

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

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“Sometimes I look back and I think, ‘Well, would I do that now?’ I would still do that now.”

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

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

Fitting into the Community

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

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

Love of Farming

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



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

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

Farm Resiliency

From Reactionary to Resilience

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

"If that new mulching system doesn't

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

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

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

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

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

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

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

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

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

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



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

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

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

— Vegetable farmer Lauren Berry

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Part of whole farm planning involves taking into consideration the larger community as well, and farms involved with the workshop series

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