

The Germinator

FALL 2019 • VOL. 40 NO. 4

FARMING IN HARMONY

Blue Dasher Farm
an example of farming
that's a bridge to the future

PAGES 23-25

FBC'S LEGACY & FUTURE

NPSAS's Farm Breeding Club has done
amazing work, and there's more to come

PAGES 18-21





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A mixed herd of livestock grazes on a rotationally grazed pasture at Blue Dasher Farm near Estelline, S.D. "Blue Dasher Farm combines cutting-edge science with hands-on experience to remove barriers to the adoption of regenerative agriculture," according to its website. Read more about Blue Dasher Farm on page 23.


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Mission Statement

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

Staff

Executive Director | Verna Kragnes • verna.kragnes@npsas.org

Event Coordinator | Kayla Pridmore • kayla.pridmore@npsas.org

Editor | Heidi Marttila-Losure • editor@npsas.org

General | info@npsas.org

Board of Directors

President: Curt Petrich (2020)
307 4th Ave. NW | Dilworth, MN 56529 | (218)-287-4304

Vice President: Krysti Mikkonen (2021)
38390 105th St. | Frederick, SD 57441 | (605) 329-7020

Treasurer: Lynn Brakke (2018)
5724 170th Ave. S, Moorhead, MN 56560 | (701) 729-1220

Secretary: Gretchen Harvey (2020)
2834 Village Green Dr. | Moorhead, MN 56560 | (218) 329-8314 (c)

Annie Carlson (2020)
927 6th St. NW | Mercer, ND 58559 | (701) 447-2649

Sean Hyatt (2018)
15054 475th Ave. | Milbank, SD 57252 | (605) 951-8771

Mike Jorgenson (2022)
33626 660th Ave | Clinton, MN 56225 | (320) 273-2437

(open) (2019)

Northern Plains Sustainable Agriculture Society

Office:

P.O. Box 276, 127 4th St. S., Moorhead, MN 56560
Ph: (218) 331 4099

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A strong foundation is vital for a resilient future

Greetings from the leadership team at NPSAS. I'd like to share some important updates.

Just as in a home, the foundation for any business or organization is critical for its longevity and success. There are times that even the best of foundations may need repairs or to be updated. Often this work is not visible to most people, and it is tedious and not very exciting. If needed repairs or updates are ignored too long, damages to a business or an organization may be more than the organization can withstand. For the past several months NPSAS has been working to ensure its foundation meets the needs for 2020 and beyond.

NPSAS's bylaws state that an annual audit is required, yet we are unsure when the last audit was performed, thinking it was at least 10 years ago. We have also missed some tax filing deadlines in the past and have made the necessary filings to be current. We are now in good standing again with Guidestar, which is critical for the survival of NPSAS, since this organization is the first place foundations and major donors check to ensure their gift is going to a reputable organization.

In the next couple of months,

you will be getting a letter outlining bylaw changes that we think are appropriate to reflect the merger of the two non-profits last year. We encourage everyone to review these and return the ballot that will be enclosed. As last year, we are doing this by mail to ensure that we can have the greatest level of input from members on this important vote for the organization.

Abraham Lincoln once said, "The best way to predict the future is to create it." We are turning to that now that the repairs to the foundation are nearly complete.

Many aspects of agriculture are changing at an incredible pace, and so are its challenges. Sustainable production practices have the attention of all production agriculture. Sourcing organic and sustainably raised products is also becoming a commitment from many food manufacturers.

NPSAS Board of Directors is looking to identify ways that we can support and serve our member society to participate in these opportunities as well as address the new challenges in today's agriculture. 🐾

Knee Deep and 20 Below

A northern North Dakota
farmer of
Norse descent
doing chores
early on a
Sunday morning
in the dark
by the setting full moon
and a ribbon of orange
predawn light
grumbles about the
truncated fall
and work left undone
when the frozen ground
would no longer
yield to tillage.

He thought he was
adjusted to this country
and its bad climate,
but 20 below and
knee-deep snow
before Thanksgiving
seem a *little* extreme.

—Terry C. Jacobson

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Terry C. Jacobson

Young members: Consider applying to board

Gratitude is the primary feeling that comes to mind as we head toward Thanksgiving this month.

I am grateful for the bounty of my squash, onion, and shallot harvest recently. I also have my favorite purple, pink, and white potatoes and leeks to create wonderful meals this winter. For many years after college, I was not so in touch with the seasons, and when I was able to start farming in my late 30s, I recognized that what I had missed the most was the tangible pleasure of stocking up my "larder" with food I had grown myself. As I cook through the fall and winter, memories of summer warmth and sunshine permeate my kitchen along with the wonderful smells of good food cooking or baking.

I have gratitude this year also for the wonderful people I have met through getting involved with Northern Plains. In particular, there is a hard-working board that has been meeting now on a monthly basis, for two hours by phone or four hours in person. Quite a commitment! So a huge thank you from me for their work.

When I was on the board of the St. Croix River Association a few years ago, I was impressed with the

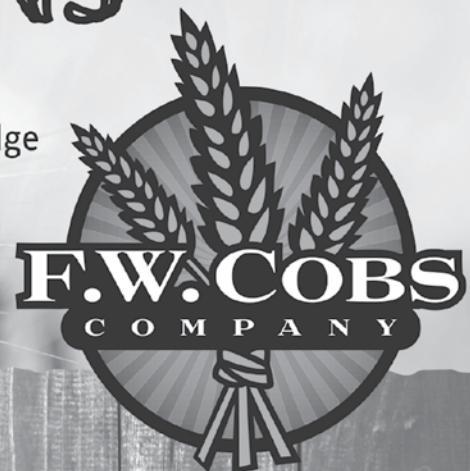
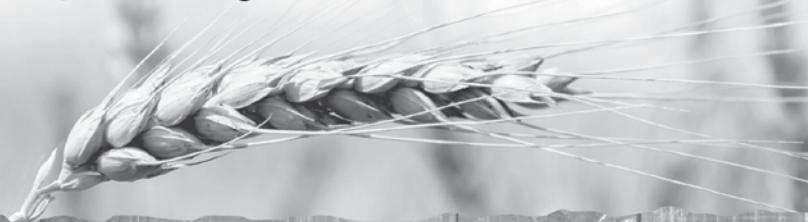
board and volunteer recruitment process through their website. I would like to follow their model of an online process to recruit board members and volunteers. You will find a board application form now on the NPSAS website to either download and mail or fill in online. Please help us have representation from the three states, ND, SD, and MN that comprise the bulk of our membership and also encourage young people that you know to apply.

Have a wonderful
and blessed
Thanksgiving. 🍂



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An unexpected wonder by the side of the road

A few days ago, I saw a moose.

I was driving home from town after running an errand, not going too fast since the road grader had just passed by and stirred up the gravel. I came over a little rise, and there it was: A young bull moose, drinking from the slough by the road.

It was pretty amazing. I mean, it wasn't quite as if I'd seen an elephant on the way home from town, but it wasn't *unlike* that, either.

I shouted "Whoa!," hit the brakes, and grabbed for my phone to take a picture, because of course that's what one does in such situations.

He had stopped drinking when I came over the hill, and after a pause he turned and cantered—if moose can be said to canter—across the field.

My photo was disappointing. I wasn't far from him, but my phone's zooming capabilities are limited. The moose wasn't much more than a blob

of brown when I zoomed in on it.

I headed for home, but as I drove I came up with a plan: Instead of fixing leftovers for lunch, I'd fetch my camera and drive to the other side of the section, where I could wait in the car for him to show up.

And so I did. I spotted him pretty quickly, even a half-mile away, and I parked on an approach where I figured he might pass by. He wasn't in a hurry. The car worked as an effective blind, and he didn't pay any attention to me. He didn't come quite as close as I might have hoped, but it was close enough: I took about a dozen photos, and three of them were of decent quality. (See one of them on page 3.)

A while later I posted them on Facebook (again, what one does in such situations). And people apparently love a good moose photo: That post was more popular than anything I've ever put on social media—more than my (lovely) children or any journalism

I've ever done. This was, shall we say, a-moose-ing to me.

I called the game warden to ask how unusual it was to see a moose in Brown County. Apparently a young bull moose or two occasionally shows up during mating season, if they've been pushed out of their territory in North Dakota. Sometimes moose cows wander through also, and in fact, there are three cows in the county now. So if that young bull is very lucky, he might stumble upon love yet.

And that, I think, is what I felt after this whole encounter: Just a little more optimistic. For many of us in farm country, our everyday lives are stressful right now, as there are challenges on every side. We've started to expect trouble. But good things are still possible, and can show up right in the midst of things, too—like an unexpected encounter with a moose by the side of the road. It was nice to have, and to share, that reminder. 🐾

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Summary of NPSAS board meetings

July 11, 2019:

- Verna offered a high-level summary of the work that has been done to prepare the 990 for submission. A motion was made and approved to accept and submit the 990 as presented.
- The board discussed mentoring programming, including what kinds of mentoring NPSAS is currently offering and how this mentoring could be developed strategically based on the strengths of the organization.
- The finance committee presented the financials in a new format. Both the balance sheet and the profit and loss statement will be more concise and have a programs focus.
- The personnel committee is drafting a written contract for Verna as executive director. Gretchen and Verna agreed to undertake a review of board succession and bylaws.
- Kayla shared her ideas for expanding college student involvement, especially during the winter conference.
- The board decided to adopt a new format for the layout of the vendor space at the conference, which should also drive attendance during Thursday night's Taste of Ag event.
- Verna has been working on case statements, which help keep board members on the same page when sharing information about the organization. Work will continue on them with board input.
- A motion was made and approved to contract with Fiebiger, Swanson,

and West to prepare an audit of NPSAS financial records in a timely manner. The board would like this completed in a six-week time frame.

- The board discussed fundraising strategies, include the criteria for participating in Giving Hearts Day in February. They also set a 40th-anniversary fundraising goal.

August 8, 2019:

- Motion made and approved to make these changes to NPSAS's Cornerstone Bank account: the signatories will be Lynn Brakke (treasurer), Curt Petrich (president), and Verna Kragnes (executive director); there will be a new requirement to procure a minimum of two signatures for any future transaction; and the NPSAS business office address will reflect its Moorhead location.
- A motion was made and approved to become a sponsor of the Farm Viability Conference in October in Redwing, MN. Verna and Kayla will attend this conference with the goal of networking, promoting the winter conference, increasing logo awareness, and staff training.
- The finance committee is working on getting feedback to sponsorship materials, working on the audit, continuing work on the financial reporting documents, and preparing for a financial presentation at the winter conference.
- Mike continues the personnel committee's work on drafting an RFP for the executive director position, should the organization need it in the future. He mentioned the

challenges of hiring out the search process. The board had a healthy discussion about what constitutes a conflict of interest if an NPSAS member has the skillset to do this work at a reduced cost. This work is intended for transition planning in the future and in no way represents dissatisfaction with current executive leadership.

- Work on the audit was discussed, including the purposes of sub-accounting and earmarking practices for certain funds. Going forward, the board should think about ways and practices it could adopt to create better firewalls and clearer reporting between projects.
- Verna requests that staff and board members send their pledges and/or gifts to the office as soon as possible. This could be done now, or pledges could be made to give on Giving Hearts Day or another online giving option that NPSAS will announce.
- Krysti suggested creating a presentation that could help bankers (in SD and elsewhere in the region) understand better the different financial contexts in which sustainable and organic farmers operate. In essence, the presentation would educate them to be better informed loan officers for sustainable & organic farmers.
- Verna offered to create a Google spreadsheet or calendar so board members know when and where presentations are scheduled. The goal is to offer at least one per month.
- The equipment rental agreement was shared. Some suggestions

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were made to improve the process for members who wish to rent equipment owned by NPSAS.

- A motion was made and approved to offer \$2,500 in support for Dakota Rural Action's policy and advocacy work in 2019. This is the same level as in 2018. DRA is a good partner, and we could continue to work together on the local foods conference in South Dakota, on developing mentoring options for our members, and on Farm Beginnings for which they have an established program.

September 12, 2019:

- The board discussed how different kinds of members are counted—business, families, students, etc. Also discussed was the idea of establishing membership goals and to consider incentives to become members, especially with respect to conference attendance. Staff will continue to research other membership organizations and think about how we might improve our membership categories.
- Verna summarized what she learned from a conference call with the National Sustainable Agriculture Coalition, of which NPSAS is a member. The coalition has put together a position paper that advocates for large increases to SARE and on-farm research in preparation for the next farm bill. NPSAS is one of the voting members on the policy council that approves such position papers.
- Verna reported on a training she attended sponsored by Farm Commons. Farm Commons will offer a pre-conference workshop at the

winter conference sponsored by SARE. FC is a nonprofit providing education and assistance with respect to the myriad legal issues faced by farmers.

- Deadlines, advertising expectations, and the delay of the summer issue of the Germinator were discussed. Board members made it clear they expect deadlines to be met in the future.
- The financial audit is on track and will likely wrap up in October.
- Verna would like the Board to consider proposing a change to the organization's fiscal year. It is currently based on the calendar year, but there are good financial reasons for adopting a September to August FY. Doing so would require a bylaws change. The Finance Committee will come back with a proposal for the October board meeting.
- A motion was made and approved to accept Roger's resignation from the board.
- The board discussed the Farm Breeding Club and efforts to renew activity. NPSAS members are facing new challenges in the 21st century and the leadership wants to discuss how the important work FBC does to meet those challenges can be supported. Besides developing seeds for the Northern Plains, one of the most important values of previous FBC work was the effort to enable farmers to be actively involved in seed development and the preservation of variety.
- In addition to seed development, farmers are more interested than ever in cover crops, soil health, carbon sequestration, and nutrient

density. FBC can participate in measuring the value of these practices through good collaborative arrangements with universities and, in particular, with Carrington research station. One concern is the time it will take to both ramp up funding (prepare grants) and re-build collaborative relationships with a new generation of scientists and farmers. Additionally, discussions focused on the self-funding mechanisms and reporting structures that need to be adopted so that the FBC model can be renewed and improved upon. All agree this is important work and that we should keep working on ways it can be supported.

- The meeting adjourned and resumed via conference call on Sept. 16.
- The board discussed a recent letter from members expressing concerns about NPSAS planning and procedures, a new member welcome plan, the cutter bee donation from Hugh Dufner and the idea of having a conference workshop on the topic and mentorship program development.
- A motion was made and approved to provide \$200 to Food Freedom effort to encourage public input and transparent policy making with respect to cottage food rules in North Dakota.

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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We hope you will voice your support for NPSAS through a donation on one of these special days. Donations on these days will receive extra publicity and help to spread the word about the good work that NPSAS is doing throughout the region.

Toxins found in conventional milk

A recent study published in Public Health Nutrition by Emory University, in collaboration with The Organic Center, tested 69 samples of conventional and organic milk from store shelves across nine regions of the U.S. The samples underwent blind analysis to prevent bias.

Researchers found the majority of conventional milk samples contained pesticides, antibiotics, and synthetic growth hormone residues. All of the organic milk samples were free of these residues.

A disturbing majority of the conventional milk samples contained antibiotic residues, high levels of growth hormones, and contamination from controversial pesticides. Even antibiotics banned from use in lactating mammals were relatively common.

—cornucopia.org

Ranchers reject corporate control over markets

Nearly 500 cattle producers from 14 states rallied in Omaha in October to denounce corporate control over cattle markets and to demand that the Trump administration do something to fix it.

This “Rally To Stop the Stealin’” was put on by the Organization for Competitive Markets (OCM) and co-sponsored by more than 20 agricultural organizations including the Ranchers-Cattlemen Action Legal Fund (R-CALF), and several regional Farmers Union chapters and Cattle-men Associations.

Ranchers convened the rally in the wake of a Tyson packing plant fire in Kansas that took out roughly 5 percent of national beef slaughter capacity. This created a glut of slaughter-ready cattle, driving down prices for feedlots and ranchers. At the same time, beef prices rose as buyers fought to secure product, reaping record profit margins for the beef packers in the middle. Last month,

packers made an unprecedented \$415 per head, up from around \$150 before the fire, while cattle producers lost on average \$200.

The USDA has launched an investigation to determine if this dramatic disparity is solely due to market shocks from the plant closure, or if “price manipulation, collusion, restrictions of competition or other unfair practices” on the part of beef packers played any role. Either way, some ranchers argue that the vast ripple effect of losing one processing plant illustrates the fragility of consolidated meat production. The incident also reignited complaints about producers’ shrinking share of the beef dollar.

“Farm and ranch families are facing a great extinction,” said OCM Board Member and former Nebraska legislator, Al Davis. “If our government won’t stop the stealin’ now, the family farmer or hardworking rancher will be a just a dusty memory.”

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EPA proposal would shrink pesticide buffer zones

In the name of making safety regulations easier to implement, the EPA proposed Oct. 24 to reduce the size of buffer zones intended to protect people from exposure to pesticides during their application on the farm. Environmental and farmworker groups said the proposal would increase the risk of pesticides being sprayed on or drifting onto workers, neighbors, and passersby.

The EPA said it was making "modest, clarifying updates" to the 2015 regulation that requires so-called application exclusion zones around equipment applying pesticides. "One of the most repeated requests" from state pesticide regulators, said the EPA, has been for simpler rules.

Environmental and farmworker groups had a different take. "The end result is reduced protection in the application exclusion zone," said Iris Figueroa, a lawyer for the

advocacy group Farmworker Justice. Ken Cook of the Environmental Working Group said smaller buffer zones will mean more risk of exposure. "Not a single farmworker justice, environmental, or public health group supports [administrator Andrew] Wheeler's latest capitulation to the pesticide lobby," he said.

At present, a buffer zone of 25 feet is required around sprayer rigs that release large droplets more than 12 inches above the ground, and a 100-foot zone is required for aerial, air blast, and ground applications that release fine or very fine droplets as well as fumigations, mists, and foggers. Buffer zones extend beyond the boundaries of a field, possibly onto roadways or neighboring buildings.

Under the EPA proposal, the buffer zone would end at a farmer's property line.

—thefern.org

Consolidation expert quits

Thanks to the Trump administration's decision to move the agency out of Washington, the USDA's Economic Research Service is losing its top expert on market consolidation at a time when declining competition in agriculture is under increased scrutiny from policymakers and government officials.

Agriculture Secretary Sonny Perdue abruptly announced his plan to relocate the ERS and another USDA agency, the National Institute of Food and Agriculture, from D.C. to Kansas City in August. About 75 percent of employees at both agencies opted to quit rather than move.

Among the departed staff is James M. MacDonald, who formerly ran a branch of the ERS focused on ag markets, productivity, and innovation. He is a leading expert on market consolidation and worked at the ERS for more than 30 years.

—thefern.org



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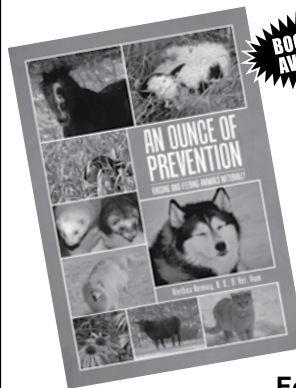
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- 1-800-FARM-AID (1-800-327-6243)
- Minnesota Rural Mental Health Specialists: Ted Matthews: 320-266-2390 or Monica McConkey: 218-280-7785
- Nebraska Rural Response Hotline 1-800-464-0258
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For many farmers and rural communities, these are hard times. Prices are down. Trade wars rage. The weather won't let up. Many friends and neighbors are going out of business, selling their operations or working extra jobs to make ends meet.

Mental health professionals see all the signs: There is an rural mental health crisis in farm country. One particularly troubling and telltale sign of hard times: There have been alarming upticks in the number of completed suicides in North Dakota, South Dakota and Minnesota.

In response, state officials and health professionals have swung into action with a bevy of plans, approaches and resources.

Among other initiatives, Minnesota and South Dakota have set up free and confidential hotlines specifically for stressed farmers and other rural residents seeking help. In North Dakota, Lutherans churches have launched a Faith and Farm Coalition to marshal help for struggling farmers. South Dakota is rolling out a new suicide prevention plan. The Minnesota Department of Health has started a series of training workshops around the state called SafeTALK, which aims to equip community members for tough conversations meant to help friends and neighbors thinking about suicide.

—Read interviews with farmers from ND and MN on inforum.com



Wetter, warmer, and more variable times ahead

South Dakota State Climatologist Laura Edwards gave a summary of what the fourth National Climate Assessment, which was released in November 2018, says about the future climate for the North Central region, which includes South Dakota, in an interview with Lori Walsh on SDPB's *In the Moment* on Oct. 8. Here are some of the highlights from that conversation:

Temperature: "Here in South Dakota we have seen warming temperatures in general when we look at an annual basis"—an increase of a couple degrees in the last century. This change isn't even across the year: Most of it has happened in the winter. "There's a strong consensus that we will continue to see warming in coming decades."

Precipitation: "The data is showing that South Dakota is getting wetter faster than most other states in the country—15 to 20 percent wetter than 60 to 70 years ago." This added moisture has come mostly in the spring and fall, complicating planting and harvesting.

Edwards said farmers and ranchers can do some things to make their operations more resilient, most of which falls under the category of soil health: planting cover crops, for example, or reducing tillage to prevent erosion during heavy rain events. "I think we have some strategies in our pocket that we can pull out, which are a little different than our traditional or conventional ways of doing things, but I think it's time to try those out."

Opportunities: Climate change does bring opportunities along with the challenges. Increased precipitation has meant increased yields in South Dakota, as well as the ability to grow crops such as corn and soybeans that weren't as common in the Dakotas a few decades ago.

Weeds and pests: "With a longer growing season and sufficient moisture, we do see a longer weed season and longer pest season in general." Some of those pests are coming up from the south. Warmer winters means more pests can survive the winter, which means dealing with pests we haven't had to worry about before. We

can learn from our Southern neighbors, who have been farming with these pests for years.

Livestock: The changing climate is bringing very wet springs and a lot of mud—"not great for calving and lambing, where you can get some more diseases early on when they are very young animals." Heat stress can also be a concern earlier in the season than has been typical until now.

Fire and drought: Fire remains a worry, as the variable climate means we'll still see droughts and heat waves. "Wet years like this allow that vegetation to grow, and that's what puts us at risk later of wildland fire."

Also, even though the general precipitation trend is increasing, there can still be a rapid onset of drought, as happened in 2017.

2019: This year has brought unbelievable precipitation and cool temperatures. Harvest is a couple weeks behind where we'd typically be. South Dakota has had record rainfall already and it's only October, and the runoff in the Missouri River is the second highest its been already. "Our soil moisture may freeze and lock in till the spring season, as it did in 2009 and 2010."

"I know we can make it through, but it's going to be a tough go." ☹️

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Organization helps farmers with legal issues

“What does this community need?”

That was the question that got Rachel Armstrong on the road to what would become her passion and her career.

She had been working on food, farming, and rural issues for her early career, and she wanted to find a way to help the community she worked with and loved. She looked for what was missing, and realized there was a dearth of practical legal information that addresses the concerns of farmers.

She enrolled in law school and worked hard to learn what she needed along the way to fill the needs of farmers and rural communities.



Rachel Armstrong

“They don’t teach you this stuff in law school,” Armstrong said. “There’s not even a class in farm law. I had to learn it for myself.”

She formed Farm Commons, a nonprofit, in 2012, and started to have class offerings for people in 2013.

“Today, we help farmers understand the law,” she said. She and Farm Commons’ four other employees go around the country hosting workshops, and they have a huge range of online resources.

So far they’ve done work in New England, Idaho, Colorado, and parts of the Midwest. “We go where we’re invited,” she said, and also where they might take advantage of where people are already gathering. An example of that is the pre-conference workshop that Farm Commons will offer at the NPSAS Food & Farming Conference.

“Our workshop focuses on core

resiliency—the fundamental best practices that you can adopt to become more legally resilient,” she said.

She’ll focus on six areas: land leasing and purchasing, business structures, sales contracts, agritourism and diversification (zoning, but also other issues), employment law, and food safety. “These are the six areas where people are exposed to the most risk,” she said. She’ll provide two “best practices” for each area that can make a farm a resilient business in regard to the law.

Armstrong added that Farm Commons doesn’t make money from the sale of legal services, so they offer the objective reality of the issues. The workshops are typically supported by grant funding.

Those interested in this workshop can sign up for it when they register for the Food & Farming Conference.

—Heidi Marttila-Losure

Cultivating Your Legally Resilient Farm

This workshop will be offered Thursday of the 2020 Food & Farming Conference

Forming a business the right way, practicing food safety measures, negotiating sales contracts, hiring workers, filing taxes . . . the legal issues involved in farming sometimes feel overwhelming.

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FARM COMMONS

What do farmers say about Sustainable Farm Law 101 workshops?

“Plain-spoken, good real world examples. Very comprehensive.”

“Way more approachable than expected! I feel like I can actually do this stuff the right way!”

“It was such an incredible gift to get so much valuable information even though I’ve only just begun learning about farming.”



Editor's Note: This article is reprinted with permission from www.grainews.ca; note that it was first written for a Canadian audience. It was published February 20, 2015.

Ten things to know about grain contracts

In a 2013 study, Jared Carlberg, a professor at the University of Manitoba, found that only 17 percent of farmers read their entire grain contracts.

This matters. How can we know whether or not we're getting a good deal if we don't know the details in the documents we're signing?

At a session at CropSphere in 2015, the Canadian Canola Growers Association's director of policy development, Cheryl Mayer, gave a presentation about understanding contracts.

To make sure they knew exactly what farmers are dealing with, Mayer and other CCGA staff collected copies of actual contracts from major grain buyers across the Prairies. Her presentation was a summary of what they found when they read these sample contracts, and how farmers can be better prepared to do business with grain buyers.

1. Read the whole thing

Mayer stressed that it's important for farmers to read the whole contract. This is going to take a while — there will be fine print and legal jargon.

Here's why it's important: there is no one standard grain contract. The terms and conditions at the end of each contract vary substantially from buyer to buyer. "It's the small print that we're talking about here," Mayer said. "There's some common elements, but the way they say things is very different."

Another reason to read your contracts regularly is that the contract terms can change without notice, and it's quite possible that no one at the company will tell you. "If you're reading them from year to year, you're going to notice," Mayer said. Knowing about the changes will give you a chance to ask about them. "They are not going to point it out to you."

A final good reason to read the whole thing is that usually, when you sign your name, you're signing a statement that says you've read and understood the contract. If there's something in there that you don't understand,

Mayer said, "it's not a negative thing to have to ask questions."

Don't forget: once you've signed a contract, the conditions are legally binding.

2. Get it in writing

"It's really risky to have a verbal commitment," Mayer said, even though she knows that many farmers often do business that way.

If there is something that you and your grain buyer have agreed to, "what you can do is ask that that is written into your contract." There is often a "special remarks" section or other blank space in a contract where this can be done.

If you have a specific verbal agreement with your buyer that's not written into the contract, and something goes wrong, the head office does not usually have to uphold that agreement. Typically, the contract will include language saying that the entire agreement is laid out in the contract. (Something like, "This contract includes the entire agreement between the parties...")

3. Get the whole thing

Many companies do business using two-part contracts. The front part will usually contain the key sale points, like the date, the price, the amount and the delivery location. The "terms and conditions" section usually includes the other details.

Sometimes, the grain company will only fax you the front section. Mayer has seen examples where the "terms and conditions" section of the contract is only available at farmers' request.

Ideally, you should keep the entire contract in your files. "If you do need to access those terms and conditions, you probably don't want to go into the elevator later when you're having a problem," Mayer said.

4. Learn about grading

Although you sign a contract to deliver a specific grade, some contracts have a clause that lays out what will happen if you deliver grain that is below the quality specified in the contract. Sometimes, this "schedule of discounts" is not included in the contract.

Mayer suggested that you also may want to specify what will happen if you deliver grain that is a higher quality than you've specified.

Mayer also suggested that farmers get familiar with grading. "Having a sense of how your grain is graded can be really beneficial, because you should be observing your grain being graded. That is your right."

5. Be clear about the delivery terms

After reviewing several grain contracts, "the one thing that we did notice is that the delivery terms vary widely," Mayer said.

Mayer found that some contracts allow grain companies to change the delivery location. While some of the sample contracts she read included a clause that would require the buyer to give 24 hours notice and provide the grower with compensation for delivering to a different location, not all contracts were as helpful. One contract allowed the company to change the delivery location "by notice to the customer..."

6. Understand the delivery period

Canadian contracts should contain a clause laying out compensation rights for farmers when grain is not called in before the end of the delivery period.

However, the delivery period may be longer than you think it is. Most companies' contracts include a clause extending the delivery contract beyond the delivery month. This is

Continued on page 16



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usually called the “extended delivery period.” Mayer has seen contracts allowing for an extended delivery period of anywhere from 30 to 180 days.

Generally, grain companies have written the compensation provision so that it doesn’t apply until the end of the extended delivery period. For example, if you had contracted to deliver your grain by the end of November, and the company has a 90-day extended delivery period, compensation for late delivery wouldn’t apply until after the end of February.

7. Understand the default risk

Most contracts include clauses outlining “liquidated damages” — how damages will be calculated if you default on your contract. These clauses vary widely from company to company. “Typically it’s an administration fee plus the difference in the price at that time,” Mayer said.

If you find yourself short on a contract, “it’s important that you talk to your grain buyer right away,” Mayer said. In fact, some contracts specify that you must notify the company as soon as possible.

There’s another benefit to getting in early: if you’ve had a production problem, chances are that some of your neighbors have too. “You’re going to want to be the first or second one in there talking to your grain buyer about what the solutions might be, as opposed to the 50th one.”

8. Be aware of set-offs

Set-offs are common in grain contracts. In these clauses, you’re agreeing that the company can assign money from your grain sale to take money that you owe to the seller, or to an affiliated business. For example, companies may take money from your grain sale to pay for your crop inputs.

9. Read about the Acts of God

“These contracts typically do contain Act of God clauses, but they’re not there in favor of the farmer. They’re there in favor of the buyer,” Mayer said.

Generally, these contracts excuse the buyer from their contractual obligations. “It’s extremely rare,” she said, for these Act of God clauses to be extended to problems at the farmers’ end. If the Act of God is intended to protect farmers, it may be offered at a premium, or there may be other requirements. Read carefully.

10. Hope for transparency

According to Jared Carlberg, only 12 percent of farmers agreed that their rights are protected when using contracts. “We hope to see that statistic change over time,” Mayer said. The CCGA would like to see more transparency in grain contracts. “It would be great to see companies have their terms and conditions on their websites.”

There was one company that did this in 2014, she said, “But they don’t anymore.” 🐾

Leeann Minogue is the editor of Grainews.



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Gary Matteson

*Senior Vice President, Beginning
Farmer Programs and Outreach
at Farm Credit Council*

Gary Matteson is an advocate for young, beginning, small, and minority farmer programs at the Farm Credit Council, trade association for the Farm Credit System of farmer-owned lending cooperatives. He's a frequent speaker/educator/trainer of young farmers on topics related to farm business start-ups, farm business transition, business planning, financial skills development, and leadership. This includes extensive work in local food system issues. He's also chairman of the board for the Farmer Veteran Coalition.



Don Wyse

*Professor and Co-Director of
The Center Integrated Natural
Resources & Agricultural
Management, University of
Minnesota*

Dr. Don Wyse conducts research on the biology and ecology of invasive weeds, diversification of cropping systems, weed management in annual and perennial cropping systems, design and management of renewable energy systems, and selection and breeding of winter annual and perennial crops. He is developing crops that provide new economic opportunities and improve water quality in the Mississippi River basin.



NCR-SARE Farmers Forum

The Farmers Forum is a traveling annual event giving farmers, ranchers, researchers and others the chance to share information about sustainable agriculture practices with a national audience. These presentations focus on research, demonstration, and education projects that promote profitable practices that are good for the environment and community. The projects and the Farmers Forum are funded by grants from North Central Region-Sustainable Agriculture Research and Education (NCR-SARE), a USDA-funded program that supports and promotes sustainable farming and ranching by offering competitive grants and educational opportunities.



www.npsas.org

Registration begins in November!



Celebrating 20 years of FBC farmers saving & developing seed

Editor's note: In honor of Northern Plains Sustainable Agriculture Society's 40th anniversary, we want to celebrate some of the organization's accomplishments so far. The Farm Breeding Club is high on the list of those successes. While FBC's story is familiar to many NPSAS members, this story is a look at just how innovative and influential FBC has been both for NPSAS and far beyond it.



For thousands of years, seed selection was part of a farmer's job. During the harvest, a farmer looked for the plants that had yielded the best, or that had other traits the farmer wanted: the sweetest, the biggest, or the most beautiful, for example. Those were the plants from which the farmer saved seed for the next year. Over the years, more plants with the desired traits grew from the seeds the farmer had saved. As conditions varied over many growing seasons—dry years and wet ones, insect infestations one year and rainstorms the next—the farmer's seed selection also incorporated traits of hardiness under adverse conditions. These seeds were the best for the farmer's own place, since they had been selected from that place.

This was not the situation in the late 1990s, when the seed of the Farm Breeding Club was being planted.

By that time, the vast majority of seed stock in industrialized countries such as the U.S. was developed and controlled by private companies—often in partnership with universities, which did much of the companies' research. In this structure, the farmer was no longer the observant scientist and designer who was part of the development of the seeds that were planted on the farmer's land. Instead, the farmer had been relegated to the role of consumer, taking what the companies and universities decided that the farms of the world should plant. The companies typically developed seed stocks for the problems and

Our food security depends upon farmers' ability to obtain and grow a diversity of seeds that are ecologically adapted and well-suited to their farming systems and markets. Their ability to do this is threatened by increasing corporate control of seeds and genetic material, including the patenting of genetics. Farmers are losing the power to choose what seeds to grow, where the seed comes from, and how it is produced.

—from the FBC's Bush
Prize application

conditions of an "average" farm—a farm that exists only in abstract, since every farm varies in its particulars.

This control even led to the punishing of those who dared to go around the system to save their own seed. Those who have seen the documentary *Food, Inc.* may remember the heart-wrenching scene in which a man with a seed-cleaning business was forced to name his customers—his neighbors—whose seed he had cleaned so they could save it for the next year, in violation of the seed company's patents. The current system had made seed-saving—the practice of farmers for thousands of years—a crime.

Organic farmers and those using fewer inputs faced additional problems, since commercially available



seeds were not addressing their needs—for example, they needed plants that could canopy the ground quickly for better weed competitiveness, and that had good root systems and durable disease resistance.

Raul Robison (1928-2014), a Canadian/British plant scientist, wrote about the successes and pitfalls of 20th-century plant breeding in *Return to Resistance*. He described plants that had been bred to resist disease and insects, and he explained how farmers could organize clubs to do their own plant breeding work.

Longtime NPSAS members Fred Kirschenmann, David Podoll, and Terry Jacobson read Robinson's book, recognized its salience, and began circulating it among NPSAS's members. This led to an invitation for Robinson to attend the 1999 NPSAS Winter Conference, which he accepted.

Following his presentation, 22 members signed up to work on developing seed stock as part of the NPSAS Farm Breeding Club. At a meeting soon after, the club was formalized with these initial goals: Enable farmers to develop, maintain, and trade seed varieties suited

to low-input agriculture in the Northern Plains; network with other organizations working to conserve biodiversity; and link food quality and taste along with varietal diversity for food by bringing together buyers, processors, and consumers to complete the food web.

Its growth over two decades from a group gathered around a sign-up sheet in 1999 was nothing short of phenomenal. FBC's accomplishments during that time included advancements in the crops themselves, the development of innovative collaborative relationships, and the example that it set, raising the profile of participatory plant breeding in the industrialized world and serving as a model for many other organizations that developed based on the inspiration of the FBC. It received many grants and won the prestigious Bush Prize for Community Innovation in 2013.

Theresa Podoll and other FBC members described the FBC's work in their application for the Bush Prize, and the summaries of the accomplishments that follow are from that writing.

Continued on page 20



"As farmers, it is our right and our responsibility to save and develop seeds. I believe that's an important point. It is our right. And it is our responsibility to carry on these genetic resources of our farms."

—Steve Zwinger,
FBC co-coordinator

"Much of what we are doing is sort of re-inventing what we once had in the past but using some modern tools. So we have modern communication tools and all of the new knowledge about plant breeding genetics that we can bring to what was an ancient system of development of varieties of seeds right on-farm."

—Frank Kutka,
FBC co-coordinator

Farmers gather to view organic wheat variety trials.
Above left: Triticale is one of the crops FBC has developed.
Photos courtesy Theresa Podoll



"One of the things that we really found unique was the collaboration that the club had with the university—particularly in this case it's NDSU and the Carrington Research Extension Center. That was an important step that really helped in the development of the club, to have that relationship with the university."

—Frank Kutka,
FBC co-coordinator

The above quotes were from a video celebrating the FBC's Bush Prize

Seed Development

The FBC has conducted organic on-farm trials and selection work on wheat, oats, triticale, rye, field peas, hairy vetch, forage radishes, and vegetable crops, including potatoes, carrots, green beans, peppers, tomatoes, and cucumbers. Sorghum and cowpea varieties, traditionally southern crops, have been identified that can be taken to seed in northern latitudes, potentially increasing farmers' cropping options. FBC increased the seedstocks and availability of heritage wheat varieties and ancient grains, including emmer, einkorn, and spelt.

Collaborative Relationships

The FBC sought to coalesce a community-of-interest to address the need to breed and select crop varieties that would thrive under organic and low-input farming systems. FBC partnered with research agronomists to conduct variety trials, providing initial "proof of concept" to the hypothesis that varieties respond differently within organic vs. high-input environments, confirming the need to breed crops specifically for organic and low-input production.

In 2003 NPSAS participated in the Kellogg-funded initiative "Shared Leadership: Cultivating Leadership for a Changing Agriculture." Also participating were the Crop Science Society of America (CSSA) and the American Society of Agronomy. As a result of this networking, together we sought grant funding to host a strategic planning retreat in 2004 on participatory plant breeding for organic and low-input farming systems. Participants included corn, wheat, barley, and oats breeders and research agronomists from the University of Minnesota, North Dakota State University, South Dakota State University, and the

University of Wisconsin-Madison; organic farmers and FBC members from ND, SD, MN, and IA; and representatives from the Organic Seed Alliance and Leopold Center for Sustainable Agriculture. This retreat provided key-stakeholder input into the development of the FBC Participatory Plant Breeding (PPB) model.

The FBC was set up to address priorities for crop variety improvement needs as determined by the membership, including participating farmers, plant breeders, research agronomists, processors, and buyers. ...

FBC has forged PPB relationships with plant breeders, farmers, millers, bakers, processors, and distributors in ND, SD, MT, MN, NE, WI, NY, VT, ME, PA, WA, OR, Canada, Germany, Russia, and Syria.

An Example to Follow

The FBC has shared germplasm and seedstocks in collaborative relationships with farming groups and researchers from the West to East Coast, allowing us to model best practices in germplasm sharing, public seed systems, and public plant variety improvement.

FBC has provided support and seed to other groups and regions launching their own farmer-led PPB efforts, including:

- Northern Grain Growers, Vermont
- Participatory Wheat Breeding, University of Manitoba
- Save Seeds Now!, Miami University, Ohio
- Seedtime Seed Cooperative, Tennessee

Leaders from these other groups have communicated to NPSAS that FBC's existence gave them permission to start their work.

Benefits to NPSAS

Even NPSAS members who have not participated directly in the Farm Breeding Club can feel some personal gratitude for the club, since FBC's successes have spread good things to the rest of NPSAS. NPSAS's name recognition and reputation rose along with FBC's; FBC's grants included a portion for overhead expenses that reduced NPSAS's overall costs. A million-dollar donation to NPSAS was given in part in recognition of the good work being done by the FBC.

The FBC was a way in which NPSAS members could act directly in support of its mission, and many appreciated and took advantage of that opportunity.

Growing Pains

Like many organizations that grow quickly, FBC experienced some growing pains in recent years. Its challenges weren't helped by frequent turnover in NPSAS's executive director position.

These were problems borne of success: Many funders believed in FBC's work, so they funded more grants than FBC's had dreamed they could receive—which also brought additional administrative work. Many farmers participated, and a lot of seed was developed and grown—resulting in questions about how to sell the seed and store it until it was sold.

These growing pains are why the NPSAS board

FBC-Dylan is a variety of wheat developed by FBC.



pressed "pause" on FBC's work for a time so they could work with FBC to chart a stable path forward. In their September meeting, the board reaffirmed its commitment to FBC: "All agree (FBC does) important work and that we should keep working on ways it can be encouraged and supported," according to the board's minutes.

Into the Future

So what's next? NPSAS recently surveyed some of the key individuals in FBC and found some direction in their responses. First, several farmers have continued developing seed stock in the past two years even without FBC's formal structure—an encouraging sign. And



they named the questions that need to be answered and the policies that need to be in place to put FBC on sure footing in the future.

One key part of FBC's work that is still moving forward is a collaboration with the seed company Pulse USA, which is selling three cowpea varieties developed by FBC. When farmers purchase the seeds, a royalty goes back to NPSAS, which will help to support future seed stock development. Developing a way to make the FBC's work self-sustaining had been a key recommendation of the Bush Foundation as it supported the FBC as part of its first grant, and this partnership with Pulse USA serves as a test case for that.

There is much to celebrate in the work of FBC in its first 20 years. The time has come for those who care about the seeds that are the basis of our food system to decide what FBC will accomplish in the next 20. 🐦

Ideas for FBC's future

"Minor-use crops like buckwheat and others are an example of crops that are needed for the future of agriculture. Perennial crops for grain, forage, and cover to protect the soil are other examples." —

Steve Zwinger

Glen Philbrick indicated he continues work on selecting seeds for vegetables and flowers. In regard to future research, "I believe there should be a focus on crops that can fit into a rotation for weed control and profitability." He supports the idea of providing stipends to participants in variety trials.

Frank Kutka describes his work: "I have made some selections on a population of Hungarian Vetch (cover crop, fodder) but have not been able to plant this fall (rain). It has been my intention to move some varieties towards commercial outlets and to eventually share some of the small income potential with the club to help fund club activities. This is one of them. Also have been working on winter emmer, winter einkorn, cowpeas, rye, etc. Some of these sprung from FBC projects and some are just mine with the hope of supporting FBC if anything ever worked out." He says that writing policies that reflect FBC's values and clarify money and seed ownership issues should be a high priority.

Noreen Thomas has been selecting seeds for flavor on her farm. For future research, she suggests "developing seed for niche markets that grow up in the north land."

Do you have ideas on FBC's future direction? Please contact Verna Kragnes: verna.kragnes@npsas.org or (218) 331 4099.

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Organic by doctor's orders

Eve Larson has been interested in agriculture her entire life, but her interest in organic agriculture started after a visit to the doctor's office.

Larson, who now lives in Aberdeen, S.D., grew up on a farm west of Frederick, S.D., where her family raised Herefords. She helped with some of the farm work: raking hay and milking, for example. She and her siblings had 4-H calves. They had horses, and she and her brother and sister all rode. They even had their own rodeo for a couple years. Her cousin had a trick horse that had been purchased from the Shrine White Horse Patrol, and her sister could ride on her horse standing up. Her uncles and the neighbors were charged a quarter when they came to watch. "It was the time of Dale Evans and all that rodeo stuff," Larson said.

Larson got her undergraduate degree in agriculture from Ohio State. "It was mainly economics, but we had to judge chickens. And I hate chickens. I thought, why can't we judge cows like we did in 4-H?" she said with a laugh.

She went on to study economic development at Iowa State, and it was there that she struggled with illness. One of the professors at Iowa State urged her to go see an allergist, and she knew just the person: Dr. George Kroker of La Crosse, Wisconsin. He retired this spring after 38 years, and his practice, Allergy Associates of La Crosse, put out a press release upon his retirement that described his philosophy: "treat the cause of allergy-related illnesses, rather than mask the symptoms."

"Instead of treating the symptoms with a pill, you control your environment," Larson said.

Kroker did a number of tests to determine what might be adversely affecting Larson and eventually

diagnosed her with multiple allergies and an overgrowth of *Candida*.

"When I came back to South Dakota (in the mid-1980s), I was very interested in having ... as clean of an environment as I could, so my immune system could heal, since it had been so insulted," Larson said.

So, for example, she purchased a cotton mattress and cotton bedding, and she kept the bedroom in as clean a condition as possible, so she could at least sleep for eight hours in an environment that didn't trigger her allergies.

She also tried to ensure that no gas fumes could make their way into her home, and that no one sprayed pesticides nearby.

"So then I started reading up on environmental issues," she said. And her interest in organic and sustainable agriculture grew from there.

Larson became a member of NPSAS in the 1990s, and went to all the winter conferences that were held in Aberdeen. She appreciated the good information she was able to get from those events.

Larson is a member of other organizations working toward similar ends: She's served on the board of Natural Abundance, a local co-op, and she's a member of the Xerxes Society (she really wants to get some pollinator habitat going on the farmland she still owns) and of the local League of Women Voters, which keeps an eye on water quality and other quality of life issues.

She's also been known to nudge people into thinking about things differently. Once she walked into the ag department at Ohio State and asked some of the faculty why they weren't doing more with sustainable and organic agriculture. (They said "Huh?" at the time, she said,



Eve Larson smiles from behind some of the sorghum that birds had planted as they visited the bird feeders in her yard. Photo by Heidi Marttila-Losure

but since then she's heard they have some more sustainable endeavors.) Her cousin, Rory Mikkonen, mentioned during the NPSAS-sponsored field tour this summer that he and his brother started to look into organic farming in part because of a conversation they had when Larson came to visit. Larson doesn't remember much about that conversation, except that she told them that Dr. Kroker had told her that we shouldn't eat chemicals.

She is also trying to do her own part in her yard, where her two poodles play. "I don't use chemicals on my lawn," she said, and she wonders why dandelions are considered our enemies.

She let the sunflowers and the sorghum grow from seeds that the birds dropped from her feeders, and she was rewarded this summer with her own eclectic garden. She's pleased that her yard would be considered a pollinator-friendly habitat, "if they had such a thing in Aberdeen," she said. 🐾

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Agriculture is perfectly poised to play a major role in the solution to the climate crisis. By helping young farmers gain access to land, everyone can help play a role. Illustration by Jon Adams, courtesy of [The Perennial Farming Initiative](http://ThePerennialFarmingInitiative)



For a sustainable climate and food system, regenerative agriculture is the key

The recent report from the Intergovernmental Panel on Climate Change shows that agriculture is responsible for 37% of greenhouse gas emissions. There's hope—and a solution.

From where I stand inside the South Dakota cornfield I was visiting with entomologist and former USDA scientist Jonathan Lundgren, all the human-inflicted traumas to Earth seem far away. It isn't just that the corn is as high as an elephant's eye—are people singing that song again?—but that the field burgeons and buzzes and chirps with all sorts of other life, too.

Instead of the sunbaked, bare lanes between cornstalks that are typical of conventional agriculture, these lanes sprout an assortment of cover crops. These are plants that save soil from wind and water erosion, reduce the evaporation of soil moisture, and attract beneficial insects and birds. Like all plants, these cover crops convert atmospheric carbon dioxide into a liquid carbon food, some for themselves and some to support the fungi, bacteria, and other microscopic partners underground. A portion of that carbon stays there, turning

poor soil into fragrant, fertile stuff that resembles chocolate cake.

The field rustles with larger life forms, too. Lundgren was visiting this particular field to meet up with a group of his grad students splayed among the plants, sucking insects into plastic tubes to be later identified and counted. Lundgren launched a research institute called Ecdysis back in 2016 to conduct comparative studies between

Continued on page 24



conventional agriculture and regenerative agriculture, which is generally defined as agriculture that builds soil health and overall biodiversity and yields a nutritious and profitable farm product. Regenerative farmers avoid tilling so that they protect the community of soil microorganisms, the water-storing pores they create underground, and the carbon they've stashed there. They encourage plant diversity and plant cover that mimics nature in their fields, avoid farm chemicals, and let farm animals polish off the crop residue.

All of us are familiar with conventional agriculture: the miles upon miles of farmland growing only one crop, the destructive tillage that wafts soil and its stored carbon into the air and into our waterways; the use of hundreds of chemicals including pesticides like chlorpyrifos that have been found to cause brain damage in children; the confined facilities that are both cruel to animals and make their impact on the Earth an assault rather than a gift.

This is the kind of agriculture targeted in the most recent report, released Aug. 8, from the Intergovernmental Panel on Climate Change, in which a panel of 100 scientists concur not only that the food system contributes 37% of greenhouse gases, but also that a more sustainable agriculture can help address global warming.

Reading through the report, I can't help but wonder whether any of those 100 scientists have visited the kind of agriculture that can turn this mess around or whether they've just read about it in studies. Whether they've ever smelled the soil that comes from these farms or seen the incredible variety of birds and insects thriving alongside the crops. Whether they've ever talked to the farmers who are discovering how to grow healthy food and healthy landscapes at the same time.

I first started writing about those farmers back in

2011, when there were more amazing anecdotes than studies, but that has changed. Lundgren himself published a study with his former student Claire LaCanne in 2018. The study followed 10 cornfields per farm on 20 farms over two growing seasons, half of which were regenerative and half conventional. The study tracked soil carbon, insect pests, corn yield, and profits.

The results give the imprimatur of science to the successes regenerative farmers have reported for years. Lundgren and LaCanne found that there were more pests in the conventional cornfields that were treated with insecticides and/or used GMO seeds than in the pesticide-free regenerative fields, presumably because the cover crops attracted battalions of predator insects that decimated crop pests—and because there were no insecticides to kill off those beneficials.

And while the regenerative farms used older, lower-yielding corn varieties without fertilizer and had lower yields, their overall profits were 78% higher than the conventional farmers'. Partly, this was because the regenerative farmers' costs were so much lower, with no cash outlays for costly insecticides and GMO seeds. They also "stacked enterprises" and had two or more sources of income on the same acre—in this case, they grazed their cattle on corn residue after harvest and got a premium price for pastured beef. What was the primary factor correlating with farm profitability? The amount of carbon and organic matter in the farmers' fields, not their yields.

The venerable soil scientist Rattan Lal was one of the first people to connect the loss of soil carbon caused by destructive farming to the buildup of carbon dioxide in the atmosphere. In a 2018 interview with Soil4Climate, Lal said that he and his colleagues estimated that regenerating landscapes—farms, forests, coastlands, and so

Blue Dasher Farm staff lead a tour of farmers from around the world to see a regenerative system in practice. Above, right: Blue Dasher Farm staff talk with farmers about beekeeping and pollinator declines.

Photos courtesy Jon Lundgren





on—could restore up to 150 gigatons (a gigaton equals 1 billion tons) of carbon to the world's soil in 80 years. All the extra vegetation grown to put that carbon in the soil would store 150–160 gigatons more, resulting in a terrestrial biosphere holding an additional 330 gigatons of carbon, equal to a drawdown of 150 to 160 parts per million of CO₂ from the atmosphere. "We should encourage the policy makers that this process of restoring degraded soils and ecosystems is a win, win, win option," Lal says. "It's a bridge to the future."

Several of the Democratic presidential hopefuls have added agriculture to their climate platforms—most notably Rep. Tim Ryan, who proposes policies to support regenerative agriculture and soil carbon sequestration. Just this week, Sen. Elizabeth Warren added to her climate platform a sweeping plan to overhaul agricultural policy, while Sen. Cory Booker announced he would propose the Climate Stewardship Act to the Senate in September; both would pay farmers for conservation practices.

And farmers of the future are ready to take it on.

"Agriculture is perfectly poised to play a major role in the solution to the climate crisis," says Bilal Sarwari, membership and communications manager of the National Young Farmers Coalition. "By helping young farmers gain access to land, everyone can help play a role."

I can't help but believe that the 100 scientists would become hopeful themselves knowing this, hopeful that humanity can turn away from the dire environmental path we've been treading. 🐾

Kristin Ohlson wrote this article for YES! Magazine. Kristin is the author of "The Soil Will Save Us: How Scientists, Farmers and Foodies are Healing the Soil to Save the Planet." She lives in Portland, Oregon, and is working on a new book about cooperation in nature called "Sweet in Tooth and Claw: Cooperation at the Heart of Nature," to be released in 2021 by Patagonia.



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Set up safe work strategies for kids on the farm

Many of us are probably of two minds about children and farm safety: We want our children to be safe when work on the farm. *Of course* we do! But we want our children to participate in farm life as much as they can be so they both learn to appreciate its benefits and can be helpful in the work. The “safest” place for children might well be inside, but that has its own health drawbacks.

How can we make sure our children participate in farm life without too much risk of injury or worse?

The National Children’s Center for Rural and Agricultural Health and Safety is focused on helping farm families think about these issues and develop plans and strategies to keep their kids safe while working on the farm. They’ve developed a website—cultivatesafety.org—with lots of information for families about farm safety in general, as well as how particular tasks can be accomplished more safely. The infographic below, adapted from that website, shows some facts to consider as you develop safe work plans for your own farm.

Top 5 Injury Statistics

A child dies in an agriculture-related incident about every 3 days.

The number of ag-related youth worker fatalities is higher than all other industries combined.

60% of child ag-related injuries happen to children who are not working.



Every day, about 33 children are injured in an agriculture-related incident.

Many agricultural work-related injuries and deaths are associated with children doing work that does not match their developmental level.

Economic Impact:
\$1.26 BILLION

Non-fatal youth agricultural injuries cost society an estimated \$1.26 billion per year, and can wipe out an individual family farm’s annual profits in just days, depending on severity.³

Top 3 Causes of Injuries & Fatalities

Fatal¹

- Machinery
- Motor Vehicles
- Drowning

Non-Fatal²

- Falls
- Animals
- Machinery/Vehicles

Learn more at cultivatesafety.org

1 Goldcamp M, Hendricks KJ, Meyers JR. (2004). Farm Fatalities to youth 1995-2000: A comparison by age groups. Journal of Safety Research. Vol. 35(2): 151-157.
2 NIOSH (2013). Analyses of the 2012 Childhood Agricultural Injury Survey (CAIS). Morgantown WV: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Division of Safety Research. Unpublished.
3 Zaloshnja E, Miller TR, Lawrence BA (2012). Incidence and Cost of Injury Among Youths in Agricultural Settings, United States, 2001-2006 Pediatrics. Vol. 129(4): 728-734.

A tool for determining what’s safe for your child

Wondering what’s age-appropriate for your child? Cultivatesafety.org has tool for that. Go to <https://cultivatesafety.org/work/>, then click on “Youth Work Guidelines.”

For example: Want your child to mow the lawn? Search for “lawn mower” and you can print out a sheet that includes the things that a youth must do to do the job safely, a list of adult responsibilities, what supervision is required by age level, a list of potential hazards, and protective strategies.



Top 5 Safety Strategies

1. Keep kids away from tractors. Tractors cause over 40% of accidental farm deaths of children under 15, Yet 4 out of 5 farm children regularly ride tractors.

2. Keep young children out of the worksite. Equipment hazards include skid steers, ATVs, and PTOs. Close supervision is required for working in/around grain, animals, and around gates, tires, and environmental hazards.

3. Ensure age appropriate work. Remember, teens have traits that the adults assigning the work often do not:

- Lack experience
- Impulsive and risk-taking attitude
- Desire to prove themselves
- Susceptible to peer pressure
- Reluctant to ask questions

4. Ensure the environment is as safe as possible. Eliminate/reduce hazards such as distractions, slippery/uneven surfaces, and repetitive motion. Also provide protective equipment such as non-skid shoes, gloves, and hearing protection.

5. Provide training for work/tasks & ensure proficiency. First, model safe behaviors yourself (this may be your most effective lesson). Take the time to train youth to do the job—don’t just throw them in to figure it out. Let them practice under your supervision until proficient, and continue to supervise as appropriate. 🐾

FALL FLAVORS

Six delicious ways to use apples & pears in the kitchen

We all know the scents of fall, when the air is tinged with a chill and the kitchen is full of the most recent harvest of vegetables and fruits. The smell of cinnamon is heavy in the air, and the apple pie is cooking. This list of six recipes is bound to liven up the menu as autumn takes over.

1. The Bread and Butter

Slicing into a loaf of homemade bread never gets old, especially when you are slicing through clumps of juicy pear along with it. The recipe at right is for fresh pear bread. This maybe wasn't the first option that came to mind when thinking of what to do with pears, until now!

The recipe below is for any bread's companion, butter, specifically apple butter. Apple butter is traditional in many homes and it goes well with almost any kind of bread for absolutely any meal.

Apple Butter

- 5.5 lbs apples, cored and chopped
- 1 cup brown sugar, tightly packed
- 3/4 cup sugar
- 1 Tablespoon ground cinnamon
- 1/4 teaspoon salt
- 1/8 teaspoon ground cloves
- 1 vanilla bean or 1 1/2 teaspoon vanilla extract

Place apples in a large slow cooker. Combine sugar, brown sugar, cinnamon, salt, and cloves. Pour sugar mixture over apple pieces and stir until well combined. Cook covered in crockpot over low heat for 10 hours. Use an immersion blender to puree apples until smooth. Scrape the inside of the vanilla bean into your apple puree (or add vanilla extract). Turn crockpot on to low heat and cook another 2 hours uncovered, stirring occasionally. Store apple butter in the refrigerator in an airtight container. It will keep about 2 weeks.

<https://sugarspunrun.com/apple-butter/>



Fresh Pear Bread

- 3 large eggs
- 1-1/2 cups sugar
- 3/4 cup vegetable oil
- 1 teaspoon vanilla extract
- 3 cups all-purpose flour
- 2 teaspoons baking powder
- 2 teaspoons ground cinnamon
- 1 teaspoon baking soda
- 1 teaspoon salt
- 4 cups finely chopped peeled ripe pears (about 4)
- 1 teaspoon lemon juice
- 1 cup chopped walnuts

In a bowl, combine the eggs, sugar, oil and vanilla; mix well. Combine flour, baking powder, cinnamon, baking soda and salt; stir into the egg mixture just until moistened. Toss pears with lemon juice. Stir pears and walnuts into batter (batter will be thick). Spoon into two greased 9x5-in. loaf pans. Bake at 350° for 55-60 minutes or until a toothpick inserted in the center comes out clean. Cool for 10 minutes before removing from pans to wire racks.

<https://www.tasteofhome.com/recipes/fresh-pear-bread/>



Continued on page 28

2. Dried Apple and Pear Chips

For those that are trying to get in a last couple of hikes before the weather turns, or for mothers finding a healthy alternative, these dried fruit chips should be a go-to. These two recipes involve nigh-on the same process and ingredients with the fruits swapped out. Combining them allows for a variety of flavor in each ready-to-go bag, as well as a range of nutrients and vitamins to keep you and your loved ones going.

<https://www.wellplated.com/apple-chips/>
<https://www.marthastewart.com/1080799/slow-roasted-pear-chips>

3. Apple Chickpea Veggie Burgers

Now for a bit more of a non-traditional idea, using apples as a tangy ingredient in veggie burgers. Those that need, or have created, a non-meat-based diet for themselves are constantly on the lookout for new substitution ideas to try. A smoky and yet sweet flavor profile keeps all members of the family coming back to the table for more.

<https://www.connoisseursveg.com/smoky-apple-sage-chick-pea-veggie-burgers-or-breakfast-sandwiches/>

4. Apple Cinnamon Rolls

With a slight twist on the beloved cinnamon roll recipe, this one is “healthier” with apples in every bite. The recipe calls for a bit of fluffy crust served with a side of apple and some caramel drizzle. What a great surprise for anyone to wake up to first thing on a chilly morning!

<https://www.unicornsinthekitchen.com/apple-pie-cinnamon-rolls/>

5. Salted Caramel Apple Pie Bars

These bars are a perfect apple treat. The layers are done up with a soft shortbread crust followed by decadent apple on the bottom, topped with a streusel crumble and drizzled with salted caramel. Although it sounds like it might be complex, it is said to be easier than apple pie! Doesn't this sound like the perfect way to kick off the season?

6. Autumn Spice Pear Cobbler

Although this recipe is not entirely unique as cobbler is a fall-time favorite of many, it gains some personality in its fruit ingredient. It may not be as common to use pears for a cobbler, but it is definitely worth giving it a try. To top it all off, it lists a combination of spices that is sure to draw in any autumn-lover just by scent alone!

<https://bakeorbreak.com/2016/10/autumn-spice-pear-cobbler/>

Amanda Williams is a freelance writer from Brookings, SD. With a background in Horticulture, even if she isn't in the garden, she is writing about it. She can be reached at amanda.williams@gmail.com

Salted Caramel Apple Pie Bars

Shortbread Crust

1/2 cup (115g) unsalted butter, melted
 1/4 cup (50g) granulated sugar
 1 teaspoon pure vanilla extract
 1/4 teaspoon salt
 1 cup (125g) all-purpose flour (spoon & leveled)

Apple Filling

2 large apples, peeled and thinly sliced
 2 Tablespoons all-purpose flour
 2 Tablespoons granulated sugar
 1 teaspoon ground cinnamon
 1/8 teaspoon ground nutmeg

Streusel

1/2 cup (40g) old-fashioned oats
 1/3 cup (70g) packed light or dark brown sugar
 1/4 teaspoon ground cinnamon
 1/4 cup (30g) all-purpose flour
 1/4 cup (60g) unsalted butter, cold and cubed
 homemade salted caramel sauce

(<https://sallysbakingaddiction.com/homemade-salted-caramel-recipe/>)

Preheat the oven to 300°F (149°C). Line the bottom and sides of an 8-inch square baking pan with aluminum foil or parchment paper, leaving enough overhang on all sides. Set aside.

Crust: Stir the melted butter, granulated sugar, vanilla, and salt together in a medium bowl. Add the flour and stir until everything is combined. Press the mixture evenly into the prepared baking pan. Bake for 15 minutes while you prepare the filling and streusel.

Apple filling: Combine the sliced apples, flour, granulated sugar, cinnamon, and nutmeg in a large bowl until all of the apples are evenly coated. Set aside.

Streusel: Whisk the oats, brown sugar, cinnamon, and flour together in a medium bowl. Cut in the chilled butter with a pastry blender or two forks until the mixture resembles coarse crumbs. Set aside. Remove the crust from the oven, and turn the oven up to 350°F (177°C). Evenly layer the apples on top of the warm crust. It will look like there are too many apple slices, so layer them tightly and press them down to fit. Sprinkle the apple layer with streusel and bake for 30–35 minutes or until the streusel is golden brown.

Remove from the oven and allow to cool for at least 20 minutes at room temperature, then chill in the refrigerator for at least 2 hours (or overnight). Lift the foil or parchment out of the pan using the overhang on the sides and cut into bars. Once cut, drizzle some salted caramel sauce on top of each.

<https://sallysbakingaddiction.com/homemade-salted-caramel-recipe/>



Picking and storing apples and pears

By Rhoda Burrows

Professor & SDSU Extension Horticulture Specialist

Apples and pears are rewarding fruit to grow. Picking them at the right time and storing them under the proper conditions will enhance their flavor and help them last into the fall and winter.

Apples

HARVEST

Apples should be harvested when the fruit is fully ripe. Color change can be deceiving, since apples may turn red before they are fully ripe. Apples will develop flavor and sweetness over time, and sometimes the best test is simply to keep sampling the fruit until it has developed its full flavor. Another indicator is to slice open a few apples, and check the seed. The seed will turn brown when the apple is ripe. Pick them with a slight upward twist of the stem to avoid damaging the fruiting spurs they are borne on.

STORAGE

Once picked, apples will keep best when stored unwashed at 32-34 degrees; they will freeze at 29 degrees.

Try not to store them with carrots, as the ethylene from the apples will be detrimental to the taste of the carrots.

Pears

HARVEST

Pears, unlike apples, should be picked from the tree before they are fully ripe. If the fruit are left on the tree to ripen, stone cells develop in the fruit, giving the pear a gritty texture, and the inner flesh may begin to rot from the inside. Tree-ripened fruit may also be poorly flavored.

Harvest pears when the fruit is just turning from a bright, leaf-green to a light greenish yellow; at this stage the small spots (lenticels) on the fruit surface change from white to brown, and the surface may become somewhat waxy. The flesh should give slightly when squeezed in your hand, as opposed to the rock-hard consistency of immature fruit, but the fruit should not be fully soft. Juice should appear on a cut inner surface, and the seeds will have turned brown. Stems should separate easily from the spurs with an upward twist of the fruit. If the spurs come off the tree, the pears are not ready to pick. If picked too early, they also do not develop good flavor and will shrivel in storage.

STORAGE

Refrigerate pears at a temperature of 30 to 32°F and a relative humidity of 90 percent until you are ready to ripen them. To ripen stored pears, place them at room temperatures (60° to 70°F) for 7 to 10 days. To hasten ripening, place the fruit in a tightly sealed plastic bag. Pears give off ethylene gas, which accumulates in the bag and promotes ripening.

Once ripe, pears may be stored under refrigeration for only a few days. If held beyond their normal storage life (1 to 3 months, depending on variety), they will not ripen. For canning, pears should still be slightly resilient, and peel easily. Pears that become soft after canning were probably overripe.

Policies create advantages for large-scale ag

Recently US Secretary of Agriculture Sonny Perdue created a media stir while visiting with dairy farmers in Wisconsin. He is reported to have said, “Now what we see, obviously, is economies of scale having happened in America—big get bigger and small go out.” The sentiment he expressed sounds familiar to those who were following agricultural policy in 1971 when then-Secretary of Agriculture Earl Butz coined the phrase “Get big or get out.”

Secretaries Butz and Perdue got it partly right.

Ironically, in the last 40 years small farm numbers have stayed relatively constant. The largest losses in farm numbers have occurred among mid-sized farms run by full-time farmers, while the biggest farms have gotten bigger. Mr. Perdue implies such losses in numbers and consolidation in agriculture are natural and a logical consequence of the economy of scale and supply and demand.

There is nothing “natural” about the big getting bigger. In nature, there are always limits to size and consequences for exceeding them. Hummingbirds don’t grow as big as ostriches. Such a bird could not fly. Elephants only grow to about 7 tons. Human selection for ever-bigger livestock has had serious consequences. I have seen sheep bred to be the size of Shetland ponies. They are highly prone to heart attacks, bad hooves and backs. Some cattle breeds have been bred to have large, double-muscled calves, nearly all of which have to be delivered by cesarean section. Really large dogs have shorter lives, are prone to hip dysplasia, arthritis, heart problems, spinal and eye problems.

Bigger may be more efficient in some cases. This is especially true in industries where inputs can be standardized, processes can be uniform and repeated, skills can be specialized and the resulting product is always the same. Even then, over time, there is inevitably a diseconomy of scale where efficiencies begin to decrease.

Financial return on investment cannot be the only economy of scale considered. External consequences need to be taken into account. Cavalier County, North Dakota, where I have lived for most of my life, was home to 15,659 people at its peak in 1910. When I was born in 1949, approximately 11,850 people lived here. The county seat, Langdon, had two creameries, three bakeries, four grocery stores, a theater, three hardware stores, a couple drug stores, two department stores, a couple dress shops, a men’s store, several bottle shops, a number of bars, several automobile dealers, a welding shop, gas stations on most corners, a couple five and dime stores and many other things I can’t remember. The population of the town was about what it is today, around 1,800 people. The economic vitality of the town was due to the number of farms and farm families in the surrounding countryside.

When Earl Butz admonished farmers to “get big or get out” in the early 1970s, the town of Langdon had a population of 2,185 people, partly because of an influx


of workers building missile installations on the prairie. The population of the county as a whole had declined by 3,600 people to 8,213, largely because the agricultural economy had forced many farmers to leave and look for their livelihood elsewhere.

There are now about 3,800 people in Cavalier County, less than half the number living here in 1970 and a third of the number when I was born. Schools have closed. Churches have closed. Grocery stores find it difficult to get suppliers to deliver to them. Restaurants can’t find employees. The remaining retail stores struggle to keep their doors open and to serve their local customers.

Perhaps farmers are like everyone else. We always believe bad things will happen to someone else, that we will be the ones to survive. We want to become one of the “big farmers” who are destined to survive. We buy better seeds, bigger equipment, adopt the latest technology, take out bigger loans and rent more land and work harder and longer. We watch our young people move away because they cannot afford to stay. We watch our neighbors quit and their farmsteads are sold to hunters who come once a year or to urbanites who want a place in the country but can’t afford a lake cottage.

Secretary Perdue is in part right. We don’t support small businesses and guarantee them a profit. We only do that for those who are “too big to fail.” That is also true of small farms. Banks charge higher interest rates on small loans in comparison to really large ones. Large farms are eligible for lower crop insurance costs. They are deemed to be a lower risk since their crops can be spread over a larger area. Small farmers who plant a diverse mix of crops have lower base acres and are paid proportionally lower support payments. Grain buyers seek out large producers who can fill their unit trains. Meat processors give preferential contracts to large cattlemen who can fill their feedlots.

Big farms are not inevitable. Farm subsidies, financial institutions, corporate structures and trade negotiations have created the climate in which bigger is better.

When we talk about efficiencies of scale, we need to ask, “For whom?” We need to ask what is the cost to the community, the environment, to others in the world. There are winners and losers in this game and sometimes the losers are us. Rural communities have reaped what Earl Butz and Sonny Perdue have sowed. 

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The USDA Sustainable Agriculture Research and Education Program has been helping farmers, ranchers, gardeners, and students achieve their goals for improved profit, production, natural resources, and quality of life for 30 years.



Contact: **Bill Hodous, Karl Hoppe, or Clair Keene,**
State Co-ordinators –
ND SARE – NDSU Extension Service

Bill.hodous@ndsu.edu
701-662-7027
Karl.hoppe@ndsu.edu
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- Triticale
- Lentils
- Soybeans
- Flax



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