs.

"Whoa — what if we grew *everything* on the farm?" Langer recalls thinking when they started seriously considering farming as a career. "It was tempting," adds Fisher.

Fortunately, during the winter of 2012-2013, the young couple took LSP's Farm Beginnings course, which was being offered in Roberts, Wis. Farm Beginnings is a 12-month training session that helps students clarify their goals and strengths, establish a strong enterprise plan, and start building their operation. The course uses a mix of farmer-led classroom sessions, on-farm tours, and an extensive farmer network.

During their time in Farm Beginnings, as well as the follow-up course, Journeyperson, Langer and Fisher learned not only how to manage their financials better, but how to set up a five-year plan of where they wanted to be and how they were going to get there. That planning allowed them to take into consideration the importance of attaining a good work-life balance and the role sustainable goal-setting plays in that.

"Five years sounded like such a long time when we were 22, you know?" says Fisher, adding that their own timeline eventually included goals that covered not only financial and production milestones, but family life desires.

"If we quit farming and went into another career, I'd say 80% of it is very helpful in another line of work," he says of the Farm Beginnings training. "And half of the Journeyperson course is like marital counseling. It's life skills."

The Journeyperson course, which is for farmers who have a few years of experience under their belt, emphasizes the use of Holistic Management, which focuses on "big picture" decision-making and goal setting processes. Holistic Management helps farmers work on achieving a "triple bottom line" of sustainable economic, environmental, and social benefits. In a Holistic Management system, a farmer's quality of life is put on the same level as the health of the soil or the operation's economic viability. Holistic Management relies on constantly monitoring whether a particular enterprise or use of a tool on the farm is helping meet long-term overall goals, or is a distraction.

That's why Fisher and Langer spend each winter combing through their enter-

Oxheart Farm, see page 19...

prises, pinpointing weak links, and looking for ways to make them more viable from a financial, family, and environmental standpoint. For example, the couple recently decided to take a break from producing pasture-raised pork for direct sale as their family obligations grew; they have a 3-year-old, Hugo, and in January, Otis was born.

When the young farmers went looking for land, they knew enough from past experience that they needed access to consistent markets as well as some infrastructure. The 35 acres, which is mostly planted to pine trees (a former owner had plans to access the wood market), is a few minutes' drive from Red Wing, Minn., as well as other markets. As far as infrastructure, it doesn't have as many outbuildings as they'd like. Besides a house, it has a garage, which was re-purposed into the creamery. Langer and Fisher have added three high tunnels for the vegetables.

They used a USDA Farm Service Agency (FSA) Beginning Farmer Loan to finance the purchase of the farm. The FSA process can be lengthy, and in fact, deals on four other farms they attempted to purchase fell through as a result of the drawn out FSA loan period. The farm Oxheart landed on was the result of a long-term relationship developed with the owners, who were willing to not put the land on the market and wait for financing to come through for the young couple.

"They sort of courted us for the summer," recalls Langer. "They basically said, 'We'll wait for you until you're ready.'"

'Questions for Francis'

While enrolled in Farm Beginnings and Journey person, Emmet and Cella learned the value of networking with established farmers who were carrying out the kind of enterprises they wanted to pursue. Through the MOSES (Midwest Organic and Sustainable Education Service) Farmer-to-Farmer Mentorship Program, they were able to connect with different established farmers and tap them for knowledge. The MOSES program (mosesorganic.org/projects/mentor-program) pays the established farmers to be available to field questions from beginners like Emmet and Cella.

Through Journey person and MOSES, the couple connected with vegetable producers Kat Becker and Tony Schultz, in north-central Wisconsin. Through that connection,

they learned of a micro-dairy in the area that was similar to what they were aspiring to. They were also able to rely on input from other farmers — including Farm Beginnings grads, in the western Wisconsin region.

But when it came time to actually launch the dairy, Langer and Fisher reached a point where the questions were so specific that they needed to find somebody who was doing specifically Grade A on-farm processing of grass-based milk that was being marketed in a relatively rural area.

It cost them around \$50,000 to convert the garage into a pasteurization and bottling plant. Some of the equipment they needed was used, but because of their size, much of it was of a specialty type that had to be purchased new. There were endless issues to



When setting up their micro-dairy plant, Langer and Fisher, shown here with their son, Otis, had to deal with innumerable technical and regulatory details. "There's a million things," says Fisher. (LSP Photo)

deal with, down to what kind of containers to market their product in.

"We wanted to do yogurt in glass, but there is no glass container and not only that there's only one printed plastic container in the U.S. All those yogurt containers by all the different brands are manufactured by one company and they have a 10,000-unit minimum," says Fisher. "That's just one example of things like that — there's a million things."

One of the MOSES mentors they relied heavily on was Francis Thicke, who operates Radiance Dairy, a small Grade A milking operation and bottling plant in Fairfield, Iowa. Thicke was able to guide them through some of the million little details required to legally and safely produce dairy products on-farm. The Iowa farmer was on Oxheart's speed dial, and at one point, they had a notebook page titled "Questions for Francis."

"I'd carry it around with me and whenever something came up I'd write it down and then when we'd have our phone call to

Oxheart Field Day

Oxheart Farm will host a MOSES field day on small-scale dairy processing on June 18, from 1 p.m. to 4 p.m. For details, see bit.ly/3kHqTIH or call 715-778-5775.

check in — I'd just run down the list with him," says Langer. "Being able to do that without feeling burdensome to somebody was very important."

Learning the proper way to do drug residue screening was particularly tricky, she recalls; one of the requirements is that Oxheart has its own drug residue screening laboratory.

"We definitely want to do everything by the books," Langer says. "We want to do it so it's easy for our inspectors to check us off. Since their systems aren't set up necessarily for someone our size, we need to figure out how to sort of fit into their box."

Fine-Tuning What's There

Oxheart's dairy was launched in the spring of 2021. Demand for the whole milk and yogurt the farm markets through its CSA and via a few local retail outlets has been strong, creating a revenue stream that complements their 3-acre vegetable enterprise. Currently, cash flow is good enough that neither Cella or Emmet are working off the farm. That's good news, but they are waiting to see if the current strong demand for local food will taper off once the COVID-19 pandemic is completely

in the rearview mirror.

Meanwhile, the farmers will continue to monitor each of their enterprises to make sure they are tracking with their goals.

"We just want to spend the rest of our energy improving all of our farm enterprises and making them more financially viable, more efficient, and more ecologically sound," says Langer. "Everything the same, but better." □

For more on LSP's Farm Beginnings and Journey person courses, see page 16.

Give it a Listen

On episode 272 of the Land Stewardship Project's *Ear to the Ground* podcast, Cella Langer talks about the key role mentors have played in launching their small dairy operation: landstewardshipproject.org/podcast/ear-to-the-ground-272-micro-milk-mentorship.

Incubating Immigrant Farmers

Dawn 2 Dusk's Dedication to Helping Africans Get Established on Minnesota Soil

Note: If one has any doubt that Moses Momanyi is passionate about farming and raising food, consider this: soon after he moved to Minnesota from his native Kenya in 2004, he went searching for a patch, any patch, of land to raise a few vegetables on. He happened upon a community garden in the Twin Cities suburb of Hopkins, where he eventually raised vegetables on no fewer than 34 20 x 20 plots. When it was communicated to him none too subtly that perhaps a neighborhood garden wasn't a good fit for someone who obviously had bigger plans, Momanyi got in his car and started driving around rural Minnesota, stopping at various farms and asking the owners if they had land they would rent him. That didn't go so well — corn and soybean farmers weren't that interested in carving out an acre or two for an aspiring vegetable farmer who was obviously not from the area.

Eventually, Momanyi got access to an acre of land, as well as production tips and local markets, through the Food Group/Big River Farms' incubator program (thefoodgroupmn.org/farmers) in Marine on St. Croix, Minn. After that, he and his wife, Lonah Onyancha, spent several years renting land at other spots in the region, honing their skills as vegetable producers. It wasn't always easy: Moses often worked a night shift at a nursing home and farmed during the day. And it took him awhile to adjust to the brutally short growing conditions of the Upper Midwest.

Finally, in 2014, they used a USDA Farm Service Agency Beginning Farmer Loan to help buy a 20-acre farm north of the Twin Cities near the community of Cambridge. Since then, they've erected high tunnels and a deer fence, fashioned a walk-in cooler from a window air conditioner, and certified the land organic. In recent years, Dawn 2 Dusk Farm (dawn2dusk-farm.com) has solidified good market connections through the Mill City Farmers' Market and the Kingfield Farmers' Market. Moses and Lonah are also focusing on making the farm a good home for their two children, Faith, 12, and Neil, 9.

Perhaps because he had such a tough time accessing land when he immigrated here, during the past two years, Moses opened up his family's farm as an incubator for other new immigrants. For a nominal fee, they were able to get access to a quarter-acre plot, water, and, just as importantly, Momanyi and Onyancha's production and marketing expertise. Moses and Lonah originally thought they'd invite "four or five" beginning farmers who had immigrated from Kenya onto their land. Word-of-mouth quickly spread and they ended up with 13 in 2020; in 2021, that group grew to 19.

The incubator has been so successful that Moses and Lonah are now helping farmers of African descent get started through an entity called Kilimo Minnesota (kilimominnesota.org). Kilimo offers a three-to-five year hands-on training program that includes organic vegetable farming experience, group classes, networking and one-on-one business mentoring. Moses and Lonah are undertaking a GoFundMe campaign to raise money for, among other things, establishing infrastructure on 11 acres of land near Lino Lakes, Minn., that is owned by a retired crop farmer who has opened it up to some of the farmers Dawn 2 Dusk works with.

While getting his greenhouse ready this spring, Moses took a break to talk to *Land Stewardship Letter* editor Brian DeVore about his farming journey, his passion for raising food, and why he's working so hard to help other farmers launch their careers. On these two pages are excerpts of that conversation. To listen to the entire interview, check out LSP's *Ear to the Ground* podcast episode number 273: landstewardshipproject.org/podcast/ear-to-the-ground-273-incubating-immigrants.

Determined Search for Land

"So after the confrontation at the community plots in Hopkins, I jumped in my car and I started driving. I said to myself, 'I will pick like a 30-minute radius from where I live in Hopkins, and just show up in people's driveways.' And I did that. You know when you're determined you don't

even realize what you're doing? So, some of the people they'd come out and they'd be looking at me, and I would know, this one is not going to work. Some would say, 'Okay, I will go talk to my spouse, we'll call you.' [But they didn't call.] I was determined. I assumed all of them would have a positive reception for me. I never thought I'd get a

negative response or reception. Sometimes I look back and I think, 'Well, would I do that now?' I would still do that now."

Marketing in Western Kenya

"In western Kenya, we grew almost everything for subsistence. But my parents came from another region where there's plenty of tea and coffee. We also grew bananas and all these other things. If we needed school fees, we'd have to sell maybe one sheep or maybe 20 bags of corn.

"In Kenya, you just grow the food, you don't think where you are going to sell it. When your things are ready, all you have to do is put them in the truck and show up at the market. The farmers I work with need to know that marketing here is much different."

Starting the Incubator

"In 2019 I did a farmer-to-farmer program in Uganda, where I trained farmers there for two weeks on record keeping. And then coming back I said, 'I'll start doing that with local people.' Then I talked to my wife and said, 'Well, maybe let's just start with four farmers, or five.' So we called a few and those few brought in 13 farmers in 2020.

"I would have gotten onto my farm a lot quicker if I had a mentor that I could be in touch with and that I work with. I just want to shorten the process, especially for immigrant farmers."

Mentoring Other Farmers

"I go out and I show them how to grow literally everything. They don't know crops like kohlrabi because some of them don't eat these things. So they have to learn all these names of vegetables first. And then they have to learn how to grow them, and then they have to learn how to wash them, how to package them, all that. And then, they have to learn record keeping, they have to learn invoicing, they have to learn how to market, how to call the buyer and talk to them — all the way until they have to learn how to integrate into the bigger farming community."

Advice for Would-be Mentors

"I would say the most important thing is to know that if you are going to bring somebody onto your farm and give them your plot, you really have to have that from your heart, because if they don't know anything about farming, they will be asking you all these questions that might feel like, 'I'm not getting paid enough for this.'

"And just talk to the person who you are incubating. If you are incubating someone who was born here, that might be different

Incubator, see page 21...

how you relate to them, compared to somebody not born here. You have to reassure them that this is the right thing to do. The farmers I work with, all the time I assure them by saying, 'Just think of it like an investment. It will pay later – don't expect it

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"Sometimes I look back and I think, 'Well, would I do that now?' I would still do that now."

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to pay today.' So farmers will come and say, 'I didn't make any money.' And I'll be like, 'Okay, let's look at what happened.'

"Make sure you have a long list of things that you agree on, and then know that it's not going to be exhaustive — something's going to come up you don't expect. Have a conflict resolution agreement in place between you and the farmers."

Fitting into the Community

"My neighbor here let me use his tractor before I bought my new tractor. My friend over here would bring his front-end loader

when I'm unloading compost. The challenge is it's not like in Africa, where you just walk onto somebody's compound, or you see a lot of people walking on the road and you'll be meeting them every day. If that was the case, being here five years, I would know people up to a five-mile radius, because we'd be meeting every day. But I guess here it's a little tougher."

Love of Farming

"Well, I drank tea and had corn on the cob for breakfast this morning. It's not a fancy breakfast, you know, but it's what I want to do. Right? I just want to be on a farm. Yes, in the summer we work so hard, but we are happy to do that, we are happy to grow things and go to the market and sell and have people say we are doing a good job. That's something we love."



"I just want to shorten the process, especially for immigrant farmers," Moses Momanyi says of his desire to mentor other farmers of African decent. (LSP Photo)

"I also look at my children and I want them to grow up on a farm. And I know other people have children that they'd love to see grow up on a farm. And when I see other children from my community, I see my little friends that I grew up with." □

Farm Resiliency

From Reactionary to Resilience

Veggie Producers Strategize How to Farm in a New Climate Change Reality

The word "resiliency" is used a lot in agriculture these days, and nothing has tested the ability of farmers to stay resilient quite like climate change. One-hundred year floods that come every-other-year, flash droughts, abnormally long heat waves, unusually timed frost events, weather-related weed and insect pest infestations, power outages caused by extreme storms — these are all becoming the norm. Weather, for good reason, has always been an obsession with farmers of all stripes. But climate change has given food producers the feeling they have less control over their future — short and long term — than ever.

"Climate change is sort of this looming, nebulous threat that feels a little bit overwhelming and a little bit all-encompassing," said southeastern Minnesota vegetable farmer Lauren Berry during a recent meeting. She added that as a result of climate change's ability to unravel the best laid plans for the growing season, she finds herself taking a very narrowly focused ap-

proach to problem-solving. "A lot of time I feel reactionary and respond to the immediate problem."

Berry shared her concerns at a virtual meeting held by the Land Stewardship Project and University of Minnesota Extension in March. The event was the capstone to a series of workshops that were designed to help produce farmers like Berry utilize whole farm planning and be a little less "reactionary" when it comes to dealing with climate change. Berry and the other 11 participants in the workshop series worked with Laura Lengnick, who does risk management education and is the author of *Resilient Agriculture: Cultivating Food Systems for a Changing Climate*.

Lengnick led the participants through a multi-step process of risk management which included assessing a farm's resources and exploring current and upcoming weather risks and how they are impacting the operation. Farmers were then asked to come up with ideas for managing weather risk and se-

lecting one or two practices that they could implement in the near future.

During the March capstone event, Berry and two other workshop participants shared some of the ideas they developed and how taking a whole farm approach helped them get a handle on an "overwhelming" force like climate change.

"This process gave me the chance to step back and look at it in a more systematic way," said Berry, who owns and operates Dancing Gnome Farm, an organic Community Supported Agriculture operation near the Mississippi River in Wabasha.

Natalie Hoidal, a U of M Extension educator who specializes in vegetables and local foods, said that climate resiliency is only becoming more critical. Long-term climate forecasts show that states like Minnesota will continue to see intense precipitation events and longer periods between rains, with heat waves exacerbating those dry periods.

She added that often people focus on elements such as extremely hot temperatures as markers of climate change. However, the long-term trend is that the hottest temperature won't necessarily be higher, but that we will have more hot days overall. By the end of the century, Minnesota will have 30

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more days when the temperature is over 90 degrees. A 100-degree day here and there can be weathered — a string of unrelenting 90-degree days takes a toll on farms and the farmers themselves.

And although we may be trending wetter overall in much of the state, there will be situations where rains are not as frequent as fruit and vegetable producers need. Combine that with the longer string of hot days, and drought conditions are a looming threat, as many farmers in the region learned in 2021.

Jody Lenz of Threshing Table Farm knows the significant toll drought can take on the land and the people who work it. She shared how on her CSA in western Wisconsin they moved irrigation pipe 56 days in a row in 2021. As a result, they are working with the USDA's Natural Resources Conservation Service to put in a more efficient irrigation system. They are also considering utilizing various forms of alternative power to help them get through periods when storms cause electricity outages, threatening their ability to irrigate, as well as wash and cool produce.

Berry said she is looking to adjust her irrigation system as well, and is considering establishing "caterpillar tunnels" that can protect rows of crops from untimely freezes. She said one priority is to make infrastructure changes using tools that can be adapted for various uses. For example, her farm acquired a large cube to store water for goats they were grazing on a hillside. That didn't work out, but she can use the cube as a source of water for transplants if the power goes out early in the spring.

"It's not going to happen every year, but it could help mitigate a really catastrophic event," said Berry.

Other farmers who went through the workshop series discussed plans to put in additional wells and erect solar panels, as well as construct high tunnels. Hoidal said climate-proof infrastructure is key, but that farmers need

to keep in mind creating resiliency through "natural systems" as well.

Joan Olson said her farm is focusing increasingly on building soil health, since it can trigger a series of solutions for various problems, including management of water, erosion, and diseases. She is going to experiment with a new mulching system as well as a four-year rotation.

Olson, whose Prairie Drifter Farm is a CSA operation in west-central Minnesota, said one thing she learned from Lengnick was to differentiate between "practices" and "strategies." Practices are individual, interchangeable tools that can help make an overall strategy a reality.

"If that new mulching system doesn't



Like many farmers in the Midwest, during the past few years vegetable producer Jody Lenz has grappled with extreme weather caused by climate change. "Resiliency is really about getting to do what we love as long as possible," she says. (Photo by Ilisa Ailts)

work out and all we're thinking about is the new mulching system, we forget that the original goal was soil health," she said. "Instead of restarting the wheel, let's dig back into the diverse toolbox that we came up with and try something different."

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"Naming it and writing it down made me feel more in control."

— Vegetable farmer Lauren Berry

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were prompted to consider how such wider connections can help build climate resiliency. Lenz said although Threshing Table is surrounded by conventional corn and

dairy operations, those farms are facing similar stress related to climate change. She would like to have more discussions with her neighbors around how they could work together to weather extreme storms. A CSA member has also proposed developing a discussion group that would mull over issues like reducing carbon footprints.

Berry said good connections with customers can help when, for example, one needs to explain why a certain vegetable isn't available because of climate change.

Finally, a key element of whole farm planning is making sure the "human" resource is being taken care of. Climate change isn't just hard on plants, livestock, and soil — people suffer as well. Participants in the workshop series talked about how to handle long-term climate anxiety, as well as the day-to-day stress of wonky weather.

That could mean training employees how to take care of themselves during hot weather and providing plenty of water breaks and shade for everyone, said Hoidal. Being aware of what cost-share programs are available to help deal with climate-caused problems can also help.

Berry said just going through the workshop's planning process helped her deal with climate anxiety. "Naming it and writing it down made me feel more in control," she said.

Olson said it helps to have ways to put things in perspective and assure oneself that often things look darker in the heat of the moment. It's important to have other farmers to check in with about how the growing season is progressing,

and Olson has a "freak out file" on her computer with photos of damaged plants. She finds it useful to open that file later in the year and tell herself, "Yeah, we survived."

Lenz said that for her, the act of working the land itself can reduce stress, especially when she reminds herself of the eaters she's raising the food for.

"I find farming therapeutic," she said. "Resiliency is really about getting to do what we love as long as possible." □

LSP is forming "farmer climate hubs" later in the year. For more information, contact Farm Beginnings organizer Nick Olson at nicko@landstewardshipproject.org or 612-767-9496.

Seeking Signs of Life

2 Approaches to Monitoring the Path to Healthy Soil

Seeing is believing, and nowhere is that more true than when it comes to building soil health in farm fields and pastures. During Land Stewardship Project field days and workshops, participants spend a lot of time discussing how they monitor whether the practices they're implementing are taking their soil, and their farms, in the direction they want. It's not always easy. Sometimes the soil is very open about how it's faring — erosion and excessive water runoff are clear indicators it is compacted and has lost good aggregate structure. Other times, it can be a bit of a silent sufferer, and it requires sophisticated testing or long-term monitoring to figure out its overall health.

During a recent series of LSP soil health workshops, two different presenters shared stories of how they gauge the progress of their soil healthy farming practices. It turns out those indicators can reveal themselves on a brightly-lit computer spreadsheet, or in the dark of night.

Homegrown Science

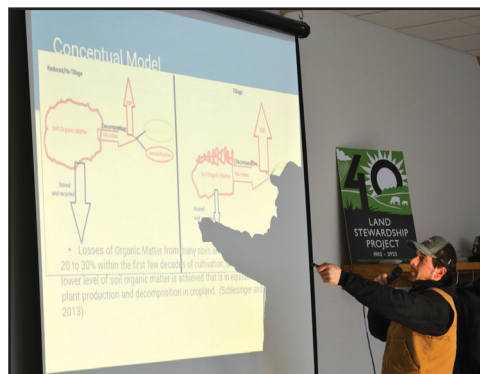
When Connor McCormick was in 4th grade, he conducted an experiment comparing the growth of two groups of grasses, one of which was receiving applications of Miracle Grow fertilizer. That experience hooked the farm kid from southeastern Minnesota on homegrown citizen science. And it was while studying biology and environmental science at Saint Olaf College that he saw the opportunity to combine his love of experimentation with his passion for farming.

When he was a sophomore, Connor received an assignment to study cover cropping. The project opened his eyes to the ecological and agronomic benefits of building the soil biome with diverse root systems. This led the student to do more soil health research. In fact, as part of his examination of the impact tillage systems have on soil biology, Connor was able to get his hands dirty on farms near the Saint Olaf campus.

One thing Connor was able to show through sophisticated field sampling and analysis was that, when compared to conventional tillage, the no-till system produced soil with the highest microbial activity, a key sign of a healthy biome.

When Connor graduated from college

in 2016, he returned to his family's farm in southeastern Minnesota, where he now raises crops and beef cattle with his father, Kevin. He also does custom trucking. All this keeps the 28-year-old busy, but Connor still finds time to do a little on-farm sci-



“It’s what brought me back home,” says Connor McCormick of his chance to combine science and farming. (LSP Photo)

ence, comparing, for example, seeding cover crops with a helicopter as opposed to with a high-boy sprayer implement.

For other farmers looking to experiment, Connor recommends attending workshops and talking to others who are implementing innovative practices. Many of these practices won't generate an immediate return on investment, so once you're ready to put your toe in the water, contact local agencies or even conservation groups about obtaining funding for, as an example, cover crop seed. The USDA Natural Resources Conservation Service, Soil and Water Conservation Districts, and even watershed protection groups all have resources available, including seeding equipment that can be rented, he says.

McCormick's on-farm soil health experiments have been encouraging and back-up what he was witnessing as a college student: armoring the soil and keeping living roots in it year-round creates resilient, productive fields that are managing moisture well and not eroding. But farming is a business, and it's just as important to monitor the monetary progress of various soil health practices. McCormick is showing that cover cropping and no-till are reducing the need for costly chemical inputs, and by grazing cover crops he has been able to provide his

cattle herd two weeks of free feed — money in the bank.

Not all of his experiments have been a success. In the spring of 2021, he planted “green” into standing rye and learned the hard way that one should wait to spread fertilizer during that process. It turned out it was hard to run a planter through where the tracks for the fertilizer applicator were.

“But I wrote it down so next year I’m going to know to apply the urea after I plant,” he says.

McCormick has ideas for experimenting with planting 60-inch corn and seeding cover crops in the wider row gaps, providing even more solar energy for forage growth. The young farmer has also toyed with planting rye in the fall after soybeans or corn, and then coming back in the early spring and no-tilling alfalfa in the rye.

Overall, Connor says such trials offer a way for soil health to serve as a natural meeting place for two fascinating worlds: science and farming.

“I love farming. I also want to learn new things and work with people, and for me that combination has worked out good,” he says. “It’s what brought me back home.”

Emergent Ecology

When Mike and Dana Seifert came back to Mike's family's 100-acre farm in east-central Minnesota a few years ago, they realized intense tillage over the decades had taken a toll in the form of eroded soils. Mike's father, Big Mike, was aware of that as well. It was also evident herbicide-resistant weeds had become a major problem.

So, the young farmers — they're both 38 — worked with Big Mike to integrate soil-friendly practices like cover cropping and no-till into their production of corn, soybeans, oats, and alfalfa hay.

Seeking Life, see page 24...

Give it a Listen

On episode 267 of the Land Stewardship Project's *Ear to the Ground* podcast, Connor McCormick talks about how a 4th grade experiment launched him down a path of researching linkages between ecology, economics, and healthy soil: landstewardshipproject.org/podcast/ear-to-the-ground-267-bringing-science-back-to-the-farm.

Episode 269 features Mike Seifert sharing how he's using cover cropping and no-till to make up for the soil damage caused by years of heavy tillage: landstewardshipproject.org/podcast/ear-to-the-ground-269-soils-stairway-to-heaven.

...Seeking Life, from page 23

They've had stumbles along the way, but some four years in, the Seiferts are starting to see better weed control, less compaction, and lowered erosion levels. Mike says that when they were first establishing cover crops, getting three years of funding and technical advice via the local Soil and Water Conservation District was key.

"When we started, I didn't quite know what I was doing, but by the end of that third year I was ready to be planting my own seed mixes and doing stuff that was beyond what they were offering us to do," he recalls. "So it was a perfect way for us to get started."

Less weed pressure and lower input costs are good indicators that the Seiferts are on the right path soil health-wise. But Mike got



Mike Seifert: "That was one of those rare moments where you actually had kind of a little message from nature." (Photo by Mike Seifert)

a particularly dramatic vote of confidence one night last August after a one-inch rain fell at the end of an extended dry period. He was walking in a recently harvested oat

field to see if it was dry enough to be seeded to alfalfa the next day and got the sense the ground was actually moving.

"It was bizarre. I bent down and I looked, and it was like a web of earthworms all across the soil, everywhere in front of me that my light pointed to," recalls the farmer.

The earthworms appreciated that oats had been introduced into a field that previously had been in a simple corn-soybean rotation. It had been one of their more marginal fields, and so the farmers thought a small grain in the rotation would benefit its biology as well as structure. They were right: all the ground cover the oats provided, combined with lots of fine root structure beneath the surface, had bolstered the biome, even during a drought.

"When you're dealing with soil health, it feels like so much of it is beneath the surface and you need a microscope to check it out," Mike says. "That was one of those rare moments where you actually had a little message from nature that said, 'You know what, you're doing the right thing here.'" □

The Cost of Negating Aggregation

Fixing the Dysfunctional Relationship Between Water & Soil

By Brian DeVore

Rancher Alejandro Carrillo likes to say that, "it's not how much rain you get, it's what you do with it." He should know. In the early 2000s, soon after he returned to his family's livestock operation in the Chihuahuan Desert of northern Mexico, the area got 20 inches of rain, which is double what the region normally gets in a typical year. So much precipitation would be a bonanza for the forage the cow-calf herd feeds on at the 30,000-acre Las Damas Ranch, right? In reality, all that extra rain did little good. That's because it was falling on hard, compacted soil that had been damaged by years of overgrazing.

Carrillo's story, which he shared while in Minnesota recently to present at a series of Land Stewardship Project soil health workshops, illustrates one of the key roles building healthy soil plays in creating resilient farms and ranches: its ability to absorb and store water and eventually make it available to growing plants when they need it. That capacity has become especially critical to farmers in recent years as they grapple with the extreme precipitation events wrought by climate change. Water holding capacity is a big deal when too much rain threatens to swamp the landscape, sending soil and agrichemicals racing off fields. It's also a big

deal when there's too little rain, as farmers learned in many parts of the Midwest during the 2021 drought. This weather whiplash has become the new normal.

"We're preparing for a future that both has too much water and not enough water, and often those things are co-occurring in the same season," says Natalie Hoidal, a University of Minnesota Extension educator.

Fortunately, farmers have proven they can use methods such as managed rotational grazing, cover cropping, no-till, and diverse rotations to build soil organic matter — the energy-rich portion of the soil profile that's made up of plant and animal residue, along with the tissues of living and dead microorganisms. There is a direct correlation between a soil's water holding capacity and the amount of organic matter present.

Just how direct that connection is may be debatable. Up until the 1990s, many soil scientists felt the link was tenuous, at best. But in 1994, a *Journal of Soil and Water Conservation* analysis found that as the organic matter increased from 1% to 3% across all types of soils, the available water holding capacity of soil roughly doubled. The USDA's Natural Resources Conservation Service (NRCS) has widely publicized the figure that a 1% increase in organic matter in the top six inches of soil adds roughly 25,000 to 27,000 gallons of water holding capacity per acre. Over the years, that statis-

tic has been cited repeatedly, including by the Land Stewardship Project.

To muddy the waters, in 2018 a *European Journal of Soil Science* analysis of the soil science literature tamped down the 1994 study's claims, concluding that a 1% increase in soil organic matter increases available water holding capacity by just 1.16%. The authors of that paper concluded that there are a lot of good reasons to build organic matter in the soil — it sequesters carbon, for example — but increasing water holding capacity may not be one of them. Meanwhile, this year a February *Soil Science of America Journal* study waded into the fray and concluded that in fact a deep analysis of the latest science shows the relationship between organic matter levels and water holding capacity may be vastly underappreciated.

Confused? University of Minnesota soil scientist Anna Cates says when making connections between organic matter levels and water holding capacity, it's important to take into account different soil types — finer textured soils may respond much differently than heavier soils, for example. Cates, who is the state soil health specialist with the Minnesota Office for Soil Health, calculates that in a medium-textured soil, increasing organic matter levels by 1% provides 3,400 gallons per acre of extra water at a 12-inch depth. That may not be as impressive as what the NRCS has been

Soil & Water, see page 25...

promoting, but it's still significant. The scientist says it's important to look beyond the first few inches of topsoil when measuring a field's ability to hold and manage water.

"At depth it is really clear the soil health systems are storing more water," she says.

The role soil "aggregates" play in water holding capacity should also be considered. Aggregates are groups of particles that bind to each other more strongly than to adjacent particles. The gaps between aggregates provide pore space for retention and exchange of air and water. Aggregate structure can be destroyed by intense tillage and overgrazing.

Cates says a farmer may get improvements in water holding capacity which are not directly related to changes in organic matter levels, but are linked to organic matter *function* and *structure*. The good news is that the same practices that can increase soil organic matter can also fortify aggregate structure.

"Soil organic matter is critical for forming aggregates, and aggregates are critical for holding water," says the scientist.

Improved aggregate structure can occur in a few growing seasons, while organic matter increases are measured in years or decades. A lot of quick aggregate structure can be created during those slower years of organic matter improvement.

A Welcome Reception for Rain

While the science may remain a bit unsettled, farmers are nonetheless finding a direct connection between building soil health and increasing water holding capacity — that applies from the arid Southwest to the humid Upper Midwest. Alejandro Carrillo, the Mexican rancher, knew something had to be done to improve his soil's water holding capacity after a bounty of rain yielded few positive results in his pastures. "When it rains, it doesn't rain grass," he says.

Over the years, the rancher has built up his land's organic matter by implementing an intense system of managed rotational grazing. Frequent movement has allowed the grasses and other forages to recover from the animal impact and develop deep root

systems that can store precipitation. Perhaps most importantly, such a system of grazing is building the soil's aggregate structure, allowing it to make use of any amount of precipitation that might be falling.

The soil at Las Damas can now soak up water at a rate of 18-20 inches per hour;

a neighboring ranch has an infiltration rate of only 2 inches per hour. That generates a direct financial payoff: Las Damas now has a 550-head

cow-calf herd, which is triple what the family used to be able to run on the same acres. Carrillo says net revenue has increased 350% since the early 2000s.

What's Your Infiltration Rate?

Want to test your soil's ability to absorb moisture? You can learn an easy way to do this by watching LSP's "Water Infiltration Test & Comparison" video at bit.ly/3wgXqLo.



The roller crimper system, which the Jovaags use in conjunction with cover crops, is helping build aggregate structure on previously damaged soils. (Photo by Paul Hunter, Mower County SWCD)

Minnesota farmers Jon and Ruth Jovaag have also made a direct connection between soil health and water holding capacity. But they are in an area that can get triple the annual rainfall that Carrillo sees in a typical year. They raise 500 acres of crops as well as livestock in southern Minnesota's Mower County and are transitioning all of their acres to organic production. The Jovaags are using a combination of no-till, cover cropping, and diverse rotations to reduce compaction and increase aggregate structure.

Give it a Listen

On **episode 268** of the Land Stewardship Project's *Ear to the Ground* podcast, organic cropping expert Léa Ver-eecke, soil conservationist Steve Lawler, and farmer Jon Jovaag talk about how the roller crimper system can help extend the benefits of a cover crop: landstewardship-project.org/podcast/ear-to-the-ground-268-rolling-down-the-cc-river.

On **episode 270**, Alejandro Carrillo discusses how he brought his family's ranch back to life by building soil health: landstewardshipproject.org/podcast/ear-to-the-ground-270-it-doesnt-rain-grass.

One method they've been using is a roller crimper to control weeds without the use of chemicals or tillage. It creates a heavy mulch between soybean rows, which not only controls weeds but reduces the amount of moisture that leaves the surface on hot days. Staff with the local Soil and Water Conservation District have examined the Jovaags' soil and say its aggregate structure is recovering after decades of intense tillage and compaction.

That's paying off at both ends of the weather extreme spectrum. During a particularly wet spring, the Jovaags noticed one of their tile lines was not emptying water into the nearby Cedar River. That was odd, because the field it ran under was usually "notoriously wet." When they planted soybeans in the field, the farmers ran into no wet spots.

And on a hot summer day during a different growing season, Jon was surprised to see other irrigation rigs in his neighborhood running, while his stood idle. He assumed that his

irrigators had failed to be activated because sensors that measured soil moisture were malfunctioning. But it turned out the sensors were right — he had plenty of moisture to spare, even if his neighbors' fields were dry.

"We were able to go about another 10 days before we ran that irrigator," recalls the farmer. "Even where the irrigator didn't hit, those soybeans still produced pretty well. And so, soil health, I mean it's just key to everything working as a system." □

The Soil Builders' Network

Join the Land Stewardship Project's Soil Builders' Network to get regular updates on workshops, field days, and on-farm demonstrations, as well as the latest soil health and cover crop research. For more information on joining, see the web page at landstewardship-project.org/soil-health or call 507-523-3366.

Getting a Reaction from the Land

Can the Johnson-Su System Turn Back the Clock on Soil Health?

Before he started dairy farming in 1979, Dale Pangrac was a science teacher. So perhaps it's no surprise that on an overcast day in early July, he's intrigued by the living experiment taking place on his operation near Utica in southeastern Minnesota.

"It is fascinating — the more I learn the more I want to learn," says Pangrac after spending the morning working with Land Stewardship Project staffers to fill two mini-silos with a mixture of barley straw, hay, manure, and bedding pack from his cow herd. Those stacks will sit and percolate for about 12 months, hopefully creating an inoculant that will take Dale and his wife Carmene's soil to a whole new level biologically. And what they and four other farm operations learn from this composting project could take soil science to a whole new level as well.

Since the summer of 2021, the Land Stewardship Project has been working with the Pangracs and the other farmers to research if a particularly innovative, low-labor approach to breaking down waste material can be a critical linchpin in efforts to bring the soil back to life. Through this initiative, LSP staff members have erected Johnson-Su Bioreactors on four farms in southeastern Minnesota and one farm in western Wisconsin. Invented by molecular biologist David Johnson and his wife, Hui-Chun Su, the bioreactor system represents a radical departure from the traditional way of taking organic material and breaking it down into a source of fertility via composting. Rather, the inoculant created by the bioreactor system activates the soil's innate ability to cook up its own fertility, akin to a baker introducing yeast to bread dough, giving rise to a chain reaction of ecological activity.

"We're not really going for a lot of nutrients or high fertility," says Maks Kopish, a southwestern Wisconsin vegetable producer who is serving as a consultant on LSP's research project. "We're really looking for a diversity of microorganisms, specifically fungi."

Kopish explains that traditional composting relies on frequent turning of the waste material to keep oxygen flowing and thus prevent the material from becoming anaero-

bic. This greatly reduces the timetable for producing a finished product, which can be an excellent source of fertility for soil. The disadvantage to such a system is that it demands lots of labor during the breakdown process, and, if done on farm scale, can be infrastructure intensive, requiring turning equipment and lots of room for windrows.

One big advantage to the Johnson-Su system is that it's scalable. A stack can be set up for less than \$50 using locally available materials like wire mesh and landscape fabric. Larger operations can simply build more stacks, while smaller farms can rely on one



Mixing the "recipe" for a bioreactor on the Cotter farm in June 2021 — the composters utilize material readily available on-farm. (LSP Photo)

or two. They can even be scaled to work for backyard gardens.

The Johnson-Su process requires a few hours of work on the front end — filling the five-foot-tall by 12-foot diameter stacks — but then that's about it. Other than some management required to add and manage moisture, the stacks are left alone for 12 to 18 months. PVC pipes are used during the construction process to create air shafts; this allows the stacks to breath during the composting process. During the first few days, the temperature is monitored to make sure the stacks heat up to a thermophilic phase of at least 131 degrees Fahrenheit in order to destroy pathogens and weed seeds. After the material cools down, red worms are added to assist further breakdown and the stacks are left to do their thing for several months.

That "quiet time" is key. It turns out all that tossing and turning in a traditional com-

posting system is hard on the long, delegate filaments that make up fungi. And fungi are key elements in creating a self-sufficient soil biome.

"The fungi will actually be breaking down the mineral structure of your soil to make those nutrients available to plants," says Kopish. "We're trying to get back to where plants and fungi are working together. It's a cyclical balance where they're returning just as much as they're taking."

The original recipe developed by Johnson and Su consists of one-third leaf litter, one-third dried cow manure, and one-third wood chips, which are piled into the miniature silo-like structures. Through this LSP project, which is being funded by a grant from the Minnesota Department of Agriculture's Agricultural Growth, Research, and Innovation Program, farmers are experimenting with variations on the original recipe, utilizing chicken and hog manure, for example. Most of the research on the Johnson-Su Bioreactor has focused in areas like New

Mexico, and studies in that region show material produced by this composting system greatly increases a soil's fungal biomass, which results in, among other things, greater crop yields and more sequestration of carbon.

Kopish has been using the system since 2020 and after one growing season is already seeing better aerated, livelier, soil.

"It's just amazing how quickly the soil structure begins to get built once you introduce this inoculant," said the vegetable farmer. "And I think the plants just respond in kind, because they're feeding microbes and the microbes are feeding them. Just in one growing season, I've seen that in our gardens. It's just mind-blowing."

One of the goals of the LSP initiative is to see how this system performs under replicated trials in the harsh climate of the Upper Midwest. There are questions around what happens when a Johnson-Su stack freezes in the winter — will it stop biological activity permanently, or can it be part of the process of creating an active biome by aiding in the break-down process?

According to the University of Illinois, the per-ton price of anhydrous ammonia fertilizer has more than tripled since 2020. And with war waging in Europe, there are indications this upward trajectory will continue in the immediate future. Pile on top of that the fact that we may be reaching what's called "peak phosphorus" in coming decades, and it's become more evident than ever that we need to build the kind of healthy soil

Bioreactor, see page 27...

that generates its own fertility. Continued reliance on outside inputs to replace the nutrients being mined from our fields is simply not viable in the long term.

Inspired by the work of microbiologist Elaine Ingham, in recent years farmers and others have been investigating how they can use intense composting to build the kind of soil that is self-sustaining, and not reliant on a constant supply of chemical inputs.

"I've always tried to sustain myself without having to use too much outside inputs," says Tom Cotter, one of the bioreactor research project's participants. He farms 850 acres of organic and conventional crops and raises beef cattle in southern Minnesota's Mower County.

Pangrac says a desire to reduce spending on outside sources of fertility is also a big motivator for him. The Pangracs' 150-cow dairy herd is certified organic, and they have spent the past several years utilizing cover cropping, rotational grazing, and manure applications to build soil organic matter levels on their 900 acres. It's mostly worked, but Dale says he wants to take soil health to the next level. He became fascinated with utilizing his soil's natural ability to generate fertility after seeing Ingham speak about creating a self-perpetuating environment where microorganisms do the heavy lifting.

"The microorganisms and the plants communicate with each other," says the dairy farmer. "The plant feeds the microorganisms and in turn the microorganisms bring nutrients to the plant. It's quite a system."

As part of the research project, LSP is taking samples from the stacks and having Kopish examine them under a microscope. Samples have also been sent to the Univer-

sity of Minnesota for genomic sequencing, as well as to the Soil Foodweb laboratory in New York. Those samples will eventually be compared to material taken from conventional commercial composting operations.

Fungal vs. Bacterial

Kopish explains that the sampling is attempting to determine what's present in terms of active fungi, bacteria, protozoa, and nematodes. The goal is to create a product high in fungi and low in bacteria (bacterially dominant soils tend to sprout lots of weeds). High levels of predatory nematodes that will feed on pests such as aphid eggs are also preferred. It's early in the research, but at the six-month mark, sampling and microscope work showed compost that was relatively high in fungal material.

"But we're seeing some samples that are



Setting up Johnson-Su composters on the Pangrac farm in July 2021 — the bioreactors utilize PVC pipes to create air shafts and keep oxygen flowing through the material. (LSP Photo)

bacterially dominant at this point, or have indications that they are becoming bacterial," says Kopish. "So we have a couple of alarm bells like, 'Oh no, what's going on there?'"

Are the stacks too dry? Too wet? Too cold? Do the recipes need adjusted? Those are some of the questions Kopish, members of LSP's Soil Health Team, and the farmers themselves will grapple with in the next year or so. The current stacks will be torn down for the 2022 growing season so the farmers can apply the end product to their soil. After that, a new set of bioreactors will be set up (*see sidebar*) so that they can produce compost for the 2023 growing season, when the research projects wraps up.

Dale Pangrac plans on putting his Johnson-Su material in a compost brewer and then spraying it on his fields. He estimates that he can treat 400 acres with what his two

Give it a Listen

On episode 266 of the Land Stewardship Project's *Ear to the Ground* podcast, farmers involved in the Johnson-Su research talk about the importance of activating life in their soils: landstewardshipproject.org/podcast/ear-to-the-ground-266-activating-soil-life.

On episode 271, Maks Kopish describes what makes the Johnson-Su system so different from traditional composting and what role it could play in the future of regenerative agriculture: landstewardshipproject.org/podcast/ear-to-the-ground-271-focusing-on-fungi.

stacks produce. Because the Johnson-Su compost is so concentrated, it can be applied at levels as low as half-a-pound per acre, according to David Johnson.

Liana Nichols, who works for Wozupi Tribal Gardens near Shakopee, Minn., is also participating in the research project. She's hoping to use the compost created by the bioreactor as potting soil and as a soil amendment directly in the vegetable plots. Extract from the bioreactor can also be used to coat seeds.

Time Machine

After spending a morning erecting two bioreactors on his farm, Tom Cotter reflects on how much his soil has been damaged over the years as a result of tillage and intense chemical use. In a sense, we've gotten away with a one-way extraction — now it's time to put something back, he says. The farmer knows the Johnson-Su system is not a silver bullet, and, in fact, Johnson and Su say that the bioreactor

works best when integrated with other soil health techniques like no-till, cover cropping, and managed rotational grazing. But Cotter hopes that mix of manure, forage, and other material percolating in those stacks standing in his machine shed represents a cutting edge spark plug that can actually wind the clock backwards.

"I hope it sets me back about 200 years, when biology was really healthy." □

Bioreactor Field Day Aug. 26

On Aug. 26, LSP will be hosting researchers Hui-Chun Su and David Johnson for a Johnson-Su Bioreactor field day. The event will be held at the Dale and Carmene Pangrac farm in Utica, Minn. For details, see LSP's web calendar at landstewardshipproject.org/upcoming-events, or contact LSP's Shona Snater at ssnater@landstewardshipproject.org.

Want to Build a Bioreactor?

In June, Land Stewardship Project staff will be setting up Johnson-Su Bioreactors on five farms participating in the composting research project. If you'd like to volunteer to help, see landstewardshipproject.org/johnson-su-bioreactor-construction-events, or e-mail Shona Snater at ssnater@landstewardshipproject.org.



Running Out In Search of Water on the High Plains

By Lucas Bessire

246 pages

Princeton University Press
press.princeton.edu

Reviewed by Dana Jackson

Running Out by Lucas Bessire is about depletion of the Ogallala Aquifer by industrial agriculture. The aquifer is not one large, level underground lake, but rather patchy and uneven layers of water underneath Kansas, Nebraska, Oklahoma, and Texas, plus edges of Wyoming, South Dakota, and Colorado. It is being pumped dry to irrigate mostly corn and soybeans and support large scale, corporate-owned livestock operations. The Ogallala accounts for one-third of all the irrigation in the United States, and one-sixth of the world's grain is produced over the aquifer. But people in the region are not facing up to what will happen to the land and the livelihoods of future inhabitants when the wells run dry.

The subject is personal to the author—he grew up in southwestern Kansas in a family that owned land under irrigation.

On the surface, the book is about groundwater depletion, a study of irrigation practices and policy in southwestern Kansas. But layered underneath is a description of family relationships, family history, and family responsibility for the past and the future.

And deep underneath, Bessire realizes that worldwide humans are recklessly depleting natural resources. He explains at the beginning of the book that “depletion requires its own genre to approximate... like an aquifer, the account is composed of many sediments...stacked in layers...patchy and unevenly spread.” One of those layers is his own life, which he fears is running out without his having built lasting relationships in a particular place.

The author refers to his family history as “destructive inheritances” connected to the disappearing aquifer. Lucas Bessire’s great-

grandfather “RW” was among the second wave of white immigrants that settled on Native American land in Kansas and one of the first farmers to start deep well irrigation in the 1940s. Bessire doesn’t remember much about RW, but he does remember RW’s daughter (his grandmother Fern), an aspiring historian and writer, unhappily trapped in traditional female work and at the beck and call of her father and husband.

Running Out explains what Bessire learned about aquifer depletion when he returned to southwestern Kansas after a 15-year absence to visit Tony, his father, living at the Little Rock House, which was once RW’s cattle camp on the Cimarron River. The Cimarron had been a groundwater river — “a crack in the aquifer’s earthen cover” — but it stopped flowing in the 1950s as the aquifer level fell.

His father became very concerned about aquifer depletion when the well at the Rock House hit bottom in 2014, and he had to re-drill a much deeper well to

continue pumping. Recharge rates near that well were under 1-inch per year, and groundwater losses at the Little Rock House were among the highest in southwestern Kansas, an area with some of the most extreme rates of loss in the whole

Ogallala region.

“By 2016, the place that nurtured five generations of my family was at the epicenter of global aquifer depletion,” writes the author.

It was shocking to learn from this book that most of the world’s major aquifers in arid lands on all continents are being depleted, and Bessire included this astounding fact: “So much groundwater is pumped to the surface and drained into the oceans that it is now a major contributor to sea level rise, roughly on par with melting glaciers.”

Aquifer depletion is only the latest resource exploitation on the Great Plains by European immigrants. Bessire writes in painful detail about the massacre of buffalo, noting that, “sources agree that between 1871 and 1874, three to seven million bison were killed within a hundred mile radius of

the Little Rock House.” With indigenous peoples starved, slaughtered, and removed, white settlers broke the shortgrass prairie and planted wheat, turning it into the Great American Desert and the Dust Bowl of the 1930s. Fairly sustainable wheat/fallow crop rotations followed in the 1940s and 1950s, when I was growing up in Kansas, until

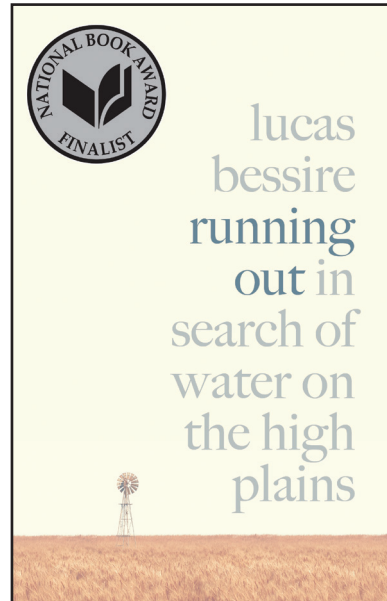
they were replaced with huge circles of irrigated corn and soybeans in the 1960s. Then came the hog CAFOs and beef feedlots, and in recent years, irrigated alfalfa and confinement dairies. Bolstered by USDA programs and crop insurance, Kansas farmers can lose money on irrigated crops and still continue farming as they drain the aquifer. Farmers are blamed for depleting the aquifer, but Bessire realizes that the top users of the water are really agribusiness corporations. That corporate influence “hides in the fiction of a family farm whose

choices are part of an independent livelihood imbued with moral values,” writes Bessire.

Since owners of 40 acres or more have water rights and participate in Groundwater Management District (GMD) governance, one would think that farmers would make rules to conserve water so they could keep farming in the future. But a GMD official told Bessire that Kansas law requires that the aquifer be used for the public interest, and the “public interest” is commerce. Switching back to dryland farming from irrigated farming, or even growing crops with less water to extend the aquifer’s supply, would be “against the public interest,” because community entities — government, schools, churches, businesses — all depend upon agrarian capitalism made possible by irrigation. So most GMDs accept depletion as the fate of the aquifer.

The only plan is to keep pumping until the aquifer runs dry, then replace it with water piped across Kansas from somewhere else, like the Missouri River, and continue irrigating.

Amazingly, aqueducts have been the fallback for at least 45 years! In the 1980s at the Land Institute in Salina, Kan., I participated in an Ogallala Study Group that examined a 1976 U.S. Army Corps of Engineers report on the feasibility of water transfer from out-



“So much groundwater is pumped to the surface and drained into the oceans that it is now a major contributor to sea level rise, roughly on par with melting glaciers.”

Running Out, see page 29...

of-state rivers to terminal storage points over the Ogallala. The price tag for an aqueduct — currently \$18 billion — was astronomical then, even without including delivery costs to individual farms, and the Corps did not recommend it be constructed.

Lucas Bessire was somewhat surprised that Tony Bessire helped him with research for this book. He and his sister had been raised by their mother, and Lucas had never been close to his father. When he returned

home, now a professor of anthropology at the University of Oklahoma and an author of scholarly publications, father and son had very little in common. But Tony arranged for him to talk to other irrigators he knew in the region and took him to Groundwater Management District meetings. During the younger Bessire's two years of gathering material for the book, sharing experiences and conclusions with his father, the pair became comfortable with each other and more familial. And in the afterword — a very important layer of the book — he reveals improvement in other relationships and

seems personally less depleted.

Although relatively short, this book was not a fast read, mostly because I kept re-reading passages to relish the metaphor-rich language. *Running Out* is an information-rich, personal narrative, anchored with 60 pages of small-font scholarly notes and bibliography. In other words, it succeeds on numerous levels. □

Former Land Stewardship Project associate director Dana Jackson grew up in Kansas and in 1976 co-founded the Land Institute in Salina.

In Search of Mycotopia Citizen Science, Fungi Fanatics, and the Untapped Potential of Mushrooms

By Doug Bierend
336 pages
Chelsea Green Publishing
chelseagreen.com

Reviewed by Shona Snater

It's fitting that *In Search of Mycotopia: Citizen Science, Fungi Fanatics, and the Untapped Potential of*

Mushrooms utilizes networks — natural as well as human-centered

— to provide an in-depth look into fungi in all its unique forms. Author Doug Bierend makes forays into the vast network of (mostly underground) social circles and cultures that are uniting around a common interest in organisms that have mostly been stigmatized and misunderstood by Western culture.

It turns out people from a diversity of backgrounds from throughout the world are challenging the conventional notion of who gets to be an “expert” in a relatively new ecological frontier of scientific study: mycology. Bierend describes how a new form of citizen science is sprouting from social groups, mushroom festivals, and larger national movements.

As with any part of the ecosystem that has either been ignored or misunderstood for many years, citizen scientists have a lot to catch up on when it comes to fungi. No

wonder they rely so heavily on each other to share the latest information and insights, as well as for moral support.

Bierend begins the book by exploring the current “Big Science” understanding of fungi and the mapping of genomic species. It may be useful to have a Google search tab open while reading this section as it is steeped in scientific jargon, abbreviations, and Latin names of unique mushrooms. For the average reader looking to learn about the processes and benefits of beer, kombucha, tempeh, edible mushrooms and medicinal species, the latter part of the book delivers such practical insights.

Personally, my favorite sections of the book involved hearing from mushroom growers and foragers and how they talk about mushrooms — these people are the so called “fanatics” of the subtitle. The longer a person engages with mushroom cultures — both human and fungal — the more reverence they hold for the “magic” that exists in all fungi. A line often repeated in the book is that when embarking on a mushroom hunt, “you do not ‘find’ a mushroom, you ‘meet’

one.” And the best way to see a mushroom is to not look for it straight on but via a peripheral glance.

These organisms’ ability to heal, remediate toxic areas, ferment, change perspectives, and adapt to changes in the environ-

ment has naturally drawn people together to explore the immense potential fungi offers up. The resulting excitement and social connections have prompted an emerging fruit of awareness in our larger society about the

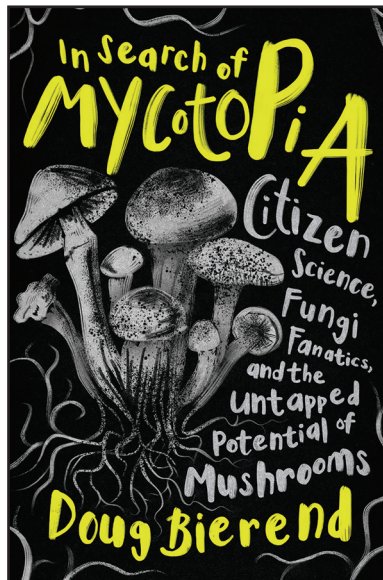
benefits fungi hold for the betterment of our world. We’re certainly seeing that in agriculture — many of the farmers I work with are beginning to appreciate the role mycorrhizal fungi can play in building healthy soil, for

• • •
Many of the farmers I work with are beginning to appreciate the role mycorrhizal fungi can play in building healthy soil.
• • •

example (see page 26).

Mycotopia is a great place to explore your mushroom passions and relate to an eclectic network of people who feel the same way about the mysterious world beneath our feet. Have fun-guys and fun-gals probing the Fungi Kingdom: “The organism,” as Bierend puts it, “that is not quite plant and not quite animal.” □

The morel of the story is that Land Stewardship Project soil health organizer Shona Snater is happiest when she knows there's a fungus among us.



Further Fungal Resources

- Visit SPUN.earth, a nonprofit, science-based initiative founded to map fungal networks and advocate for their protection.
- Download the iNaturalist app at inaturalist.org. iNaturalist is a social network of naturalists, citizen scientists, and biologists built on the concept of mapping and sharing observations of biodiversity across the globe.

The 'We the People' Wisdom of Lorraine Redig

Note: When longtime Land Stewardship Project member Lorraine Redig passed away earlier this year (see page 4), she left behind a deep legacy of letters to newspapers, as well as commentaries and Congressional testimony where she argued passionately in defense of family farms, fair and open markets, and vibrant rural communities. Former LSP policy and organizing director Bobby King filed away many of Lorraine's writings and testimonials. Below are a few samples of her public pronouncements that King shared with the *Land Stewardship Letter*.

→ **Lorraine testified before members of Congress on May 14, 1987, about the Farm Credit Systems' failure to serve farmers and rural communities.**

"Our country's strength and freedom doesn't depend on the number of acres farmed. It does depend on the number of family farmers. We are losing the broad-based, diversified land ownership that made our country so outstanding. And it is necessary to keep our country viable as a Government of the people, by the people, and for the people."

→ **A Sept. 16, 2016, letter Lorraine wrote to the Winona Daily News called for the banning of frac sand mining in Winona County.**

"We are passengers on our mothership Earth. Our Awesome God created our mothership Earth not as the personal property of any individual, but as the place of exile for all generations past, present and future, to live while each decides to love our God above all else by loving all of our neighbors as we love ourselves — or not."

A Sept. 27, 2021, letter Lorraine wrote to the Winona Post discussed property rights and the free market.

"The Constitution, with its emphasis on property rights, was written with the traditional wealth-transfer system to benefit a few Americans. 'We the people' didn't include women, Native Americans, slaves,

small family farmers, labor, and others.

"Today, most of us don't even see the system that transfers wealth from producer to those who control 'the markets.' 'The markets' short-circuit the economy because production costs and full human rights of farmers and others who produce the wealth aren't included in the price the producer receives in return for their production."

→ **In 2001, Lorraine testified before the U.S. Senate Committee on Agriculture, Nutrition, and Forestry during a hearing at the American Legion Post in Stewartville, Minn. Senators Mark Dayton and the late Paul Wellstone, along with U.S. Representative Gil Gutknecht, were present.**

Lorraine entered the Legion Hall after the hearing had begun. Senator Wellstone stopped speaking and left the stage to meet Lorraine as she entered to give her a hug. He then returned to the front of the room to continue the hearing. Later, Lorraine gave this testimony:

"Justice demands that farmers and laborers who produce food receive a fair share of what consumers spend on food. We farmers don't have the structure to market our production as the demand arises at a profit. The buyer-traders have filled that vacuum.

"They discriminate against those who enter raw production from a certain economic stream. The supply-and-demand economic system is called a law of nature, but it is

not. It is man-made policy, and it is unjust policy... We ask you to form a farmer-run democratic board of trade to replace the Chicago Board of Trade and every other structure that enables the buyers to put production they don't yet own up for sale at auctions that they control to find out how little they have to pay for what they want to get. The only trade that a just nation can afford is trade that profits everyone involved."

Senator Wellstone's response:

"...when Lorraine said 'democratic board of trade,' that was with a small 'd,' which is the most important of all... I would like to thank Lorraine... because you put together your values and your deep religious faith with why we are all here and how important family farmers are to this country. I would like to thank you for years and years and years of having such a strong voice."

→ **On Feb. 25, 2003, Lorraine wrote a letter to the Ortonville Independent in response to an attack on LSP's opposition to factory farms.**

"[Bill Rowekamp] mistrusts his neighbors who organize with Land Stewardship Project. My husband and I have farmed for 52 years and helped start the LSP office in our area. LSP strives to learn from nature's billion-year experience in sustainability. LSP strives to make producing food and fiber profitable for farmers and healthy for our neighbors.

"Bill is disturbed that LSP prevented the establishment of 26 factory farms and a lot of traditional jobs. These 'new' jobs would be poverty level jobs in unhealthy working conditions. The promise of factory farms differs greatly from reality.

"How will we thrive when the Earth is no longer able to produce sufficient food and can no longer recycle foul air and water back into fresh air and water?

"...Bill, trust your LSP neighbors. We have studied both sides. Join us in rejecting economically and ecologically unsustainable corporate policy. We are working for a way that benefits us all." □

Go Public With Your LSP Support

There are numerous fun ways you can show your support publicly for the Land Stewardship Project. LSP has available for purchase t-shirts (\$20), caps (\$20), window decals (\$3), tote bags (\$15), 8 x 10 metal barn signs (\$20), and "Let's Stop Treating Our Soil Like Dirt" bumper stickers (\$3). Order these items at landstewardshipproject.org/shop or by calling 612-722-6377.



Bumper Sticker

T-shirt



Metal Barn Sign



Window Decal



Cap



Tote Bag



Investing in the Next LSP Season

By Megan Smith

Spring is an exciting time — we're all ready to push out from our hibernation and see what's possible! Spring brings a feeling of hope for what's to come and a feeling of trust in what you've built, stored, and invested in over the winter.

For the Land Stewardship Project, we've been building and investing in some of our internal systems and infrastructure over the past several months. We've grown to be a powerful grassroots people's organization over the past 40 years, and supporting all the great organizing, advocacy, and education we do is the internal system that helps us at ground level. Just as a farmer needs the right settings on a planter to get the best yields, our organization needs the right technology and internal systems to be successful in creating a regenerative farm and food system.

In November 2021, we upgraded our membership database to a new management system that allows our organizing to be more integrated, strategic, and robust. Along with the new database, we've adopted some new communications tools; you may have noticed receiving text messages and voice-mails from LSP over the past few months. It's more important than ever to be able to

connect with people and traditional mail and e-mail aren't always the best way to reach folks. Using telephone communication, text messaging, and voicemails helps us to let you know when we're having an event that you might be interested in, when your membership is due to renew, or if there is urgent action needed at the Capitol.

As we're finishing the final stages of the database migration and learning these new systems, we ask for your patience and your feedback. If you notice your mail or e-mails aren't coming through like they did before, if your membership status seems wrong or your contact preferences changed, let us know. Simply call or shoot us an e-mail and we'll get your record all set.

Join, Renew or Contribute

Now is the time to invest in making transformational change. As we live through anxious times involving a pandemic, economic uncertainty, wars overseas, and increased political divisions, finding opportunities to engage in change-making can feel daunting

and at times overwhelming.

Being a member of LSP is a meaningful way to invest in your community and create change from the ground up for a farm and food system that cares for people and the land. I encourage you to join, renew, or contribute a special gift before the end of our fiscal year on June 30. If you're not already a member, consider joining. If you are a member, thank you! Your financial support as a member means a lot and is a form of direct action. Membership dollars allow LSP to take action when and where it's needed most. Use the envelope in this *Land Stewardship Letter* to send in a contribution of \$35, \$50, \$100, or another amount that works for you!

Time is also a valuable contribution. If you are looking for volunteer opportunities, we have projects related to data, mailings, telephoning, and upcoming 40th Anniversary events. Visit landstewardshipproject.org/volunteer to get signed up for our monthly volunteer digest. ☐

LSP advancement director Megan Smith can be contacted at 612-400-6342 or megans@landstewardshipproject.org.

Membership Questions?

If you have questions about your Land Stewardship Project membership, contact LSP's membership coordinator, Clara Sanders, at 612-400-6340 or csanders@landstewardshipproject.org. To renew, mail in the envelope included in this *Land Stewardship Letter*, or see landstewardshipproject.org/join.

Has Your Address Changed?

Has your address changed or do you anticipate moving in the next few months? Take a moment to update your address with LSP so that you can continue receiving the *Land Stewardship Letter*, event invitations, and other updates. To update your address, see landstewardshipproject.org/address. Make sure you use the same e-mail address you have on file with LSP so your data updates correctly.

In Memory & in Honor...

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

In Memory of Gordan Bakker & Jamie Labat

- ◆ Keith Vanoverbek

In Memory of Richard Kreutter

- ◆ Richard & Karen Ahrens

In Memory of Lorraine Redig

- ◆ Barb & Martin Nelson
- ◆ Gayle Goetzman-Stolpa
- ◆ Ken McCullough & Lynn Nankivil
- ◆ Mary & Ronald Cross
- ◆ Joan Redig & Wayne Purtzer
- ◆ Jeanne & Steven Tanamachi

- ◆ Arlene & Laverne Nelson

- ◆ Jane Redig

- ◆ Robert & Kathy Redig

- ◆ Winona County Old Settlers Association

- ◆ Cherie Hales

- ◆ Doug Nopar

In Honor of Mike McMahon's Return to LSP

- ◆ Lisa Whelan

In Honor of the 2022 Jubilarians of the School Sisters of Notre Dame Campus in Mankato

- ◆ Sister Kathleen Mary Kiemen

To donate to LSP in the name of someone, contact Clara Sanders at 612-400-6340 or csanders@landstewardshipproject.org. Donations can be made online at landstewardshipproject.org/join.



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Stewardship Calendar

→ **SUMMER-FALL — LSP 40th Anniversary Regional Bonfires**, various locations. Contact: landstewardshipproject.org/40th-anniversary-events
 → **JUNE — LSP Johnson-Su On-Farm Construction Events** (various dates; see page 27 for details on volunteering)
 → **JUNE-OCT. — Land Stewardship Action Fund Deep Canvass Trainings** (various dates; see page 15)
 → **JUNE 28 — LSP Virtual Policy Organizing Meeting**, Zoom online. Contact: landstewardshipproject.org/upcoming-events, Amanda Koehler, akoehler@landstewardshipproject.org, 612-400-6355
 → **JULY 26 — LSP Virtual Policy Organizing Meeting** (see June 28)

→ **JULY 28 — LSP 40th Anniversary Block Party & Picnic**, 6 p.m., LSP Twin Cities office. Contact: landstewardshipproject.org/40th-anniversary-events, Elizabeth Makarewicz, emakarewicz@landstewardshipproject.org, 612-400-6354
 → **AUG. 1 — Deadline to Submit LSP 40th Anniversary Stories** (see sidebar below)
 → **AUG. 1 — Early Bird Discount Application Deadline for LSP's 2022-2023 Farm Beginnings Course** (see page 16)
 → **AUG. 23 — LSP Virtual Policy Organizing Meeting** (see June 28)
 → **AUG. 26 — Johnson-Su Composter Field Day with Hui-Chun Su & David Johnson**, Lewiston, Minn. (see page 27)
 → **SEPT. 1 — Application Deadline for LSP's 2022-2023 Farm Beginnings Course** (see page 16)
 → **SEPT. 23 — LSP 40th Anniversary Square**

Latest LSP Events: [landstewardshipproject.org/ upcoming-events](http://landstewardshipproject.org/upcoming-events)

Dance, 6 p.m., Seeds Farm, Northfield, Minn. Contact: landstewardshipproject.org/40th-anniversary-events, Elizabeth Makarewicz, emakarewicz@landstewardshipproject.org, 612-400-6354
 → **SEPT. 27 — LSP Virtual Policy Organizing Meeting** (see June 28)
 → **NOV. 12-13 — Minnesota Emerging Farmers Conference**, Shoreview, Minn. Contact: emergingfarmers.org, 651-433-3676, mpenasutti@thefoodgroupmn.org
 → **DEC. 7 — LSP 40th Presentation by Robin Wall Kimmerer, author of *Braiding Sweetgrass***. Contact: landstewardshipproject.org/40th-anniversary-events

Celebrating 40 Years of Keeping the Land & People Together

Tell Us an LSP Story for Our Anniversary

The Land Stewardship Project turned 40 in 2022, and throughout our history we have centered our work around giving voice to the people who are passionate about farming, food, land, and rural communities, as well as social and economic justice. So as a fitting tribute to our focus on telling the stories that matter, we're inviting you to share an LSP remembrance. Simply click on the **start recording** tab at landstewardshipproject.org/stewardshipstories and use the microphone on your telephone or computer to tell us a brief (under five minutes) story about an experience you've had related to LSP. We ask that you include these basic bits of information in your recording: your name, where you live, and roughly how long you've been an LSP member. If you prefer to write down your story, send it directly to Brian DeVore at bdevore@landstewardshipproject.org. Also, if you know of another LSP member who has a good story to tell, let DeVore know.

Maybe your inspiration for sharing a tale is an energizing organizing meeting, an insightful field day, or a workshop that blew your mind. Or maybe it was simply a conversation you had with another LSP member. As part of our 2022 anniversary year celebration, we will transcribe some of these stories and include them in a special commemorative publication. Before we use yours, we'll ask permission, of course. We would like to collect these stories by **August 1, 2022**.

40th Anniversary Events

We will be organizing a series of fun Land Stewardship Project anniversary events this summer and fall. For details on the latest ones we have scheduled, see landstewardshipproject.org/40th-anniversary-events.

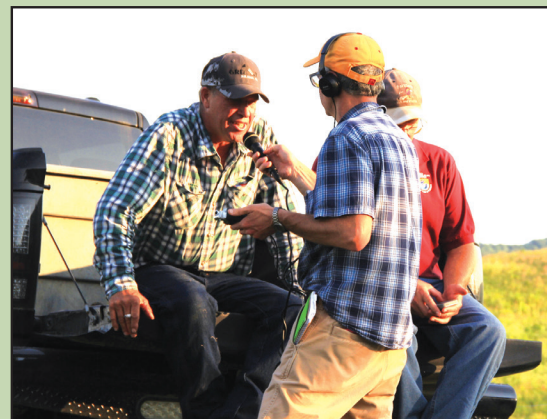


Photo by Rebecca Wasserman-Olin