



The Next Stage Grant

2019 Project Findings



SUPPORTING A HEALTHIER COMMUNITY

The Mill City Farmers Market Charitable Fund (MCFM-CF) is committed to the success and sustainability of the local food economy. MCFM-CF designed the Next Stage Grant to provide funding to local, sustainable farmers and other food producers who experience hardship, are improving sustainable farming and business practices or growing toward the “next stage” of their local food businesses.

The Next Stage Grant program is rooted in our educational mission with the goal that farmers and makers will learn from and be inspired by our grantees’ findings. For more information on these projects, such as specific details, building plans or questions for grantees, please contact us at: info@millcityfarmersmarket or 612-341-7580. The goal of this grant program is to help keep regenerative family farmers on the land, producing nourishing food for all.

Mill City Farmers Market has awarded over 60 grants to local farms and businesses since the grant program began in 2013.



2019 NEXT STAGE GRANT AWARDEES

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| Big River Farms | Increased Mechanical Cultivation Education |
| Bean Market & Der's Flower Farm | Cold Storage Systems |
| Clover Bee Farm | Year Round Production - Passive Solar Greenhouse |
| Good Turn Farm | Season Extension with Moveable Caterpillar Tunnels |
| Growing Lots Urban Farm | Bed Prep Equipment |
| Prairie Hollow Farm | Paperpot Transplanter |
| Racing Heart Farm | Hoop House Renovation for Season Extension |
| Red Clover Herbal Apothecary | Increase Herbal Tea and Extraction Production |
| Seven Songs Organic Farm | Nutrition Fact Research and Shelf-Life Testing |

The Next Stage Grant program is sustained by donations from our generous market community and sponsorship from CoBank. We are honored to be stewards of this program.

Big River Farms

'Increased Mechanical Cultivation Education'

Big River Farms, located in Marine on St. Croix, Minnesota is a Certified Organic incubator farm and education site, serving serving around 40 beginning farmers per year, primarily farmers who are immigrants, refugees and people of color.

With help from the Next Stage Grant, Big River Farms purchased a used Farmall 140 cultivating tractor to teach farmers in its program how to efficiently weed and prep soil mechanically with various implements. They also taught tractor safety and maintenance.

During the 2019 season, Big River Farms trained one of their farmers how to use and maintain the tractor for his 6-acre plot. Farm Director Molly Schaus explained that there is typically more interest in equipment training, but the wet weather in the 2019 season and other factors had most farmers so stressed for time that they didn't have the capacity to add anything new to their schedules.

Since the tractor was more available than originally anticipated, Molly used it to cultivate farmers' fields for them, reducing weed pressure and inspiring a pilot program for staff to cultivate all farmers' beds once every two weeks.



"The impact of this tractor will continue to grow. We invested in a basket weeder, which will allow us to do in-bed cultivation instead of just cultivating the aisles. The weed pressure at BRF is enormous because it is an educational farm, so as staff we want to do more to help farmers manage their weeds. We will also continue to offer tractor training to any farmer interested and able to commit to learning to operate the tractor safely." -Molly Schaus



Good Turn Farm

'Season Extension with Moveable Caterpillar Tunnels'



Good Turn Farm in Stockholm, Wisconsin is a Certified Organic, 6th-generation family farm. Owners Kevin Anderson and Annelie Livingston-Anderson grow vegetables for farmers markets, restaurants and their on-farm store.

With funding from the grant Kevin and Annelie constructed two caterpillar tunnels to improve soil health and yields. The tunnels, which can be set up between 50 and 75' long, extend the spring and fall growing season for cool crops and improve summer conditions for

heat-loving crops. Unlike permanent greenhouses, the moveable "caterpillar-style" covered growing spaces allow farmers to improve soil health through longer crop rotations and let the soil recover between intense productions.

In 2019, Kevin and Annelie used the tunnels in the summer for peppers, sweet potatoes and ginger and in the fall for baby lettuces, radishes and overwintering onions. Overall, with the exception of ginger, the crops did better compared to field and non-mobile high tunnel production, Kevin and Annelie were able to extend their fall planting by nearly a month and they were able to rest their beds and use cover crops rather than immediately replanting.

Even with these successes, Kevin and Annelie experienced a couple issues with the tunnels and are making plans to improve them for future use. First, the traditional method of venting caterpillar tunnels by holding up the side plastic with clamps was problematic during rain, which pools and forces the sides to roll down. Second, moving the tunnel was very time consuming - about 12 hours with one person and a tractor. They hope to solve both of these challenges by adding doors to the end walls and a ridge purlin.



Caterpillar tunnel grown sweet potatoes (left) vs field grown (right)



Clover Bee Farm

'Year Round Production through Passive Solar Deep Winter Greenhouse'

Clover Bee Farm is a transitioning organic farm in Shafer, MN. Owners Andrew and Margo Hanson-Pierre grow a variety of vegetables for farmers markets, CSA shares, co-ops and restaurants.

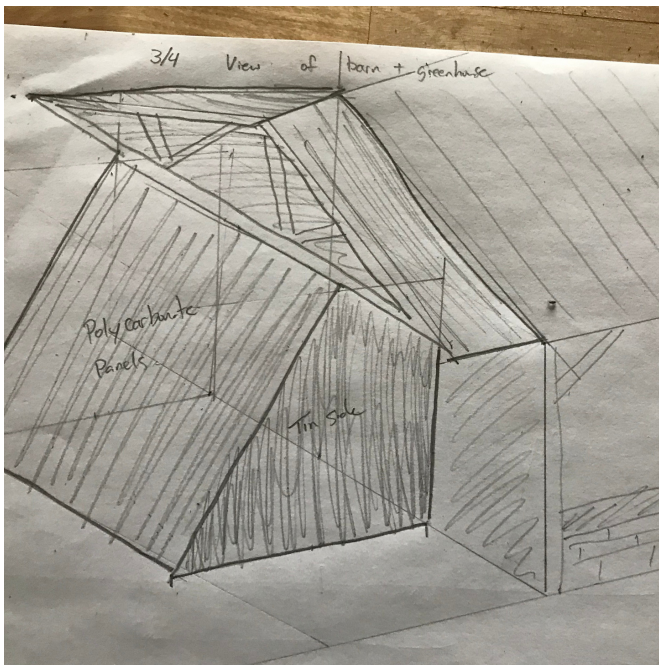
Funding from the grant supported construction for the farm's passive solar deep winter greenhouse, a year-round growing space heated naturally through innovative building techniques and sunlight.

Andrew and his team began construction on the 16 x 22' greenhouse in the summer of 2019 and are on-track to grow greens and start seeds in early spring of 2020 - all without propane heating.



The heavily insulated winter greenhouse is attached to the south side of one of Andrew and Margo's barns, in the former site of two non-functioning silos (which they demolished as part of this project). The space was chosen because of its sun exposure for passive heat and for access to the barn for additional insulation, water and a space for post-harvest handling. It is wood framed with polycarbonate sheeting and concrete foundation filled with river rock as the ground and heat sink.





Both summer and fall's constant rain was a constraint on the project's timeline, but support from neighbors (who loaned them a skid steer to move three dump truck loads of rock), friends and employees (who helped with labor) and digital communities (like a Facebook group for deep winter greenhouse enthusiasts who answered questions along the way) are keeping the project on-schedule.

Being able to grow greens, herbs and other crops in the winter will allow Andrew and Margo to work at a "light jog" throughout the year rather than a "heavy sprint" during the traditional summer growing season. This will improve cash flow, work load and increase the community's access to fresh, local food.

"Margo and I have been working on not being too hard on ourselves. Running a small business, and this might be truer for vegetable farmers, there is this drive and personal expectation of doing a perfect job. So when there are setbacks, unforeseen challenges and just physical exhaustion the first things to blame on the issues are ourselves. We know that's not true and what we work on is reminding ourselves we're doing a great job and we're not alone. We would both say without a doubt 2019 was our hardest year farming yet. Asking for help is important, showing gratitude for that help is doubly important. We're entering the 2020 season feeling rested, prepared, and with reinvigorated hope for the future of our farm as well as for all sustainable farmers." -Andrew Hanson-Pierre



Clover Bee Farm's deep winter greenhouse before (left) and nearly complete (right)

Growing Lots Urban Farm

'Bed Prep Equipment'

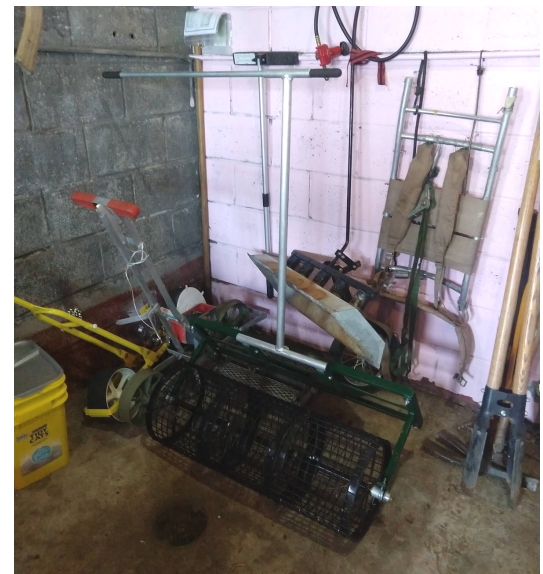
Growing Lots Urban Farm is located Minneapolis' Seward neighborhood. Owners Taya Schulte and Seamus Fitzgerald grow diverse vegetables on previously vacant parking lots for farmers markets and a 60-member CSA.

With funding from the Next Stage Grant program, Taya and Seamus purchased small-scale bed prep equipment, including a tillie, seed bed roller, gridder and seeder. With this equipment in the 2019 growing season, they achieved their goals of maximizing space and reducing physical labor on the farm. They were able to complete jobs like prepping and shapping beds, which previously took weeks to accomplish by hand, in days.

Additionally, with the ability to plant straighter rows with fewer weeds they achieved higher yields of more uniform produce, which is more appealing to customers.



"Bed prep used to be very physically straining on our bodies, but the tillie really eased that stress for us. It's so important to find ways to run the farm that are gentle on my body. Farming is so physical that preserving a mobility is crucial." -Taya Schulte



Racing Heart Farm

'Hoop House Renovation for Season Extension'



Els detaching old plastic

Racing Heart Farm is a Certified Naturally Grown vegetable farm located in Colfax, Wisconsin. Owners Les Macare and Els Dobrick sell a variety of vegetables and fruit direct to consumers through CSA shares and farmers markets.

With the Next Stage Grant, Les and Els renovated their two hoop houses (30'x44' and 30'x72') to provide increased growing space for healthier transplants and protection from frost for more food production in the spring and fall.

The project is going well. Les and Els completed stage one, repairing and recovering the larger of the two hoop houses last spring, and have purchased all the materials for the final stage, repairing and recovering the small hoop house.

Originally, the plan was to construct the end walls themselves, but the carpentry behind renovating old structures and combining metal and wood required technical assistance from their farm mentors who have agreed to help Les and Els finish construction in March 2020.



End wall framing on larger hoop house



New roll-up side walls for temp and air control

Prairie Hollow Farm

'Paperpot Transplanter'

Located in Elgin, Minnesota, Prairie Hollow Farm is multi-generational family farm, producing sustainably grown vegetables, fruit, cheese, bread, grass-fed beef and pasture-raised pork.

With the grant, farm owner Pam Benike and her family purchased and are experimenting with a paperpot transplanting system that allows farmers to do the strenuous work of seeding and transplanting vegetable plants while accomidating injuries and other physical limitations.



Pam unfolding the paper pots for seeding

Prairie Hollow Farm experimented with the system for their spring and fall plantings. Pam was able to fill and seed trays in a comfortable standing position, noting the outer pots or "cells" take a bit more attention to fill than the inner ones and dibble board and seeding plate worked well--although she recommends multiple sizes of plates for different sized seeds. Compared to plastic seeding trays, the seeds germinated quicker. On the down-side there is less room for root development in the paperpots. Root space typically would not be a problem if you are planting right away, but in 2019 the wet spring delayed translanting, so some of the transplants were too stressed for a later planting. Weather and heavy clay soil also made it difficult to use the system in the field in the spring and summer.





In September, Prairie Hollow Farm used the system to transplant spinach, salad turnips, beets and carrots into their hoop house. In this controlled environment, they had much more success compared to their heavy clay soil in the field. After seeing how well the transplanter worked in the hoop houses, Prairie Hollow Farm has decided to intensify their soil building efforts for 2020 so that the paperpot transplanter will be more successful in coming years.

Additional Findings:

- Paperpots do not break down quickly. Had to tear the pots off the radishes and turnips when they harvested. Less a problem for carrots, which were in the ground longer. Additionally, hand weeding was challenging since weed roots dislodged paperpots.
- Pots with ungerminated seed leave gaps when planting.
- Labor for planting fall transplants in hoop house consistent with direct seeding, and labor for weeding is less since they eliminate the most labor intensive weeding done right after direct-seeded plants show first true leaves.
- They were better able to work around adverse weather conditions using this system, since they could plant seeds regardless of weather, taking advantage of small windows of good weather for other tasks like tilling and transplanting.



“The paperpots work well for keeping me involved in the planting, and I think they would be great for most people with limited mobility. Filled trays weigh about 12 pounds which is within my lifting range, and fits within limits for most people according to my physical therapist.” -Pam Benike

Red Clover Herbal Apothecary

'Increase Herbal Tea and Extraction Production'

Red Clover Herbal Apothecary is a Certified Organic herb farm, located in Amery, Wisconsin. Owner Nancy Graden and her farm hand Kathleen grow and process over 50 kinds of medicinal and culinary herbs for sale at farmers markets and through CSA shares.

With the grant, Nancy purchased a single-phase electric hammer mill and hydra-screw mini jack tincture press that dramatically reduce labor and increase efficiency of processing herbs for teas and tinctures.

The project was not without its frustrations and learnings. Most notably, Nancy had to unexpectedly hire an electrician to convert and rewire her 220-volt outlet to a 240-volt outlet to accommodate the mill. Additionally, Nancy faced challenges with the screens supplied with the mill as they did not fit properly and had to be returned 3 times before she was finally issued a new mill of the same model. With these setbacks, they installed the mill in mid-October after the farm's harvest but are looking forward to using it in 2020. Nancy estimates the hammer mill will cut the two days of work done by two people down to half a day's work by one person.



Nancy with the hammer mill



Kathleen with the tincture press

The tincture press was a more straight-forward process and is working wonderfully. Nancy says they are not only saving time, but also extracting $\frac{1}{2}$ to 2 ounces more per quart. For example, when pressing elderberries they extracted an additional $\frac{1}{2}$ gallon of syrup, which will result in nearly \$400 of revenue.

"Providing a local organically grown source of high quality herbal products to the surrounding communities is our goal. Efficiency is increasingly important as the demand for our products increase. Decreasing production hours spent garbling and extracting frees up time to explore and think forward on future projects on the farm we're excited about."
-Nancy Graden

Seven Songs Organic Farm

'Nutrition Fact Research and Shelf-Life Testing'



Seven Songs Organic Farm is a Certified Organic fruit, vegetable and flower farm, specializing in ginger and garlic for local food makers and chefs.

With the Next Stage Grant, farm owner Melissa Driscoll brought her Escape! Garlic Scape Pesto to the "next stage" by obtaining nutrition label and shelf-life information. Having professional labels will allow greater distribution of her product, allowing for winter income and a market for the copious amount of this bi-product of garlic farming.

Melissa sent samples of her jars to Market Fresh Food Tasting lab for food safety testing in May and learned her product is food safe and palatable when refrigerated for up to five weeks. This was good news because without this professional testing, food safety inspectors required her to tell customers it was good for only one week. This not only gives customers more confidence when buying a high-value product, but also allows Melissa to sell the pesto in the refrigerated section at stores with other pestos.

Next, working with Market Fresh lab again, Melissa got nutrition label testing for her product. The new labels have allowed her to get a new wholesale account at Lakewinds Co-op, in addition to her pesto sales at smaller retail markets and co-ops.

In 2019 Melissa reported Seven Songs' best pesto production year ever--1,000 jars! Melissa currently uses garlic scapes from her own farm and from Open Hands Farm in Northfield. As production expands, she plans to continue to buy garlic scapes from other farmers in the area, further stimulating the local food economy.



Bean Market & Der's Flower Farm

Cold Storage Grants

With generous grants from the Minneapolis Foundation and Bo Thao Urabe's giving circle MCFM-CF piloted 2 walk-in cooler projects for produce and flower storage in 2019. Cold storage is critical to increasing quality and shelf life of these highly perishable products.

Working with Der's Flower Farm, Bean Market farm, Ariel Pressman farming consultant and Pete Hang and his crew at Lyota construction, MCFM-CF researched, designed and built custom cold storage systems using air conditioners, CoolBot technology and used refrigeration panels sourced from Bauer Brothers Remodeling and Construction Supplies.



Our goals are for these systems to be accessible for farmers working on rented land who often don't have access to cold storage and to guide farmers on how to implement an affordable system. Our initial plan was to create a printed "how-to" guide, but after working through this process, we realized greater potential in a collaborative mentorship model.



For future cold storage projects, MCFM-CF hopes to partner with individual farmers through the Next Stage Grant program and connect them to contractor Pete Hang when appropriate to plan and build cold storage systems, utilizing what we have learned through this pilot. Lyota construction company is Hmong owned and operated, and Pete has close family ties in farming.

As we work with a diverse group of farmers, we must remain responsive to knowledge sharing that happens in many ways – on paper, in words and through experiential learning. We hope to empower farmers through active involvement in the process, that they might be advocates and leaders within their own farming communities.

Above: Xai Lor & Tongsee Xiong of Bean Market
Upper right: Der Thao of Der's Flower Farm



Der's Flower Farm

Der Thao and his son Jeffrey farm a 17-acre flower and vegetable farm in Dakota County. Since founding the farm in 1994, they have worked without cold storage. They typically harvest on Thursday and Friday before markets, making up to 400 bouquets and often working late into the evenings. With construction of their 10 x 20' cooler in summer 2019, Jeffrey said their workload in the week has greatly improved. Now the Thao family can cut flowers throughout the week and store them in water in the coolers, which more evenly spreads the workload throughout the week and greatly increases the shelf life of the flowers.



In addition, they were able to reduce waste by harvesting and storing flowers as soon as they become ready in the field. Some flowers, like sunflowers, lilies and gladiolas, can last up to 3 weeks in the cooler, as opposed to less than a week without cold storage. Their ability to cut the flowers just as they start blooming and store them in cool temperatures not only led to less waste in the field but also has increased profitability for the farm.



Bean Market

Xai Lor and Tongsee Xiong farm a market vegetable farm in Hastings, where they previously used two refrigerators in their garage for cold storage. The refrigerators were packed to the brim with produce, were not large enough to hold everything they wanted to harvest and frequently caused power shortages in their house due to their inefficiency. With the grant project, they now have a 6 x 6' walk-in cooler with plans to add about four more square

feet of storage in the spring as new refrigerator panels become available. Having reliable, increased cold storage gave them the confidence to apply for three more acres of farmland for the 2020 season, a more than 40% increase. Xai and Tongsee's have been approved for a total of ten acres and are looking forward to growing their business.





The Next Stage Grant

Mill City Farmers Market Charitable Fund

For more information on these projects, such as more specific details, building plans or questions for grantees, please contact us at:
info@millcityfarmersmarket or 612-341-7580

Mill City Farmers Market Charitable Fund's mission is to support a healthier community through partnerships, educational programming, and support for organic farmers and local food makers.

Applications for MCFM-CF's Next Stage Grant open in January and are awarded in April. Learn more about our grants and other charitable work at:
millcityfarmersmarket.org/impact

Healthy Foods, LOCAL FARMERS