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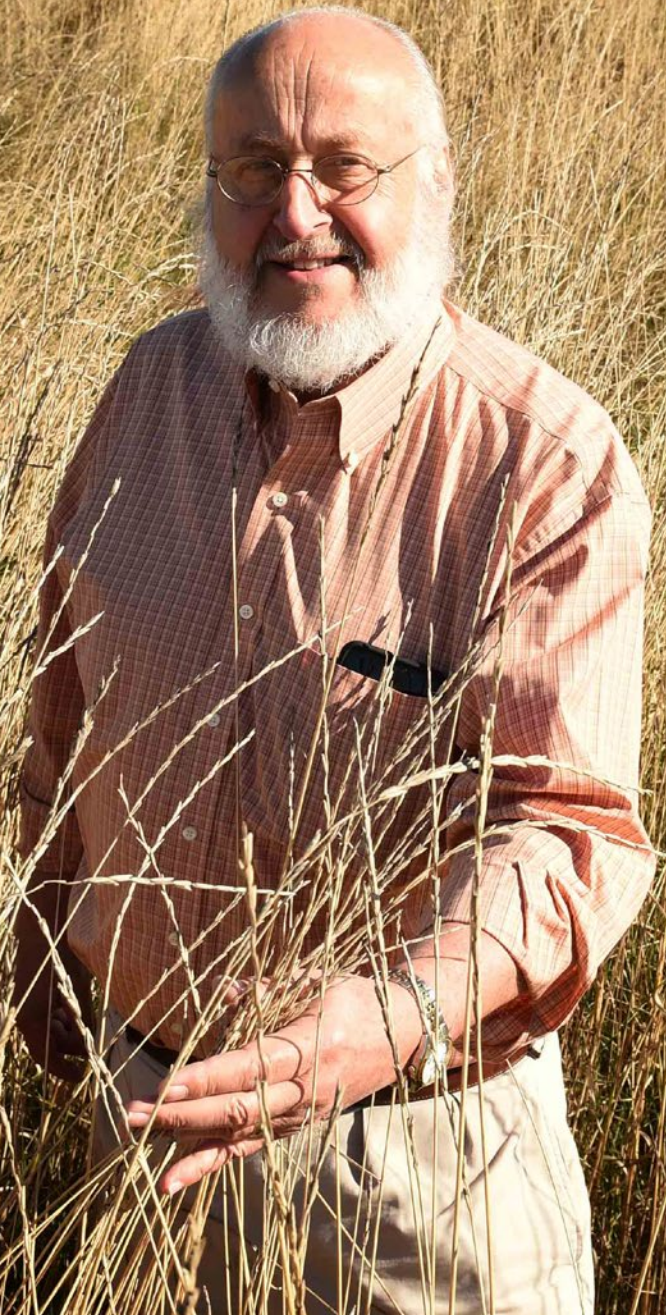
The Germinator

WINTER 2020 • VOL. 41 NO. 1

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Cover photo




Don Wyse, a professor of agronomy and plant genetics at the University of Minnesota, stands in a field of Kernza on the school's St. Paul campus Thursday Oct. 1, 2015. Kernza, a perennial grass that his program has helped develop, could one day outperform wheat both environmentally and economically. See the story on page 14. Scott Takushi / Pioneer Press photo – reprinted with permission



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Mission Statement

Northern Plains Sustainable Agriculture Society
promotes sustainable food systems
through education, advocacy, and research.

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NPSAS occasionally includes guest articles and opinions. The opinions in these articles may not reflect the opinions or policy of the Northern Plains Sustainable Agriculture Society or its Board of Directors.



Behind-the-scenes work continues to build NPSAS

As another year ends and we begin to prepare for the new year, it's important to take time to reflect on and appreciate the positive things in our lives.

It is too easy to be burdened with the challenges, stresses, and the negative “noise” that can consume our attention if we let it. Here at NPSAS, we choose instead to focus on the good work being done by board and staff on behalf of the members. As I mentioned in the last *Germinator*, all of us continue to work hard to rebuild a solid foundation upon which a thriving NPSAS depends. Many of our biggest tasks have either been completed or are very near completion. A few are still in progress. Here is a big picture list of some of the most recent work being done to move the organization forward:

- We have changed the fiscal year from a calendar year to September 1 – August 31. This change will improve how we capture and report on the NPSAS's financial activities.
- The accountants are working hard to bring a financial review of FY2018 and an audit for the first 8 months of the newly adopted fiscal year, January 1 – August 31, 2019, to a close. Both reports should be complete by the annual meeting.
- Two vacated board seats have been filled by Randy Nelson and Kalie Rider. Randy

brings his connections to agricultural extension networks, and Kalie brings her ranching background and nutrition expertise to our leadership team. You can read more about them on page 7.

- Members will have received a draft of the newly revised bylaws for comment by now. A final version will be on the ballot for member approval at the annual meeting. We believe these updates, like the other work noted above, will position NPSAS to serve our members effectively and into the future.

Although these kinds of tasks are necessary and time-consuming, they are not very exciting to report on. But I hope you agree with me that solid foundation work is crucial to any organization that wants to move forward with confidence and credibility. As we approach 2020, the entire NPSAS board and staff looks forward to a new year filled with opportunities to work together to build a future for sustainable agriculture.

On behalf the NPSAS Board of Directors, we wish our members a hope-filled and happy new year.

We look forward to seeing everyone at the annual meeting. 🐾

Accountability

What will we say to our progeny when they call on us to account for what we have passed on to them? How can they survive, let alone prosper in a world polluted, and exploited of resources, many of which were used for frivolous junk or meaningless consumption? How will we explain that our conveniences, thrills and egos are more important than their well-being? What will we say when they scream at us, saying that we have waged war on them by our actions and our failure to act responsibly? How dare we charge our extravagances to the future generations!

— Terry C. Jacobson

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Terry C. Jacobson

Winter: A time for connections, conversation

During this week's hushed stillness of winter cold, we are excited for both the upcoming time with family and friends and the warmth rekindled in our hearts during this season.

In Native communities, certain stories can only be told when snow is on the ground. Humans have responded to this cycle of cold and darkness through the ages with activities that welcome the return of light in the new year. With our individual religious and family traditions, we nurture the inner light that restores and prepares us for the days ahead.

Since I became involved with NPSAS, one overwhelming impression of this organization has been the community bonds developed among members. In my experience as a CSA farmer for 25 years, I know that communities, like marriages, need tending. You can't expect the commitments made in years past to automatically continue without touching back in again to shared values and "taking time" to listen to what is on the other's heart and mind.

This year's winter conference is preceded by a film that reveals an aspect of the history I was not aware of. David Vetter was a student of Fred Kirschenmann, and their meeting influenced his choice to become an organic/sustainable farmer. I am delighted to have crossed paths with Fred at a conference this fall and excited that, weather permitting, he will join us on Saturday for the conference.

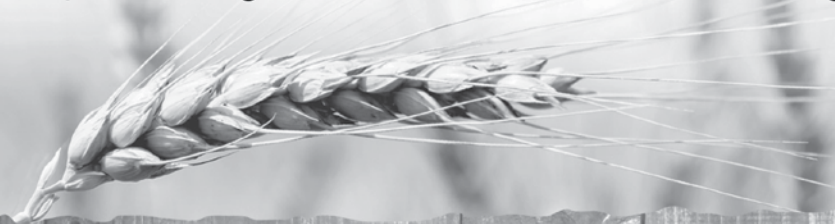
It is important for communities to remember their history.

Several elements in this year's conference that create a space for conversations. Recognizing that not everyone will be able to come to Aberdeen or Fargo, we encourage members to host a "watch the film party" potluck. We are happy to pay the cost of the film rental and reduce the conference fee by \$25 for party hosts. Secondly, the agenda for the annual meeting includes a "listening session" with board members after an update on current and future activities. One of the workshops with Didi Pershouse, entitled "Developing Communities of Practice," provides skills and ideas for reaching out for support and will strengthen one historical element of NPSAS, that of building a network for sharing farming knowledge and skills. And finally, we have reserved the Club Room at the Holiday Inn, across the hall from the coffee shop, as "Community Cafe" where you can find a more quiet spot to share a cup of coffee and visit or convene a small group conversation.

I hope you will take time for well deserved rest over the coming days and look forward to seeing you in Fargo in the New Year! ☺

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Summary of NPSAS board meetings

October 10, 2019:

- *Germinator*: Board members held a robust discussion about the Germinator the included striking the right balance between advertising and text. Staff will do some research on the history of this balance to better inform the discussion to include analysis of costs, reach, etc. The board has taken the recent delays seriously and wants to make clear that every effort will be made to avoid a similar delay in the future. Board members are asked to send potential new advertiser prospects to Verna or Heidi.
- *Grant Funding and FBC*: Verna is on track with the submission of a SARE grant. The proposal is designed to facilitate the refreshing of FBC activity and membership. She is working with interested FBC members who similarly want to see the research work continue to be facilitated and supported. This initial request is a request to submit a full proposal for funding that would be made available in November 2020. Verna is also working on identifying other funding sources with shorter time frames so that the rejuvenation of FBC work can begin as soon as possible.
- We currently use a ND address as the official address of NPSAS but we need to be attentive to creating the organizational infrastructure needed that allows us to serve our multi-state members and not be hampered from supporting NPSAS mission because of state lines and certain grant funding limitations.
- *Mission-driven activity*: A wide-ranging discussion considered the many ways there are to accomplish the mission-driven work of NPSAS. This discussion led to a larger consideration about what members want NPSAS to be in the future. We agreed to have more discussion on the strategic planning needed by NPSAS and will consider ways to engage members at the winter conference in this work.
- Board members discussed how best to liquidate assets in storage, including Dylan, Mida, TM23, etc.

A discussion with FBC members about their interest in this inventory is the next step to making a decision.

- Fundraising is ongoing and continues to be a high priority before the end of 2019.
- Kayla explained the challenge inherent in creating a historical overview of income/expense from 2008-18. Curt encouraged her to make a “reasonable” effort to identify some historical trends that would be helpful in planning for the future of NPSAS.
- Nominations: The discussion included filling board of director positions up for rotation at the 2020 annual meeting. The board aims to recruit younger farmers and mentoring them to be part of the leadership team.
- *Bylaws*: Routine updates are needed, and Gretchen is working on suggested revisions that she will send out to board members prior to the November board meeting. **A motion was made and approved to accomplish bylaws updates by mail prior to the annual meeting so that every member’s input matters as we know it will take time to read through the changes.** Board members should get a view of the supporting information and letter that goes along with the mailing.

November 14, 2019:

- The Finance Committee and the accountant recommend the following:
 - Modify the current contract for an audit and complete a review for FY2018 for lack of adequate records/information.
 - Change the fiscal year from the calendar year to September 1 to August 31, effective in 2019 for purposes of accounting and record keeping.
 - Conduct an audit of and submit a 990 for the first 8 months of the 2019 calendar year as an important step of realignment with the newly adopted fiscal year.
- **A motion was made and approved to follow recommendation of the CPA to modify the audit contract**

to a review contract for FY 2018.

- **A motion was made and approved to change the fiscal year to September 1-August 31 effective 2019.**
- **A motion was made and approved to contract for an audit of and file a 990 for the period of January – August 31, 2019.**
- Discussion followed about preparing the next budget, developing a financial presentation for the annual meeting, responding to and developing interest among granting institutions that support NPSAS, and assessing income and expenses for winter conference 2020.
- The Board discussed nominations for election to the board of directors, as well as filling current vacancies by appointment as authorized by current bylaws. Randy Nelson, an Extension Educator in home horticulture and agricultural production systems with University of Minnesota Extension, was nominated to fulfill one of the vacant terms that ends in 2022.
- **A motion was made and approved to appoint Randy Nelson to fill a vacated term on the Board of Directors ending at the annual meeting in 2022.**
- Verna introduced Ron McFall (an attorney) who provided the Board with an overview of his work history and the types of work he has done in support of farmers, producer and value-added cooperatives, and in the field of agriculture generally. The larger purpose of inviting him to the meeting today was to have him explain the premise behind a new project/tool/structure he has helped design called Farmland Conservation Partners. FCP is a model designed to fill a current and pressing need in farm country, i.e., one that supports the retention and stewardship of farmland generally, but also preserve opportunities for beginning farmers in the face of ever increasing consolidation. It is understood that although FSA programs are trying to address these realities too, more needs to be done to steward farmland transfers during a time when transferring ownership of land will occur at a rapid pace.



- The presentation was followed by an extensive question-and-answer period and a request to Ron to consider offering a presentation about FCP for members at the winter conference, 2020. The consensus of the Board at this time is to continue exploring the development of a relationship between NPSAS and FCP and as it fits into the current mission and programming of NPSAS.
- The board discussed the ongoing planning for the January conference & Annual Meeting. Feedback on the presentation via email should be sent to Curt.
- Gretchen offered a brief summary of the work she has been doing to update and review the organization's bylaws. She sent a recent draft to Board members and requests feedback over the next two weeks. The next step will be to approve the changes and then open up a comment period for the Membership. The new bylaws will require approval by the membership at the annual meeting in 2020.

Meet new NPSAS board members

Kalie Rider is a dietitian and has a master's in food systems and



sustainable agriculture. She is passionate about food as it relates to the land and is a complete nerd when it comes to how food nourishes the body. She is a mentor for the North Dakota Grazing Lands Coalition, and so she provides nutrition experience to ranchers regarding the nutritional benefits of pastured animals. She lives in Alexander, N.D.

Randy Nelson is Extension Educator for Clay County for the Univer-



sity of Minnesota Extension. His focus is on horticulture, and he works through a variety of media to address the public's questions about horticultural issues. He lives in Moorhead, Minnesota.

The full text of the minutes from past NPSAS board meetings can be found at <https://www.npsas.org/about-us/board-meeting-minutes/>.

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Make your conference-going packing list

The preliminary 2020 Food and Farming Conference program with details regarding registration, hotel, and pre-film and pre-conference workshops was mailed last month. More details are included in this *Germinator* issue and updated regularly at foodfarmingwinter2020.sched.com.

I was delighted as I reviewed the film “Dreaming of a Vetter World” to see how nicely it points historically to Northern Plains history as well in that David Vetter introduced Fred Kirschenmann to organic agriculture! We are expanding the film showing to Aberdeen’s Capitol Theatre and encouraging “watch parties” and potlucks throughout the region. Since the actual NPSAS incorporation date was in March, 40 years ago, this conference helps us conclude our 40th anniversary year!

The registration table will open at 9 a.m. Thursday and 7:30 a.m. Friday and Saturday. Thursday’s pre-conference workshops start at 10 and 11 a.m. Lunch is provided for the full-day Legally Resilient Farm workshop.

Taste of Agri-Culture features a mini farmers market as well as “nibbles and sips” of local and regional products and Holiday Inn hors d’oeuvres buffet. Local brew and cider will be available again

with cash bars through the weekend.

PACKING NOTE #1: Bring swimsuits for children to enjoy the free pool party that coincides adjacently. Thanks to generous support from Ceres Trust for covering the pool party and conference registration costs for children. Large double doors directly connect the pool and Taste of Ag event. You can bring food to the pool area, perhaps sharing life-guarding duties with friends to also trade around adult mingling through the event.

PACKING NOTE #2: We have two rooms for children’s activities this year, with one of those set up for play for younger children and the other a space for older children’s programming. The children’s room will be staffed by a student from MSUM and supported by a rotation of volunteers.

PACKING NOTE #3: During the Taste of Ag, we will have an “ice-breaker activity” that encourages you to network and meet other people with a prize drawing for participants.

PACKING NOTE #4: For those using phone apps, keeping track of conference schedule and communicating with friends during the conference this year is aided by the

use of a program that you can access at foodfarmingwinter2020.sched.com.

PACKING NOTE #5: We are trying out a variety of ways to gather you feedback on the conference. Look for post-it-notes in your conference packet to give us feedback each day on posters in the Main Dining area and hallways. We have a post-conference evaluation form with a tear off to put into the drawing. That way we can have anonymous feedback and still provide you with a chance for a 2021 conference registration as a reward.

PACKING NOTE #6: Bring your instruments and join us for the performance by children and a pick up musical jam session on the last evening.

PACKING NOTE #7: Bring products you would like to be included in the mini-farmers market at the registration table all conference long. Honey, homemade soaps, flour, etc. 25% of the proceeds will go to support NPSAS scholarships.

PACKING NOTE #8: Have a gift or service you’d like to donate to the Silent Auction? Bring it along! Please give us a call at 218-331-4099 so we can include it! 🐾

— Verna Kragnes

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Food & Farming Conference Schedule

SATURDAY, JANUARY 11

1:30 p.m. Screening of the film “Dreaming of a Vetter World,” *Capitol Theater in Aberdeen, S.D.*

SUNDAY, JANUARY 12

2:00 p.m. Screening of the film “Dreaming of a Vetter World,” *The Fargo Theatre, Fargo, N.D.*

THURSDAY, JANUARY 23

9 a.m. Registration opens
 Noon – 7:00 p.m. Exhibitor check-in
 10:00 a.m. – 5:00 p.m. **Cultivating Your Legally Resilient Farm** by Rachel Armstrong, Farm Commons
 11:00 a.m. – 4:00 p.m. **A Healthy Soil Sponge: Essential for All Life on Land** by Didi Pershouse
 5:00 p.m. – 7:00 p.m. **Taste of Agri-CULTURE social hour with appetizers and cash bar**, *Great Hall, Holiday Inn; pool party for children, Holiday Inn Pool*

FRIDAY, JANUARY 24

7:00 a.m.–8:00 a.m. Breakfast Buffet
 Registration and exhibits open
 8:00 a.m. Welcome and Awards Ceremony
 8:30 a.m. – 10:00 a.m. **KEYNOTE: Hold Hope Close, but Know It Is Not a Strategy** by Gary Matteson, Senior Vice President, Beginning Farmer Programs and Outreach at Farm Credit Council
 10:00 a.m. – 10:30 a.m. Break / Exhibits
 10:30 a.m. – 11:30 a.m. **WORKSHOP SESSION 1:**
Dicamba Conversation: Exploring What’s Needed to Support Organic Farmers by Willa Childress, John Fagan, and Ryan Schmid
Farming Practices to Support Pollinators and Beneficial Insects by Karin Jokela
☞ Oats Variety Trial and Stress Management by Melanie Caffé-Trembl and Meg Moynihan
Regional Climate Considerations for Seed Production by Koby Hagen
Stress: How to Know If It Is Affecting Me and Easy Techniques to Deal With It by Maggie Peterson
 11:30 a.m. – 1:30 p.m. Lunch Buffet
 1:30 p.m. – 2:00 p.m. Break / Exhibits
 2:00 p.m. – 3:00 p.m. **WORKSHOP SESSION 2:**
☞ Cover Crops in Established Vegetables and Across the Northern Plains by Dana Jokela and Abbey Wick
Dig into Data: Who Is on Your Side of the Desk by Cheryl Landsem
Growing Food & Environmental Health: Current Projects at Blue Dasher Farm by Ryan Schmid
Organic Agriculture Research at NDSU by Jesse Puka-Beals and Greta Gamig
Should Farmers Be Paid as Contractors for Regrowing Healthy Topsoil? by Didi Pershouse
 3:00 p.m. – 4:00 p.m. Break / Exhibits
 4:00 p.m. – 5:30 p.m. **WORKSHOP SESSION 3:**
Glyphosate Update: Science, Legal Developments and Market Impacts by John Fagan
Growing Cash Flow by Gary Matteson
☞ Livestock as a Soil Health Partner by Erin & Drew Gauler, Douglas Landblom, and Mike Ostlie
Solar Energy on the Farm by Charlie Ricketts
Weed Control in Organic Systems by Charlie Johnson and Mark Askegaard
 5:30 p.m. Cash Bar
 6:00 p.m. – 7:00 p.m. Banquet Dinner
 7:30 p.m. – 9:00 p.m. **Map of My Kingdom**, a play by Mary Swander, Iowa Poet Laureate

Food & Farming Conference Schedule



SATURDAY, JANUARY 25

7:00 a.m.–8:00 a.m.	Breakfast Buffet Registration and exhibits open
8:30 a.m. – 10:00 a.m.	KEYNOTE: Developing High-Efficiency and Regenerative Agricultural and Food Systems: A Forever Green Agriculture Initiative by Don Wyse, Professor and Co-Director of The Center Integrated Natural Resources & Agricultural Management, University of Minnesota
10:00 a.m. – 10:30 a.m.	Break / Exhibits
10:30 a.m. – 11:30 a.m.	WORKSHOP SESSION 1: Healing Generation RX: Supporting Our Young People Without Psychiatric Drugs by Didi Pershouse Farmland Transition Workshop by Mary Swander Marketing Grassfed Meat by Cindy Tolle FF SARE Grantwriting: What You Need to Know by Joan Benjamin and Beth Nelson Seed Sovereignty: Who Owns the Seeds of the World, Bio-Piracy, Genetic Engineering and Indigenous Peoples by Winona LaDuke
11:30 a.m. – 1:30 p.m.	Lunch Buffet
12:30 p.m. – 1:30 p.m.	NPSAS Annual Meeting
1:30 p.m. – 2:00 p.m.	Break / Exhibits
2:00 p.m. – 3:00 p.m.	WORKSHOP SESSION 2: FF Creative Ways to Improve Local Food Access in Rural Areas by Jacquelyn N. Zita and Ren Olive Faith, Farms and Climate: Finding the Values in Farmer-Led Climate Action by Matt Russell Improved Agroecology Using Perennial Grains by Brian Smart What's Trending with Deep Winter Greenhouses? by Carol Ford Panel: New Models to Support Beginning Farmers by Ron McFall
3:00 p.m. – 4:00 p.m.	Break / Exhibits (Vendors take down exhibits at 4:30 p.m.)
4:00 p.m. – 5:30 p.m.	WORKSHOP SESSION 3: Creating Trusted “Communities of Practice”: Ongoing Learning Groups that Support Innovation in Farming and Ranching by Didi Pershouse Hemp Panel: A Growing Industry by Winona LaDuke, Mike Ostlie, and representatives from 1881 Extractions and Legacy Hemp Regenerative Ag: Meeting Challenges by Don Wyse, Fred Kirschenmann, and Ryan Schmid FF Unusual Crops: Kernza, Hops and Quinoa by Glendon Philbrick, Von Hines, and Jacob Jungers
5:30 p.m.	Cash Bar
6:00 p.m. – 7:00 p.m.	Dinner, Children's Music & Entertainment

SUNDAY, JANUARY 26

7:00 a.m.–8:30 a.m.	Breakfast
9:00 a.m. – 11:00 a.m.	Discussion/Action Planning: Role of Faith Communities in Climate Change by Matt Russell, Iowa Interfaith Power and Light

FF = Farmers Forum, a program of North Central Region – Sustainable Agriculture Research and Education

**SAVE THE DATE NOW for the 2021
Food & Farming Conference, Jan. 21-24, 2021!**

Better farm beginnings

Speaker encourages farmers both young and old to think strategically for long-term sustainability

Want to farm? You're going to need a plan.

Part of Gary Matteson's job is helping farmers make those plans for success and sustainability. He does that through his role as Vice President for Young, Beginning, Small Farmer Programs and Outreach at the Farm Credit Council, the national trade organization for Farm Credit.

His keynote during the Food & Farming Conference will focus on the importance of thinking strategically long-term, especially because the daily needs of farming can narrow one's perspective.

"It's easy to forget about long-term sustainability when you are trying to make the numbers work for this year," Matteson said. "Farmers getting together and talking about it helps them widen that perspective—as well as) having someone, like me, speak to a group of farmers and say, 'You know what? It's OK that you're uncertain of your future. Let's talk about how can you cut it into smaller pieces, and take on one small problem at a time instead of being overwhelmed by the sum total of all the problems.'"

Investing in farm beginners

Matteson works to help beginning farmers in a variety of ways, including talking to other stakeholders about how they can support beginning farmers. One idea he's excited about is equity investment for beginning farmers: The farmers would essentially sell a bond to the equity provider, a five-year note, that would provide some equity on the farmer's balance sheet.

"Then normal lending can follow that equity," Matteson said. "Right now I'm in conversations with some large food manufacturers that are interested in helping their farmers convert to regenerative agriculture practices, and this equity investment idea is something that they are very interested in, so we're trying to figure out how to make it happen."

Farm Credit would serve as an intermediary in that transaction, as a neutral party that can help determine whether such an investment should be made.

"It's awfully hard for somebody who isn't a farm lender to look at a farm business and say, 'Is this farm business healthy enough to be economically sustainable so that it can implement sustainable ag practices?'"

"It's not a good idea to just give money to people who want it. Everybody wants it. But providing a loan or equity investment to a farm business that can't effectively use it and pay it back is making somebody worse off than they were before," Matteson said. "And that, of course, is not the point. The point is to accomplish some expansion of the capability of the acres that are farmed with regenerative practices."

Trends for beginning farmers



Gary Matteson

Getting into farming is still just as hard as it ever was—that's nothing new. But Matteson sees some positive recent developments for beginning farmers.

First, more tools are available to inform their decisions—particularly tools for planning, such as those for doing "what-if" cash-flow scenarios. This helps farmers understand the risks they are taking. "It doesn't necessarily reduce the actual risk, but good planning increases the possibility of succeeding," Matteson said.

New farmers have many sources of technical assistance in agriculture, from Cooperative Extension offices to gatherings such as the Food & Farming Conference. Matteson sees beginning farmers also forming their own informal advisory boards—a group of people who can give feedback on the farmer's ideas.

"For beginning farmers, the willingness to talk about what they are doing, share their numbers, and ask other people to help them analyze, I think represents a generational difference that will allow this generation of beginning farmers to find the information they need to be successful," Matteson said.

This tendency becomes a habit in their social media lives, where young people are often more comfortable sharing information than older generations.

"And in terms of succeeding in business, it's a darn good habit," Matteson said. "If you can talk about your mistakes as enthusiastically as you can talk about your successes, then you're going to learn a lot."



Looking for opportunities

This willingness to be open is a key trait in an entrepreneurial mindset, and Matteson says many more farmers are adopting that mindset. “If they take on those (entrepreneurial) skills when they’re young then they’re going to have a whole lot of opportunities, and their farm production business is likely to be just one of the 3 or 4 businesses that statistically they’re going to have over the course of their career.”

Those other businesses are not going to be in production agriculture, though they are often connected to it: Using grain trucks to haul freight or gravel in the off-season, for example, or turning the welding shop on the farm into a business.

Matteson says one strategy all farmers can consider is finding different marketing channels for the products the farm is already producing. So, for example, a young woman who returned from college to a beef operation might start marketing a portion of the beef to an urban market, or a grain producer could grow a crop with a sought-after characteristic such as high oleic acid. “It’s just looking for an entirely different market ... for essentially the same product,” he said.

This new way of thinking about opportunities often starts to snowball, Matteson said. “As an entrepreneur, once you start in that mindset, it’s really easy to keep seeing new opportunities in places where others are just not going to look.”

Opportunities for veterans

Matteson wears another hat as president of the board of directors of the Farmer Veteran Coalition, which helps veterans who want to become farmers after their military service. Veterans go through assessments to guide their decision-making, and they can apply for \$5,000 start-up grants.

The veterans become part of a community that offers “the kind of camaraderie, or at least a piece of it, of what they had while they were in the military, out here in civilian life,” Matteson said.

Many members of the military are from rural areas, and when they return, they want to find a way to become a part of rural communities again—bringing the dedication to mission that they had in the military to farm fields.

“(Connecting veterans with farming opportunities) is only going to help agriculture and all of our rural communities,” Matteson said. “We need them. And for a period of time, as they find their footing out in the civilian world, they need us.”

Ag to improve the landscape

Winter annual and perennial crops with benefits for farmers, communities, and the environment are coming online quickly

When farmers choose what to produce on their land today, there's often a tradeoff between what benefits a farmer's pocketbook and what benefits the environment and community. But what if farmers could choose crops that did all three?

That's the goal of the Forever Green Initiative at the University of Minnesota, which is part of a multi-state effort to develop the next generation of crops, according to Dr. Don Wyse, professor and co-director for The Center for Integrated Natural Resources & Agriculture Management and leader of the Forever Green Initiative.

These new crops and cropping systems are profitable for farmers and others in the supply chain, but they also provide services that benefit the environment, such as keeping water in place, recycling nutrients, providing wildlife habitat, and supporting beneficial insects.

"It's really designed to develop a new set of crops that can change the landscape but change the landscape with an economic pull," Wyse explained.

Instead of being summer annuals, like most of the crops typically being produced in the Midwest today (such as corn, soybeans, and wheat), these crops are winter annuals and perennials that keep the soil covered and protected from

erosion year-round. Twelve new crops are being developed, and four of them—perennial flax, camelina, hazelnut, and Kernza—are actually moving into commercialization already.



Don Wyse

You may have read stories about perennial agriculture before, especially about The Land Institute's work on it, and if so, you may remember that most of those stories described the great potential of perennial agriculture

but also included a note of caution about how long it would take to develop—perhaps 100 or 150 years.

Those aren't the projections anymore.

"It's going to move faster than that," Wyse said. "We just released the first variety of a perennial grain, and it's under commercial production and being moved into the marketplace."

That first variety is of Kernza, an intermediate wheat grass, and is called Minnesota Clearwater.

The first releases of Kernza, just like any new crop, won't be at a high yield level, but the yield will increase every year. "Our breeders

are projecting the yields will go up about 300 to 400 pounds per acre every breeding cycle," Wyse said, cautioning that this was a projection based on current rates of increase. Nevertheless, it's very promising: "In 15 years, we will be within 80 percent of spring wheat yields."

A new approach

This kind of crop development could not have happened until recently.

"Historically, the idea of domesticating 12 new crops was a joke," Wyse said. "But we now have the new tools—the genomic tools—to actually make great advances in the domestication of new crops."

Wyse gave an example of the previous pace of development: Canadians developed canola from rape seed over 24 years. "It took a long time to do it using classical breeding," he said. Scientists at the U of M have gone through a similar process with pennycress, which has the same type of oil complex as rape seed, but "because of genomics technology, we were able to domesticate it in seven years rather than 24 years."

They got a boost in that process because pennycress is a relative of Arabidopsis, which Wyse described as "the white mouse of plants"—much of the basic discovery of plants has been done with Arabidopsis. "So when we sequenced the genome of pennycress, we matched it up with Arabidopsis, and within three months, we knew all the key genes controlling all of the domestication traits in pennycress," Wyse said. "That's an example of the rapid progress that can be made in the



development of new crops. That opportunity never existed before.”

Wyse explained that this isn't genetic modification—it's using genetic tools to find natural mutations. He said genetic modification hasn't been needed for this work, since they have found enough naturally occurring genetic mutations to make the progress they want to make.

A history of perennial development

The pace of change might seem fast now, but it has roots in work that started decades ago. The idea for crops that served the environment as well as farmers got a big boost when people were thinking of developing biofuels, Wyse said, though the plan to create a polyculture using legumes, forbs and grasses together to produce biofuels didn't work. “There just wasn't enough economic carrying capacity to make it happen.”

But the 16 cropping systems that were under development then were then looked at to see what ecosystem services they could provide, which became the 12 under development today.

“It took time to get investment,” Wyse said. “Ideas don't get early investment. You have to have some real products before people are really willing to invest.”

The program now has a budget of about \$10 million a year, and 55 people at the U of M are involved in this program.

There is still a lot of work to be done—in part because they are developing cropping systems, not just crops. In addition to benefiting farmers and the environment, Wyse wants these crops to benefit the rural communities where they are grown.

“It's a new model for the agriculture and food system. We don't want it to become just a commodity,” Wyse said. “We want it to be focused on the development of new economic opportunities for rural communities rather than just growing a raw product and shipping it out with no value left in the communities.”

That means that in addition to developing the crops themselves, the Forever Green Initiative is working on developing the production, supply chain, and marketing systems around those crops.

And they are looking for partners—farmers or communities that want to be part of developing this new model. He's hoping to have conversations with some potential partners at the conference. 🐾



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Farmers who have received grants to research on their own farms will present their findings during Farmers Forum sessions

When a farmer has an idea—of a different crop to grow, for example, or how a process could be improved—what happens to it?

Often, the answer is unfortunately “nothing.” If there’s risk involved, or an investment of time or resources is required, ideas are often shelved for “someday” when there’s a little more room to experiment. And, in farming, that “someday” often never arrives.

A variety of grant programs through Sustainable Agriculture Research and Education (SARE) are intended to provide the leeway required to test out some of those ideas.

SARE, which is funded through the U.S. Department of Agriculture, has funded more than 7,100 projects since 1988. Those grants “advance agricultural innovation that promotes profitability, stewardship of the land, air and water, and quality of life for farmers, ranchers and their communities,” according to the SARE website.

“These grants help to remove risk,” according to Joan Benjamin, grant coordinator for the North Central Region of SARE. “You might learn how to do it better the next time. As long as you learn something, we consider these projects a success.”

Those grant-funded projects—whether they’ve found better ways to do things or found a method

that’s better off avoided—have produced a wealth of knowledge that could benefit farmers and ranchers in their own operations. One strategy for getting that information out into the world is the Farmers Forum, in which grant recipients share their learning during presentations at a conference. The Farmers Forum of the North Central Region of SARE is coming to the Food & Farming Conference in January. Conference goers will hear about the results of a dozen projects during workshop sessions.

SARE has partnered with NPSAS to have a Farmers Forum once before, but this one will be bigger.

The Farmers Forum was actually started more than a decade ago by the late Ron Macher, publisher of *Small Farmer Today* magazine, who saw the need to get the learning from SARE projects out to the public, according to Benjamin. Macher would bring 30 farmers to his trade show and conference in Missouri to present the results and lessons learned from their projects. This gathering was well-attended, and after a while the NCR-SARE staff considered how to make the experience available to more people. They started rotating the Farmers Forum to other conferences in their 12-state region.



“(We) hold it in association with an existing conference so we aren’t competing with a conference but actually helping to support an existing conference while giving the grant recipients an opportunity to share their information with other farmers, ranchers, researchers, and educators,” Benjamin said.

SARE works with conference organizers to select projects and presenters that will appeal to the audience that typically attends the conference, plus some topics that might appeal to new attendees.

“One thing that we’ve noticed, many years, is how people have such an interest in specific topics, and they will come to a conference specifically to hear from a farmer on a topic they are interested in,” Benjamin said. “We often have to ask people to move away from the speaker area (after a session), because they will have a crowd around them that can last anywhere from a half-hour to an hour or more. People want this very specific information on how to do this (work). Our grants are applied grants. They are very practical ... It’s not basic research, it’s applied types of projects, research as well as education.”

She’s seen many connections made through the Farmers Forum.

“We have heard from some people ... who have started working together, even people from other states, because they’ve found someone working in the same innovative idea they are,” Benjamin said. “There might not be someone else in their community who’s working on this, or anywhere close by, but they might be able to set up a relationship with someone in another state. They can compare notes and visit, and see how their project is going.”

Sometimes farmers also set up mentoring relationships between experienced farmers and those who are just starting out.

Benjamin said they don’t give guidelines on what kind of topics they are looking for; they’ve observed over the years that farmers are ahead of their thinking anyway. A variety of projects are in the works every year, but she has noticed some trends in those topics: In the early years, many projects focused on rotational grazing. A boom in high tunnel research followed. More recently, the focus has been on new crops such as elderberry and quinoa.

Farmers and ranchers who have an idea for a project that could benefit from SARE funding can start by going to www.northcentralsare.org and click on the tab labeled “Grants.” That describes SARE’s six grant programs and requirements for each. NCR-SARE staff will also have a workshop during the conference (10:30 a.m. Saturday) for potential grant applicants. 🐾

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Today, we need smart seeds

Indigenous seeds are better for our era of climate change, LaDuke says

Renowned activist and farmer Winona LaDuke has been to the NPSAS winter conference once before—"I crashed it, in Bismarck," she said.

She arrived with her niece, her son, and her son's best friend and soon realized they were the only people of color. "So it was really hard to crash, since you couldn't blend," she said with a laugh.

It might also be that she was recognizable in her own right: She is internationally known for her activism on many issues and was twice a vice presidential candidate with Ralph Nader for the Green Party.

That year, she was there to speak with Steve Zwinger and the Podolls about the corn seeds that they grew. She's happy to be attending again—this time with an invitation—to talk with a larger group about seeds.



Winona LaDuke

More specifically, the topic of one her workshops is seed sovereignty.

"I don't think seeds are owned. I think seeds belong to the Creator," LaDuke said. "And I think the enclosure of the commons and the enclosure of seed varieties by multinational corporations ... and the diminishment of agrobiodiversity is an egregious crime. My interest is in protecting and restoring indigenous seed varieties and rematriating them back to the songs and the ceremonies and the foods of all peoples — of our peoples, and then all peoples."

Indigenous seeds are intelligent in ways that GMO and hybrid seeds are not. "They have been adapted to micro-regions, and they are drought-resistant and frost-resistant. They are pre-petroleum, and they are post-petroleum," she said. "When you figure out the kind of seeds you want to grow in a time of climate change, you want agrobiodiversity, and you want adapted, resilient seeds."

She is interested in agriculture as part of a spiritual and cultural tradition. This is significantly different from the dominant American agricultural paradigm, which she describes as damaging and unsustainable: "It's essentially a scorched-Earth policy of agriculture," she said. "I'm interested in restorative agriculture. I'm interested in rebuilding soils and putting animals back on the land. And I'm interested in hemp."

LaDuke, who has had a permit to grow hemp from the state of Minnesota for four years, will also be on a panel discussing hemp at the conference. She is interested in the potential for hemp to change the economy in our region. "After all, the word canvas comes from cannabis," she said. Moving to a post-petroleum economy will require a lot of hemp to rebuild the materials economy in a new way.

She mentioned hemp activist Craig Lee, who was in a short documentary about hemp called "Misunderstood," produced by Patagonia. In the film, he said, "In (the 1920s) there was a war between the hydrocarbon-based society and the carbohydrate-based society—the agrarian-based."

"The carbohydrate economy was hemp," LaDuke said. "And the hydrocarbon economy was oil. And we chose wrong. ... I want to return to a carbohydrate economy. And I can't do it alone ... I think our region could do something cool, and I want to be there." 🌱



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SATURDAY, JANUARY 11

1:30 p.m.

Screening of the film “Dreaming of a Vetter World”

Capitol Cinema in Aberdeen, S.D.

The film features the self-sustaining, self-renewing farm-management experiment Donald and David Vetter created in the 1970s. As the Vetters try to stay one step ahead of changing weather patterns, market fluctuations, and ever-increasing pesticide use around them, they work to regenerate soil through organic methods.

SUNDAY, JANUARY 12

2:00 p.m.

Screening of the film “Dreaming of a Vetter World”

Fargo Theatre, Fargo, N.D.

See description above.

THURSDAY, JANUARY 23

PRE-CONFERENCE WORKSHOPS:

10:00 a.m. – 5:00 p.m.

Cultivating Your Legally Resilient Farm: Farm Law 101

Rachel Armstrong

Developing a strong, legally resilient farm business is easier than you think. Farm Commons' collaborative, easily accessible approach to learning farm law is perfect for innovative direct-to-consumer and sustainable farmers.

11:00 a.m. – 4:00 p.m.

A Healthy Soil Sponge: Essential for All Life on Land

Didi Pershouse

Didi Pershouse will engage participants in deep discussions about the soil sponge's central role in the soil-plant-animal-atmosphere continuum; how all life on land participates in the creation of the soil sponge; and how we can help create the conditions for it to naturally regenerate.

FRIDAY, JANUARY 24

8:30 a.m.

KEYNOTE: Hold Hope Close, but Know It's Not a Strategy

Gary Matteson

Children's Conference Schedule

Friday, 2 p.m.

River Crime Lab

Riverkeepers will lead a group of detectives to solve the crime of trash in the Red River. Ages 8+

Saturday, 2 p.m.

Soil Health

Get soily with the South Dakota Soil Health Coalition. Soil scientists will lead activities from their Soil Health Buckets. Ages 8+

Friday & Saturday, 4:30 p.m.

Music practice with Noelle Harden for Saturday night's performance. All ages

10:30 a.m.

Dicamba Conversation: Exploring What's Needed to Support Organic Farmers

John Fagan and Ryan Schmid

Join John Fagan, Pesticide Action Network expert on relationships between agricultural practices and the levels of nutrients and agrotoxins in crop, and Ryan Schmid of Blue Dasher Farm to discuss emerging issues with dicamba. Share what you've witnessed in your area or how it's impacted your operation.

Farming Practices to Support Pollinators and Beneficial Insects

Karin Jokela

Beneficial insects provide crucial pollination and pest control services in farming systems. This session will explore the use of conservation practices that attract and sustain beneficials, such as insectary strips, cover crops, beetle banks, wildflower meadows, and hedgerows. We will provide an overview of design and installation considerations—including site preparation and pesticide drift protection, as well as insight on how to access USDA financial and technical assistance to achieve your conservation goals.

ff Oats Variety Trial and Stress Management

Oat Variety Trial: Increasing Profitability for Organic Producers in the North Central Region
Melanie Caffe-Treml and Meg Moynihan
Choosing the right oat variety can have a

major impact on revenue per acre as it affects both the productivity and marketability of the grain produced. Because chemicals are not used to control weeds and pests in organic farming, the choice of variety constitutes an even more important decision than for conventional farming systems. Although oat variety recommendations are available for conventional management systems, very limited information on variety performance under organic production systems is available. The results of oat variety trials performed at organic farms in three states during two growing seasons will be presented.

Trying Times: Tools to Understand and Alleviate Farm Stress

Maggie Peterson

Stress factors are on the rise for all kinds of farmers who face financial instability, price and marketing uncertainties, farm transfer issues, production challenges, and more. You, or people you care about, might be struggling with stress, anxiety, fear, depression, burnout, feelings of indecision, or suicidal thoughts. In this session, we'll acknowledge the manifestations of farm stress and explore an NCR-SARE-funded project that focuses on navigating conflict and difficult situations, supporting farm youth in stress, and preventing suicide.

Regional Climate Considerations for Seed Production

Koby Hagen

Shifting climatic patterns will continue to have profound effects on our communities and agricultural production, including seed production. This workshop takes a summary look at climate trends and projections, and their effects on pollination and seed set of various vegetable crops in the Upper Midwest. How can we respond, as researchers, breeders and farmers, in a way that effectively mitigates climate extremes while reducing emissions? We will briefly review thematic recommendations on which we can all move forward together and jump into a Q&A period.

Stress: How to Know If It's Affecting Me and Easy Techniques to Help Deal with It

Maggie Peterson

Stress—we all know we have it. But what is it really doing to your body? Do you know the signs? Do you know what can be done about it? In this session you will learn practical, easy ways of affecting your body's ability to manage stress.



Workshop Descriptions

2:00 p.m.

FF Cover Crops: In Established Vegetables and Across the Northern Plains

Dana Jokela and Abby Wick

Growing a long-season crop like peppers in a short, Upper Midwest growing season means that often harvest isn't over by the time we would normally seed a cover crop. We will discuss our 2019 field trial using interseeded cover crops in a bell pepper production system. We will cover the practices used to establish and maintain the cover crops; effects of the timing of cover crop establishment on pepper yield, soil temperature and moisture, cover crop biomass, and soil health; and practical take-homes from the crop management perspective.

Working alongside farmers in soil health, Dr. Abbey Wick, Assistant Professor, Extension Soil Health Specialist, will share her research on adaptation of cover crops to build soil health in the northern plains.

Dig into Data: "Who Is on Your Side of the Desk?"

Cheryl Landsem

Did you know there's a great deal of hidden data to be found in your financial statements that can help your farm run more successfully? As you continue to dig your fields each year, start digging into your data. Learn how the power of knowledge from a Complete Financial Analysis can help the bottom line of your operation and not just empower, but inspire you to make better decisions for the growth and success of your farm operation moving forward.

Growing Food and Environmental Health: Current Projects at Blue Dasher Farm

Ryan Schmid

At Blue Dasher Farm, we believe we can grow food to meet our population demands, while also conserving biodiversity and environmental health. Our mission is to provide research that can make innovative practices scalable and transferable to as many farmers as possible, leading to the redesign of agroecosystems to be more resilient and produce healthier food. Recent research themes conducted at Blue Dasher include how cattle grazing management affects dung beetles and cattle pests, the benefits of farming regeneratively for conserving natural resources and turning a profit, and studying the effects of ag products, e.g.,

neonicotinoids, glyphosate, and dicamba, on beneficial insects. The real power comes from our understanding of how these topics interact to produce a cascade of benefits within farming systems.

Organic Agriculture Research at NDSU

Jesse Puka-Beals and Greta Gramig

Dr. Greta Gramig will present results from organic agriculture research conducted by NDSU scientists. Topics include biodegradable mulches for organic vegetable production and cropping sequences for creeping perennial weed suppression. Group discussion will focus on collaboration ideas for future research projects. Farmer input is highly encouraged! Dr. Greta Gramig and her graduate student (Jesse Puka-Beals) will discuss the findings of a project that examined weed management tactics in organic vegetable production. The objectives of the study were to observe the crop and weed response to an integrated weed management plan that may be useful for small-scale vegetable growers. Discussion topics will include cover crops and hydromulching.

Should Farmers be Paid as Contractors for Regrowing Healthy Topsoil?

Didi Pershouse

Healthy soil provides many other benefits other than growing crops—clean water, public health, flood and drought protection, and more. A farmer who knows how to collaborate with other species to grow healthy soil is rebuilding essential infrastructure (the soil sponge) and providing services for the watershed and community around them. Can farmers be paid for that work? (Just as the highway department is paid for building and maintaining roads and bridges?) There is a movement afoot to pay farmers for ecosystem services. Didi Pershouse—who is working with farmers and policy leaders to write legislation on this—will explore the concepts of biological work, biological capital, ecosystem services, payment for those services, and various ways we might hire farmers to grow the biological capital and essential infrastructure that underlies all successful economies.

4:00 p.m.

Glyphosate Update: Science, Legal Developments and Market Impacts

John Fagan

The glyphosate story is moving fast. It's now implicated in cancer, liver disease and birth

defects, and Monsanto's suppression of the evidence has been exposed. 13,000+ lawsuits claim Roundup harm, and the first 4 plaintiffs have been awarded \$2.5 billion+. This story is adding huge momentum to the call for transparency, authenticity and safety for our food, which means more demand for organic! We'll also report on our research on glyphosate levels in food, water and people, and our discovery of a fast, safe way to clear toxic glyphosate from your body—just eat organic!

Growing Cash Flow

Gary Matteson

Are you frustrated by a low checkbook balance after all the work of growing and selling your crops? Do you struggle to have enough money on hand to cover critical expenses throughout the growing season? Growing Cash Flow provides a straightforward tool for managing cash—and budgeting for the future—that you can use in your farm business. This session simplifies the concept of Cash Flow Analysis so that you can “use the parts you're comfortable with.” The idea is to grow your financial skill set at a pace that makes sense for you.

FF Livestock as a Soil Health Partner

Bale Grazing to Build Soil Health

Erin and Drew Gaugler

This project was designed to address the resource concerns of land that had been historically farmed with no inputs and depleted to a point of no longer being productive. To rejuvenate the land and demonstrate how sustainable agriculture can be adapted to fit each operation, project coordinators used bale grazing—a practice that is ecologically sound, profitable and socially responsible.

Effect of Long-Term Integrated Crop and Livestock Systems on Forage Finishing, Soil Fertility, Nitrogen Mineralization, Carbon Sequestration, and Profitability

Michael Ostlie

Learn how the CREC is working to incorporate cover crops into cropping systems through the use of grazing. The work is being supported through NCR-SARE, and involves holistic management of the integrated crop and livestock system.

Whole System Approach to Integrated Crop/Livestock Production to Enhance Soil Health and Profitability of Cropping and Livestock Systems in the Northern Great Plains

Douglas Landblom

Beef cattle and cropping systems research at the Dickinson Research Extension Center



has been funded by two NCR-SARE grants. As a long-term integrated systems project, traditional feedlot finishing has been compared to extended grazing of perennial native range combined with annual forage grazing within a multi-crop rotation. Coupling forage crops and grazing within the diverse cropping system has improved nutrient cycling and soil health, reduced crop input, increase beef cattle net return, sequestered carbon through reduced greenhouse gas emissions, and improved system economics. A brief summary of results will be presented during the session.

Solar Energy on the Farm

Charlie Ricketts

Learn how solar works on the northern plains and the true cost of installation and maintenance. Dakota Solar Energy CEO Charlie Ricketts will present alongside a farmer with installed solar.

Weed Control in Organic Systems

Charlie Johnson and Mark Askegaard

Crop rotations, delayed planting, clean seed and good timing; putting weeds in their place can take a lot of management. Learn from the pros.

SATURDAY, JANUARY 25

8:30 a.m.

KEYNOTE: Developing High-Efficiency and Regenerative Agricultural and Food Systems: A Forever Green Agriculture Initiative

Don Wyse

The Forever Green Initiative is leading an effort to develop more regenerative Midwestern agricultural systems by developing new winter annual and perennial crops to produce a continuous living cover and provide farmers with new economically viable options for their farming operations. Based at the University of Minnesota, the Forever Green Initiative is broad-based, involving many partners in the commercial, research, and conservation sectors. The goal of the Forever Green Initiative is to develop a wide range of commercial products from the new winter annual and perennial crops that will make it economically possible for farmers to produce the crops, and thereby achieve previously unattainable solutions to the water quality challenges facing Midwestern agriculture.

10:30 a.m.

Healing Generation RX: Supporting Our Young People Without Psychiatric Drugs

Didi Pershouse

Is our society a safe place for young people to be themselves and learn resilience? Are we offering our young people the nutritional support and physical outlets that their systems require in order to self-regulate and thrive? Half of all 13-18-year-olds have had a mental illness, and one out of 5 is said to have had a "seriously debilitating mental illness." The use of psychiatric drugs is escalating wildly. These statistics call into question who is profiting from these diagnoses. Using research on the microbiome, the gut-brain connection, changes in soil microbiology and agricultural practices, and the role of connection in human resilience and development, Didi Pershouse offers a whole-systems perspective on "mental illness" and brain function. She will lead participants through exercises for developing strong communities of peer support, and outline a strategic plan to grow a generation of zestful, empowered, and grounded leaders for the next generation.



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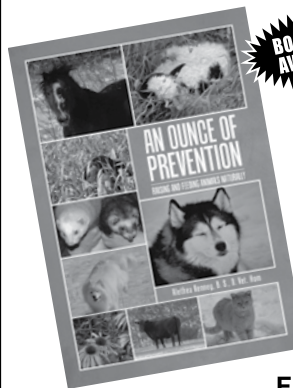
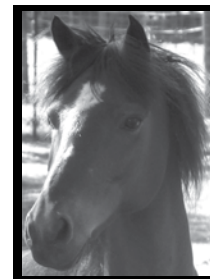
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Workshop Descriptions

Farmland Transition Workshop

Mary Swander

Mary Swander discusses some of the family issues that arise with farm and ranchland transition and brainstorms with the class to map out common family scenarios, such as aging parents who want to preserve their way of farming but come into conflict with the younger generation; the farmland owner who has no heirs who want to take over the operation; the family with an on-farm offspring with sweat equity in the operation who wants to take over the farm, but the siblings want to sell all the land and cash out.

Marketing Grassfed Meat

Cindy Tolle

Join Cindy Tolle from Evergreen Ranch to talk about the specifics of marketing grassfed beef. Learn what makes her operation successful and how she's partnered with local institutions.

FF SARE Grantwriting: What You Need to Know

Joan Benjamin and Beth Nelson

The workshop focuses on developing, writing and implementing successful SARE grants. Information about the North Central Region's USDA Sustainable Ag Research and Education grant programs will be presented, emphasizing Farmer-Rancher and Youth Educator grants. Tips for successful grant writing will be shared, and successful grant recipients will talk about their experiences applying for and receiving a SARE grant.

Seed Sovereignty: Who Owns the Seeds of the World, Bio-Piracy, Genetic Engineering and Indigenous Peoples

Winona LaDuke

Indigenous people's nurtured tremendous agro biodiversity, much of it in the Northern Plains. Today, as the commons are enclosed by multinational corporations, and climate change transforms our world, these seeds, knowledge and worldview are key to our collective future.

2:00 p.m.

FF Creative Ways to Improve Local Food Access in Rural Areas

Building a Virtual On-line Food Hub for Small Scale Sustainable Farms in Rural Areas

Jacquelyn N. Zita

This is a presentation on how we built an online farmers market in North Branch,

Minnesota, with potential and still growing outreach to East Central Minnesota. We will discuss what we learned from our experience, how we measured success and failure, and some of the challenges of an urban-style pro-organic online project in rural corn-and-soy farm country, which continues to suffer an organic farming food desert. The North Circle project is designed to create a local rural food system supporting small-scale family farms using organic and regenerative growing methods, supported by surrounding communities. We are growing food and community together.

Farm to Fridge: Assessing Need and Availability of Underutilized Refrigeration in Rural Grocery Stores for Use by Fruit and Vegetable Farmers

Ren Olive

Ren will share findings from the "Farm to Fridge" graduate student research project. Through farmer interviews, rural grocery store and farmer surveys, assessment, and outreach, this project seeks to support the profitability of small and mid-size fruit and vegetable farmers through a "farm to fridge" model: assessing the opportunity for farmers to connect with existing, underutilized refrigeration space in rural grocery stores.

Faith, Farms and Climate: Finding the Values in Farmer-Led Climate Action

Matt Russell

This facilitated discussion will explore how we are called to climate action in our vocation of farming or working with farmers. Farmers are important leaders as we move from a world organized by a vision of scarcity in the fossil fuel economy and into a world embracing the abundance of creation. Matt will share the success of Iowa IPL in helping farmers find solutions to the climate crisis by leaning into their identity as problem solvers.

Improved Agroecology Using Perennial Grains

Brian Smart

Agriculture is at an exciting, pivotal point in history. Climate change has already begun changing the agricultural landscape, and conventional agriculture will not be enough to overcome growing issues like soil erosion, eutrophication, and ecosystem collapse. As we move forward through the 21st century, it is essential that the agricultural community be equipped with crops and resources focused on "agroecology": an ecological approach to agriculture that views agricultural areas

as ecosystems and is concerned with the ecological impact of agricultural practices.

What's Trending with Deep Winter Greenhouses?

Carol Ford and Dan Handeen

Carol Ford from the Regional Sustainable Development Partnerships and Dan Handeen from the University of Minnesota's College of Design's Center for Sustainable Building Research partner in this conversation about what's happening at the cutting edge of design, production, and education in the innovative world of Deep Winter Greenhouse research and development.

Panel: New Models to Support Beginning Farmers

Ron McFall

A National Young Farmers Coalition survey of more than 3,500 young farmers and ranchers found that, regardless of geography or whether they had grown up on a farm, land access was their number one challenge. Land access for young farmers is embedded in a complex system of needs, and as we face a time when we need to rebuild local food economies, new models and outside investment are likely required. This workshop introduces emerging areas of work for NPSAS supporting the New Roots Farm Incubator Cooperative and with Farmland Conservation Partners, LLC, a social finance entity, which has modified the existing business structure of a farmland management company to work with one or more non-profits.

4:00 p.m.

Creating Trusted "Communities of Practice": Ongoing Learning Groups that Support Innovation in Farming and Ranching

Did Pershouse

Many successful innovators in farming and ranching have an informal "community of practice." This is a tight-knit group of people (nearby or far away) that talks together regularly to provide each other with long-term learning and support as they "break from the herd" and face tensions with their more cautious neighbors (those dreaded "coffee shop" moments). These groups, gatherings and ongoing conversations can provide opportunities for people to listen to each other's successes and failures—and learn from each other's experiences; build strong connections with people tackling similar issues, and help each other think things



through, when things get rough. There are many ways to create a community of practice that works for you—even if your peers don't live nearby. In this workshop and discussion, we will look at tried and true ways to create a community of practice that is fun, real, trustworthy, and that lasts.

Hemp Panel: A Growing Industry

Winona LaDuke, Mike Ostlie, and representatives from 1881 Extractions and Legacy Hemp

The industrial hemp industry is set to double in the next two years. Join a diverse panel of industry leaders, farmers, and agronomists to talk about the future of hemp in the Northern Plains.

Regenerative Ag: Meeting Challenges

Don Wyse, Fred Kirschenmann, and Ryan Schmid

The next decade of agriculture will involve numerous changes that will be especially challenging for farmers, but it will also need to be addressed by everyone in our food system. The "neo-caloric era" which was based on an almost unlimited supply of cheap inputs that enabled farmers to maximize yields is now coming to a close due to the depletion of cheap inputs and the challenges of climate change! The study of past civilizations gives us some important advice.

FF Unusual Crops: Kernza, Hops and Quinoa

New perennial grain crops and partnerships to enhance rural prosperity and ecosystem services

Jacob Jungers

A new perennial grain crop called Kernza is being developed to provide growers with a low-input, high-value crop for rotations in the Northern Plains. Kernza has extensive roots that prevent nitrate leaching to groundwater, reduce soil erosion, and sequester carbon. A multi-faceted research program is underway in Minnesota to optimize Kernza grain yields and ecosystem services while developing a supply chain for this new crop. I will describe two ongoing projects: The first includes a novel private-public partnership of various stakeholder groups working to simultaneously study Kernza's ability to reduce nitrate leaching, establish production-scale fields for demonstration and education, and to coordinate local supply chain and commercialization efforts. The second involves industry partners measuring carbon cycling in Kernza systems. These projects serve as models for deployment of other new perennial and winter annual cash cover crops for the Northern Plains.

Quinoa Production in Central North Dakota

Glendon Philbrick

Growing the ancient grains quinoa and amaranth has been done successfully in central North Dakota. A project funded by USDA SARE helped identify varieties and practices for growing and harvesting both crops. This session will also identify tips for cleaning and marketing both crops as well as best practices and challenges.

Examination of the productivity of four hops varieties

Von Hines

This presentation will address the results of investigation of growing eight varieties of hops in Southwestern South Dakota in two soil types. Von will briefly cover the basics of small scale hops cultivation, harvesting, and processing. It also include information on the hops and brewing industries.

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Presenters

Dr. Donald Wyse is a Professor in the Department of Agronomy and Plant Genetics at the University of Minnesota, St. Paul, where he teaches and conducts research on invasive plant management, cropping system development, plant breeding and new crop development. His research efforts focus on the development of perennial cropping systems, cover crop systems, prairie polycultures, and their impact on soil and water quality. Dr. Wyse was the founding Director of the Minnesota Institute for Sustainable Agriculture, initiated the development of the Regional Sustainable Development Partnerships, was founding Director of the Midwestern Cover Crop Council, and currently serves as Co-director of the Center for Integrated Natural Resources and Agricultural Management. Recent activities of the Center have led to the development of the Mississippi River—Green Land, Blue Water Initiative. GLBW is a consortium of universities, state and federal agencies, and NGOs that have organized efforts to add perennial and winter annual crops to agricultural landscapes that will improve soil health and water quality in the Mississippi River and Great Lakes Basin. Dr. Wyse organized, and now leads, the Forever Green Initiative that is developing the new winter annual and perennial crops that can be produced by farmers that will provide ecosystem services and new economic opportunities.

Gary Matteson has more than 30 years of experience in the farming and agriculture industry as well as a bachelor's degree in agronomy and biology from the University of Connecticut. He leads the Farm Credit program serving young, beginning and small (YBS) farmers and ranchers at the Farm Credit Council, the System's national trade organization. Mr. Matteson coordinates efforts within Farm Credit's nationwide network and among many national organizations to ensure that YBS farmers have the tools they need to succeed, including loan assistance, mentoring and business planning support. Mr. Matteson also helps the YBS Farmer program build diversity in farming by encouraging agricultural operations that bring a focus to locally grown foods near urban areas. Mr. Matteson knows agriculture first hand as well, and runs a small greenhouse business in Epsom, New Hampshire, growing anemones for the wholesale cut flower market. In addition to having been an agricultural entrepreneur himself, Mr. Matteson has served on the board of directors of a Farm Credit institution, and was a founding member and long-time chairman of the board of trustees of New Hampshire Made, a non-profit organization that promotes New Hampshire-made products and services.

A fifth-generation farmer and graduate of North Dakota State University, **Mark Askegaard** has a passion for preserving the land and promoting the health of communities through organic agriculture and local foods. He transitioned his farm to organic in 1995, with his primary crops being wheat, soybeans and flaxseed. Mark is proud to serve on several committees that aim to promote local foods including the Minnesota Grown Advisory Committee and the University of Minnesota Regional Sustainable Developmental Partnership. In his free time, Mark enjoys spending time with his family—his wife, Barb, and two daughters, Claire and Beth.

Dr. Melanie Caffe-Tremi leads the oat breeding program at South Dakota State University. The objective of the oat breeding program is to increase the profitability of farmers in South Dakota and surrounding states by rapidly developing and releasing new oat cultivars with improved agronomic characteristics including yield, test weight, lodging resistance and disease resistance. Her objective is also to improve grain value and marketability. She works closely with the oat milling industry to develop varieties with improved milling characteristics and increased nutritional value for consumers.

Willa Childress grew up on a small farm in rural Oregon. Her passion for environmental justice is deeply rooted in early experiences with ecological destruction, a rural affordable housing crisis, farmworker wage theft, and industry's exploitation of working class people. In 2014, she coordinated the Mesa de Conversacion project in her hometown to generate restorative dialogue between Latinx and white community members. Experiences interning at the Oregon State Legislature and MN-based organization 'The Advocates for Human Rights' fueled her interest in political organizing. Willa leads Pesticide Action Network's organizing and advocacy work in Minnesota, where the straddle between urban and rural spaces feels similar to her home state.

Dr. John Fagan was an early voice in the scientific debate on GMOs and during the last 25 years he has championed food safety and nutrition around the world. Today, he is Chief Scientist at Health Research Institute, a non-profit research and education institution applying cutting edge science to understand the relationships between agricultural practices and the levels of nutrients and agrottoxins in crops. By creating transparency regarding safety and nutrition, HRI enables shoppers to make better food choices and drives demand for organic.

Carol Ford wrote the book *Northland Winter Greenhouse Manual* with her late husband, Chuck Waibel, in 2009 and still raises fresh produce in the Garden Goddess deep winter greenhouse (DWG) they built in 2005. Carol has worked as the Regional Sustainable Development Partnerships' Program Coordinator for the DWG Project since 2013, providing production workshops, conference presentations and field days across the upper midwest to teach current and future DWG producers all the tips, tricks and best practices in DWGs.

Erin & Drew Gaugler both grew up in southwest North Dakota on a farm and ranch. Over time, they realized that they wanted to be actively involved with production agriculture. For more than ten years, Drew worked in the oil industry. While working, he found and created opportunities to become involved with ranching on a full-time basis. He now manages a cow-calf operation and acreage consisting of native, improved pasture, winter forage/hayland, and CRP. Erin has spent the last few years working off the farm to gain experience and advance her knowledge of production agriculture. She is now transitioning back to the operation. Drew and Erin aim to address resource concerns and make long-term improvements in an effort to revitalize the land and improve wildlife habitat.

Dr. Greta Gramig is an Associate Professor in the Department of Plant Sciences at North Dakota State University. She teaches courses about weed identification and weed biology and ecology. Dr. Gramig's current research interests include non-chemical weed management, integrated weed management, weed ecology, and weed management in organic production systems.

Koby Hagen is one seed saver along a long line of great teachers and breeders before her. While Seed Sages is not her daytime job, seed stewardship and biodiversity conservation is a driving force behind her work. Starting out as an intern at a small, family-owned CSA in Colorado, she has more than 10 years of grounding experience at educational, research, biointensive, urban youth, and seed-saving farms across the country, including Tiny Diner (MN) and Farm, Farm Table (WI) Emandal Farm (CA), Arid Crop Seed Cache and Cuartro Puertas (NM), JD Rivers Child.

Von Hines is a fourth-generation farmer/rancher from Martin, S.D. Before establishing her hops farm on the family operation, she taught biology at Western Nebraska Community College. She now has two test plots in the Martin area containing 700 plants. She performs research on the productivity of



hops production in Western South Dakota, hops processing methods, and will begin a hops breeding program in 2020.

Charlie Johnson was named 2013 MOSES Organic Farmer of the Year. Johnson Farms has 2,800 owned and rented acres that Charlie manages with his brother, Allan, and cousin, Aaron. The Johnsons' younger brother, Kevin, also helps on the farm, along with Charlie's children, and the brothers' wives. The brothers grew up on the farm under the tutelage of their late father, Bernard, who taught them to respect the land through chemical-free management. Certified organic by International Certification Services (FVO/ICS) since 1982, the farm has been under organic management since the mid 1970s, long before the development of organic markets and infrastructures.

Dana Jokela co-owns and operates Sogn Valley Farm, a 20-acre certified organic vegetable farm and native plant nursery located in Cannon Falls. The farm's produce is sold at the St. Paul Farmers Market and wholesale to co-ops, school districts, artisan food processors, and a distributor in the Twin Cities metro. Dana holds a B.S. in Plant and Soil Science and an M.S. degree in Sustainable Agriculture and Horticulture.

Karin Jokela is a pollinator conservation planner based in southeast Minnesota. She partners with NRCS staff in Minnesota and Wisconsin to provide individual consulting to farmers on habitat restoration and pollinator-friendly farm management practices, and serves as an adviser to staff of other conservation agencies. Karin received her M.S. in Ecology and Evolutionary Biology at Iowa State University. She and her husband are organic vegetable farmers in Cannon Falls.

Jacob Jungers is an Assistant Professor in the Dept. of Agronomy and Plant Genetics at the University of Minnesota. As an agroecologist, Jake's research goal is to improve and develop new cropping systems that provide high-value agricultural products, enhance farmer profitability, improve water quality, and reduce greenhouse gas emissions. Jake conducts cropping system trials that include small grains, oilseeds, perennial forages, and novel perennial grain crops at university research stations and on farm. Jake is committed to working with regional growers and other stakeholders to improve agriculture in the Northern Plains.

A longtime national and international leader in sustainable agriculture, **Fred Kirschenmann** shares an appointment as Distinguished Fellow for the Leopold Center and

as President of Stone Barns Center for Food and Agriculture in Pocantico Hills, New York. He also continues to manage his family's 1,800-acre certified organic farm in south central North Dakota, which he converted to a certified organic operation in 1976. He developed a diverse crop rotation that has enabled him to farm productively without synthetic inputs (fertilizers or pesticides) while simultaneously improving the health of the soil. Kirschenmann's farm has been featured in numerous publications including *National Geographic*, *Business Week*, *Audubon*, the *LA Times* and *Gourmet* magazine. In 1995 it was profiled in an award-winning video, "My Father's Garden" by Miranda Smith Productions, and is still widely used as a teaching tool. Kirschenmann also has been advisor for several documentaries including "American Meat" and "Symphony of the Soil."

Winona LaDuke is an internationally renowned activist working on issues of sustainable development renewable energy and food systems. She lives and works on the White Earth reservation in northern Minnesota, and is a two-time vice presidential candidate with Ralph Nader for the Green Party. As Program Director of the Honor the Earth, she works nationally and internationally on the issues of climate change, renewable energy, and environmental justice with Indigenous communities. In her own community, she is the founder of the White Earth Land Recovery Project, one of the largest reservation-based nonprofit organizations in the country, and a leader in the issues of culturally based sustainable development strategies, renewable energy and food systems. She also continues national and international work to protect indigenous plants and heritage foods from patenting and genetic engineering. In 2007, LaDuke was inducted into the National Women's Hall of Fame. The White Earth Land Recovery Project has won many awards, including the prestigious 2003 International Slow Food Award for Biodiversity, recognizing the organization's work to protect wild rice from patenting and genetic engineering. A graduate of Harvard and Antioch Universities, she has written extensively on Native American and environmental issues. The author of five books, including *Recovering the Sacred*, *All our Relations* and a novel, *Last Standing Woman*, she is widely recognized for her work on environmental and human rights issues.

Douglas Landblom is a Beef Cattle and Integrated Systems Specialist at the NDSU Dickinson Research Extension Center. His focus has been on nutrition, reproduction management, and integrated crop and livestock systems. The last 15 years he

has studied drought management in the semi-arid region of western North Dakota. This research led to studying cattle integration within a diverse cropping system and the resultant effect of integration on crop production, beef production, soil health, and economics. Doug's goal is to collect biological data to conduct economic analysis.

Cheryl Landsem has a bachelor's degree in Accounting and Business Management and over 20 years of experience in agricultural accounting and finance. She was raised on a small grains/cow-calf farm in northern Minnesota. She did accounting for 70+ farming operations from 2007 to 2017. She has also worked as an agricultural credit analyst for three different lending institutions. She began working with Eide Bailly about a year ago in the AgriBusiness Consulting area.

Ron McFall, Stoel Rives, LLP, Minneapolis, has 25+ years of experience serving the legal needs of the sustainable/cooperative agriculture community. Recently, he has been advising the Pacific Northwest-based Organically Grown Company as it "became the first U.S.-based business to restructure its operating and funding model to support purpose-based entrepreneurship, ownership and succession." OGC is on the leading edge of a movement to shift the paradigm in business to "stewardship ownership" where companies are self-owned by their community of stakeholders for the longterm, rather than a commodity to be bought and sold." This experience forms a backdrop to supporting the emerging work for NPSAS with Farmland Conservation Partners.

Meg Moynihan oversees the Minnesota Department of Agriculture's efforts to support farmers and others in agriculture who are experiencing financial, emotional, and mental stress in their lives and communities. Meg also owns/operates a diversified 70-cow organic dairy farm with her husband, Kevin Stuedemann. In 2016, the Stuedemanns lost their milk market and Meg took a leave of absence to run the farm single-handedly, encountering the stress, anxiety, burnout, and depression so many farmers experience.

Ren Olive spends their time at work supporting produce farmers and rural grocery stores as the Sustainable Agriculture and Food Systems Program Associate for the University of Minnesota Extension Regional Sustainable Development Partnership, working throughout greater Minnesota. Ren is also currently part of the Natural Resource Science Management Master of Science program at the University of Minnesota - College of Food, Agriculture, and Natural Resource Sciences.



Presenters

Michael Ostlie is a research agronomist with NDSU at the Carrington Research Extension Center. His primary responsibilities include oversight of the agronomy research program as well as conducting research on timely topics affecting N.D. producers, with a focus on weed science, plant health, and minor crops. Michael grew up near Northwood, N.D., on a farm that raised wheat, barley, corn, soybean, edible beans, sunflowers, and sheep. He and his wife Lindsay enjoy the rural lifestyle provided by their farmstead near Carrington. Michael completed his Ph.D. in weed science from Colorado State University in 2012, where he developed non-GMO wheat lines resistant to the Assure II herbicide. He received his M.S. in weed science and B.S. in crop and weed science from NDSU.

Didi Pershouse is the author of *The Ecology of Care: Medicine, Agriculture, Money, and the Quiet Power of Human and Microbial Communities* as well as *Understanding Soil Health and Watershed Function: A Teacher's Manual*. As the founder of the Center for Sustainable Medicine, she developed a practice and theoretical framework for systems-based ecological medicine—restoring health to people as well as the environmental and social systems around them. After 22 years of clinical work, Pershouse now travels widely: writing, teaching, and developing learning resources with the Soil Carbon Coalition, the USDA Southern Plains Climate Hub and other organizations. Her workshops and activities engage farmers, schools, and watershed groups in opportunities to improve soil health, public health, and climate resiliency through changes in land management. She does consulting, and facilitates retreats and peer-support groups for leaders in social and environmental change.

Dr. Maggie Peterson practices in her hometown of Enderlin, N.D. Family Chiropractic & Massage is a practice that cares for the whole family and the whole spectrum of health. She is certified in Wellness, has her fellowship in Pediatrics/Obstetrics, and Transcranial Direct Current stimulation. She is currently working on finishing her certification in Heart Rate Variability, her diplomate in Neurology, and becoming a Metabolic Balance Coach. She is trained in Total Body Modification and Neuro-Emotional Technique.

Glen Philbrick lives and operates the century-old Hiddendale Farm near Turtle Lake, N.D., with family. Glen grew up with dairy and massive gardens. Glen has been a life-long farmer, experimenting in the garden or field every year. Some of the experiments included growing quinoa, amaranth, sugar cane, stiff sunflower, hairy vetch, and numerous

vegetables. Glen transitioned the farm's vegetable and seed production to certified organic as of 2016. Glen is also a business instructor at Sitting Bull College located at the Standing Rock Sioux Nation.

Jesse Puka-Beals is a graduate student in the Plant Sciences department at North Dakota State University. He grew up adjacent to a diversified vegetable farm and developed a passion for knowledge intensive and ecologically based management strategies in agricultural production. Jesse is finishing up a master's degree at North Dakota State University before moving to Michigan where he hopes to continue working with growers and generating research that helps shift agricultural practices in the direction of sustainability.

Charlie Ricketts is originally from Valley City. In 2014 he moved away to work for electric car company Tesla and its subsidiary, Solar City. Five years later, he made his way back to North Dakota to become CEO of his own solar energy company, Dakota Solar Energy.

Matt Russell has spent his career advocating for social justice—the first 11 years training for and working in ministry and 16 years doing secular work focused primarily on economic and environmental sustainability. He draws on both backgrounds to lead Iowa Interfaith Power & Light since April 2018. He studied for the priesthood with the Catholic Diocese of Des Moines from 1994 to 1996 and earned an M.S. in Rural Sociology from Iowa State University in 2003. Matt worked at the Drake University Agricultural Law Center on issues concerning retail agriculture, land tenure, conservation, climate change, farmer veterans, rural development, state food policy, and federal farm policy. Matt is a fifth-generation Iowa farmer. He and his husband, Patrick Standley, operate Coyote Run Farm. They raise fresh produce, heirloom tomato plants, and grass-finished beef.

Ryan Schmid is an agroecologist working at Ecdysis Foundation (Blue Dasher Farm's non-profit research institute). He received a PhD in Entomology from Kansas State University in 2018. Ryan credits his upbringing on a small farm in northwest Iowa for generating a passion to work closely with farmers. His research focuses on insect ecology and pest management, and applying those interests to help farmers and ranchers innovate their conventional farming systems to produce food, fuel, and fiber with minimal adverse impacts on the land. He works with ranchers to investigate ecosystem services provided by arthropod communities in regenerative rangeland management programs.

Brian Smart is pursuing a master's degree in both Plant Sciences and Software Engineering at North Dakota State University. Since beginning these programs in 2015, he has been on a research assistantship with Dr. Brent Hulke of the USDA – Agricultural Research Service. He primarily researches and breeds sunflower, perennial flax, and silphium (a perennial "cousin" of sunflower). Talk to him about genomics, perennial grains, climate change, or his recent engagement to his fiancée, Taylor!

Mary Swander is the Poet Laureate of Iowa, the Artistic Director of Swander Woman Productions, and the Executive Director of a non-profit designed to imagine and promote healthy food systems through the arts. Her latest book is a collection of essays called *The Sunny Side*. Swander tours a performance of *The Girls on the Roof*, a recent book of poetry, for the stage with Eulenspiegel Puppet Theatre. Swander is also touring her plays, a drama about recent immigrant farmers and *Map of My Kingdom*. She lives in an old Amish schoolhouse, raises geese, goats and a large organic garden. She performs her own work playing the harmonica and the banjo.

Cindy Tolle owns Evergreen Ranch & Livestock LLC, which encompasses several large ranches in South Dakota (Hermosa and Hot Springs), New Mexico, and Mexico. Their family operation raises bison and Criollo cattle, a heritage breed, "the long-horn breed that settled the West." One of Cindy's biggest clients is Rapid City Regional Hospital. Cindy serves on the board of SDSPA.

Abbey Wick is the Soil Health Extension Specialist at NDSU. She works with farmers on incorporating cover crops and reducing tillage and also develops statewide training programs for county agents. When it comes to using cover crops, her philosophy is to keep it simple.

Jacquelyn N. Zita is professor emerita from University of Minnesota and currently works for the Women's Environmental Institute (WEI) as Farm Manager for WEI's Amador Hill Farm and Orchard, Director of Education for WEI's Down to Earth: Sustainability and Justice Education Program, and Coordinator for WEI's North Circle Project. She has been on the North Circle Project from a wild idea 10 years ago to its moderately successful implementation over the past three years. WEI added a 2019 WEI theme to this project—farming for a liveable planet—as a new local strategy to bring more intentional and environmentally-minded consumers to our online platform to build support for a self-sustaining climate-ready regional food system.

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Exploring stories from America's foodways

It's the time of year when I find my way to my folder of recipes, batter-spattered and flour-dusted, and some of them in the handwriting of dear old ladies who shared them with me when I was a young bride. Searching online for recipes won't do for the holidays—for the most part I'm re-creating memories in the process and in the taste of the final result.

Recently, reached up into my cookbook and recipe shelf, I noticed a book that was given to me by one of those dear women—my husband's grandmother, Joyce, who, like many of Germans-from-Russia heritage, showed their caring for their families through big, delicious meals. I'm a little embarrassed to admit I didn't do much more than thumb through the book at the time. The title of the book is *Whistleberries, Stirabout & Depression Cake: Food Customs and Concoctions of the Frontier West*, and I remember thinking it didn't seem a very practical addition to my busy life—who has time for experimenting with old-fashioned cooking? But as I looked through it 15 years later, I see why she gave it to me. It's more a storybook than

a cookbook, and, as someone who would typically rather read than cook, *stories* I make time for. Joyce knew me better than I'd realized.

The stories in the book were written as part of the Federal Writers' Project (1936-42), one of the U.S. government's efforts to keep more people employed during the Great Depression. Writers were hired to document the food customs and recipes of America in what was envisioned to be a grand collection called *America Eats*.

"The government feared that many of our food customs, if not recorded, would soon be lost, because mechanized mass production of foodstuffs was already firmly in place by the 1930s and cooks were already spending less

time preparing food from scratch," according to Greg Patent, who wrote the foreword for the book.

The project was left unfinished when the U.S. entered World War II, and the part that was completed—about the Frontier West—was abandoned in archives until researchers resurrected it and compiled it into the book published in 2000 and which Joyce gave me some years later.

More recently, those archives have been digitized and made searchable—along with a treasure trove of other food-related history. The website is www.whatamericaate.org.

On the facing page is an example of what can be found there: A story about Depression Cake by Alice Prescott Young, preserved in its type-written form with handwritten edits. (Note that she was writing in 1941, and "years ago" was likely a generation earlier.)

I think many *Germinator* readers may enjoy perusing that site, whether you're on a search for recipes, stories, or re-created memories.

Interested in more food histories from the Federal Writers' Project?
Search here:
www.whatamericaate.org

Cook and hired girl in kitchen. Quarter Circle 'U' Ranch, Montana. By Aurthur Rothstein, June 1939. Accessed from the Library of Congress (loc.gov).



Depression Cake.

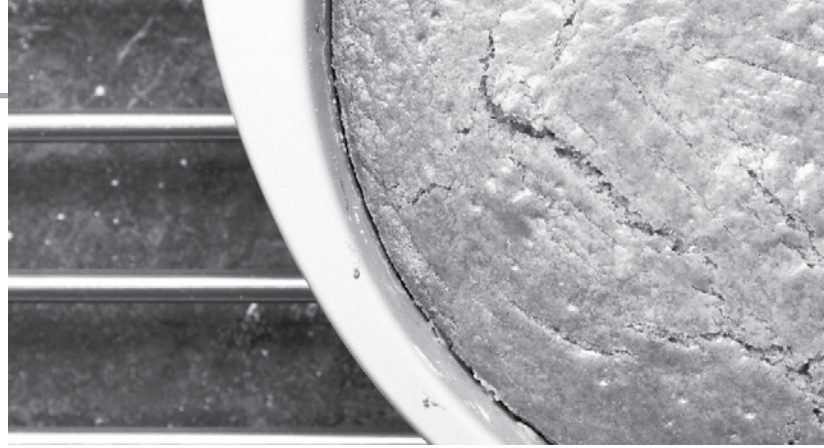
By Alice Prescott Young
November 5, 1941

Years ago a company of Missourians inspired by Horace Greeley's advice moved bag and baggage to the upper Madison Valley—their household effects piled high on wagons drawn by foot-sore and weary horses. The place where they settled was later called Missouri Flats. Hard time and drouth foiled every attempt to prosper for many of them.

Nevertheless these courageous old timers refused to become down-hearted, and one Fourth of July was being celebrated gloriously, with a picnic, rodeo, and general get-together. Ethel was to bring a cake, and as she watched a small cloud in the sky hoping that rain would not spoil the picnic, even though the garden needed moisture, she reviewed the ingredients of a cake.

Eggs! She had none. The few hens she possessed were either burdened with the responsibility of baby chicks, or setting on eggs, dispositions ruined and cross-eyed with chagrin over confinement and the hot weather, or had temporarily joined the Industrial Workers of the World.

Butter and milk. Ye God! Old Stubby had taken a leave of absence and followed a herd of white-faces that were grazing over on the West Fork, having observed a fine gentleman among them who appealed to her fickle heart. She must remember to have Nick go after her right after the Fourth.



Ethel looked at the **pan of raisins** stewing on the stove. An idea entered her mind. It was worth trying, and she could experiment on her husband and brother. Necessity was the mother of invention.

When the raisins had partially cooled, she carefully measured **a cup of the fruit and a cup of the juice** and poured them into a mixing bowl, adding a **teaspoonful of soda, half a teaspoonful of cinnamon and nutmeg, a pinch of cloves, ginger, and allspice. A heaping tablespoon of bacon drippings** went in next, and she watched the mixture bubble and froth, wondering if the stuff would explode. She sifted **one and three-fourth cups of common flour and a cup of sugar, a pinch of salt and a teaspoonful of baking powder**, added them to the volcanic mass in her mixing bowl. After a moment of hesitation, she put in a **teaspoonful of flavoring**. What was it? A cake or a pudding? She did not know.

After greasing and flouring a loaf-cake tin, she spread the batter in the pan, and closing her eyes, prayed fervently as she closed the oven door on the mystery.

Forty minutes alter Ethel surreptitiously opened the oven door, her eyes wide with wonder. Spices—no odor from the old world ever smelled more delicious. The cake—for by all the Gods, it was a cake—had risen, round, light, brown, shrinking away from the pan, proclaiming to the world that it was sufficiently baked.

No modern chef ever carried a brain child more carefully or proudly than Ethel when she lace the cake to cool. Her creation appeared beautiful, but would it taste?

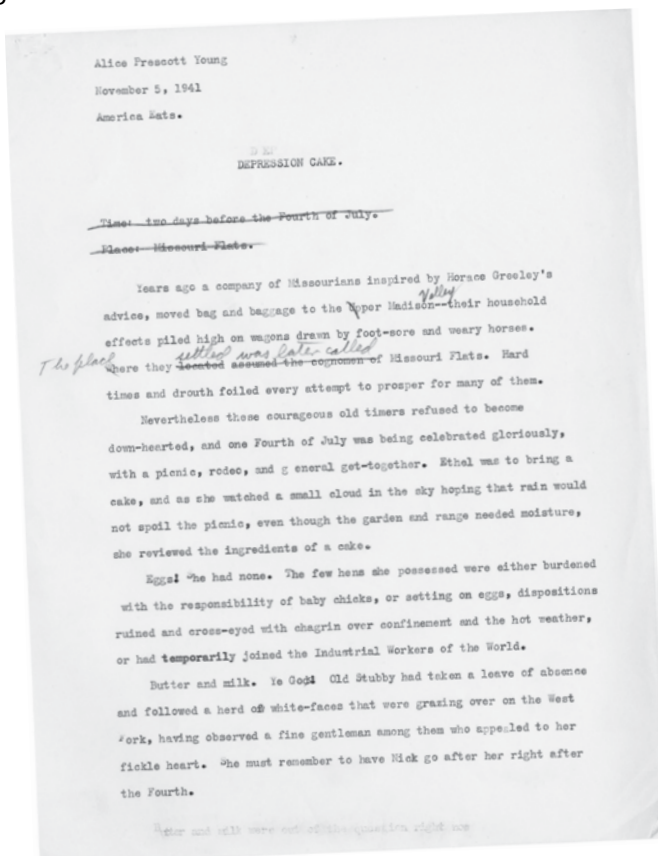
When the man came in weary and hungry from work, they were greeted at the door with the odor of that cake, which held the place of honor in the center of the table.

“How?” asked the man of the house, well aware of the lack of provisions.

“Eat it first,” answered Ethel. “I’m afraid to talk.”

After the cake had been eaten to the last crumb, the brother inquired cautiously, “Gosh, Ethel, do you reckon you can do it again?”

Ethel nodded assent, and many years later when another and larger depression hit the Missouri Flats, the recipe found its way into my hands. 🍪



Nature belongs on a farm's balance sheet

I grew up where I now live. As a child I loved hearing the songs of the birds which shared our farm with us. I learned to recognize the bright “chip, chip” of the chipping sparrow and the cooing of mourning doves. To me, spring sounds like the raucous chatter, squawks and whistles of the red winged black birds. The mimicking brown thrashers sing everyone's song. My favorite bird memory, however, still is the song of the eastern meadowlark. My mother said they sang in Norwegian. I can't find the Norwegian meadowlark song, so I can't be sure she wasn't pulling my leg. I have never had trouble recognizing their lovely melody.

When I was young, our yard and fields were full of monarch butterflies, red admirals, fritillaries, painted ladies and even swallowtails.

Recently the Audubon Society published a report which found we have lost nearly 40 percent of all grass-land birds since 1966. Eastern meadowlarks are threatened and the lesser prairie chicken is on the brink of extinction. The study confirms what I have noticed. The number of meadowlark songs I heard this summer was paltry compared to what I remember as a kid and even more recently. Even the cacophony of spring black birds' calls has been meager in the last few years.

This year I saw painted lady butterflies and a few monarchs. Even the number of mosquitoes and flies seemed less than normal. Because the insects are fewer, so are the barn swallows and other insect eating birds. Recent studies by the National Geographic Society also reports a decline in bird and insect numbers. They attribute the decline to loss of habitat for nesting birds and the expanding use of insecticides and other chemicals.

When we consider the success of our work for the last year, how many of us count the baby killdeer hatched, the meadowlark songs heard, or the bobolinks sighted along one of our soughs? Did we remember to check for monarch caterpillars on the milkweed on the side of the road? Did we count fox dens and badger holes? Did we look for Brown-Eyed Susans and prairie coneflowers? Did we plant native grasses and wild flowers in unused corners? Did we mow around duck nests in our hay meadows?



Organic farmers tend to have a better idea than most that all of nature around us is interconnected. If the birds and the bees do better, we do better. Birds eat insects that eat our crops. Bees pollinate many blooming plants in our gardens, orchards and fields. Foxes, badgers, eagles, hawks and owls keep the gophers and field mice from taking over. Insects break down cattle manure in the pasture, clean up dead animals and feed the birds. Wild flowers on the edges of our fields or in our pastures attract beneficial insects and birds. The microbiology of the soil breaks down organic matter and even minerals into nutrients for the plants growing in and above the soil. Fungi connect roots and nutrients.

The financial end of things is a necessary part of any enterprise. It is justifiable that those of us who tend the land also must keep our farms in the black a majority of the time. Years like this one with low prices, bad weather, diseases and high input costs create stress and even depression.

Our balance sheets must also have a page for the birds, bees and butterflies. 🐦

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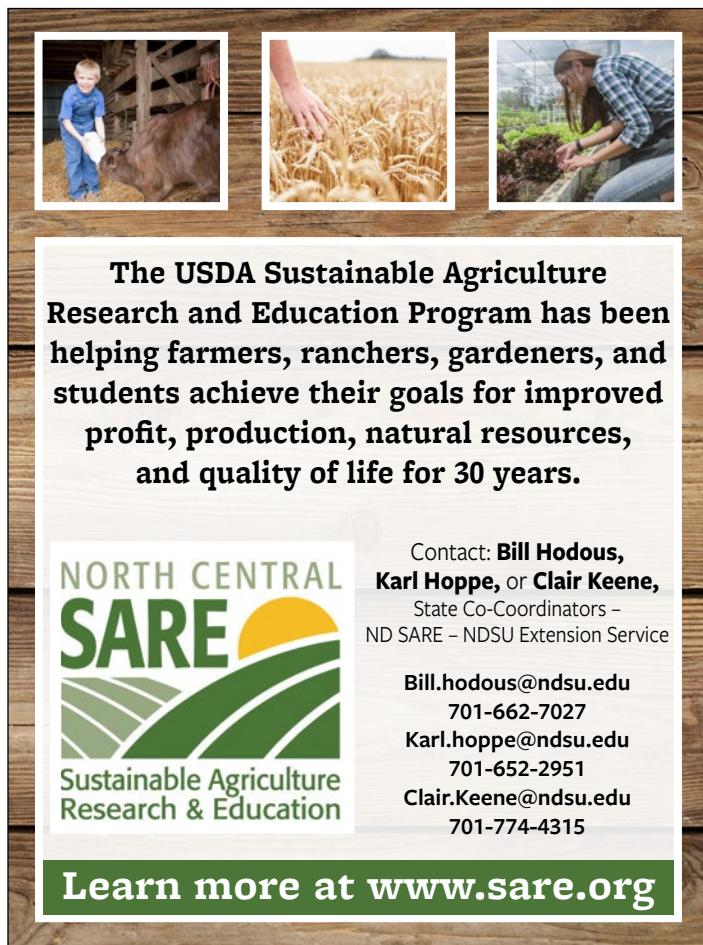
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