



Mill city farmers market Farmer Grant Program 2014 Awardees

Mill City Farmers Market (MCFM) is committed to the success and sustainability of its vendors. The *Farmer Grant Program* began as effort by the market to support our vendors in times of hardship and crop loss or to support farm improvement projects. This program embodies our commitment to building a healthy, local, sustainable, and organic food economy. The grant fund was created through the generosity of our market community. We are honored to be able to offer these grants to our vendors.

The Organic Field Project Grant is designed to provide funding to vendors who are working on improving their sustainable farming practices. Grants are open to all current MCFM vendors and reviewed and awarded annually in the spring of each year to affect the coming growing season. *The Farmer in Need Grants* are reviewed and awarded on an ongoing basis. Grant awards up to \$2000 are awarded with the final amount based on need and availability of funds.

MCFM is committed to the education of the local food community. Therefore, grant awardees are required to share highlights, learning's and results of their projects to build awareness and educate the broader community. Below is recap of grant awardees learning's and results.



Dawn 2 Dusk • St Croix Falls, MN

Grant funds were used to build five 10' x 100' temporary, portable, low tunnels or 'caterpillar tunnels' to shield high value summer crops from frost. The tunnels were erected in September and extended the growing season greatly. The benefits of the tunnels are being measured by using un-covered, control beds alongside the covered beds and measuring yield differences over the 5-year lifespan of the tunnels. Findings will be reported as a part of the organic certification process.

Mill City Farmers Market Inc.

Our mission is to inspire and nurture a healthy community by building a local, sustainable, and organic food economy in a vibrant, educational marketplace.



Seed to Seed • Clear Lake, WI
7-acre diversified vegetable farm

“The Mill City grant allowed me to buy replacement hoops for my greenhouse which was destroyed due to the large amount of snowfall last winter. Paying for new hoops out of pocket would have been a huge expense for the farm -

especially since I had just spent several thousand dollars buying the greenhouse 2 years ago. Using the new hoops we were able to completely rebuild the greenhouse in a matter of 2 weeks. In addition, we were able to reconstruct several hoops. I learned a ton about how greenhouses go together, but also how to salvage bent or damaged pieces. We really had to get creative and were able to come up with some great ideas and systems to piece everything together. Unfortunately, greenhouses collapsing is not that uncommon so I would be happy to share my knowledge with any other vendor that experiences this situation.”



Stone’s Throw Urban Farm • Minneapolis, MN
3-acre urban farm converting vacant land into growing spaces, harvesting greens, heirloom tomatoes, root crops

Stone’s Throw evaluated the financial viability and integration of ginger production into our existing vegetable operation, comparing production between high-tunnels and outdoor beds and the feasibility of integrating ginger into a fall salad mix succession.

Results: Stone’s Throw Urban Farm harvested a total of 114.5 pounds of ginger, averaging about .46 pounds per foot. The farm sold about 85% of total harvested ginger at an average of \$14/#. This totaled about \$1362.55 in gross profit or approximately \$1.37 per square foot. Extrapolated, this would total \$62303 per acre. For comparison, the farm’s enterprise budgets for other crops demonstrate gross incomes of: carrots: \$65340, head lettuce: \$49005, salad mix: \$26680.50, and heirloom tomatoes: \$26680.50. Therefore, ginger has the potential to be a highly profitable crop for the farm.

Conclusions: The test established ginger as a reliable, profitable crop in Stone’s Throw Urban Farm’s intensive vegetable rotation. We were pleased by its appearance, taste, and attractiveness at market. We also see its potential for diversifying our crop rotations, its integration into in-field production, and its ability to increase farm income.

Mill City Farmers Market Inc.

Our mission is to inspire and nurture a healthy community by building a local, sustainable, and organic food economy in a vibrant, educational marketplace.

Harvest time greatly influenced yield, as we noticed major yield increases throughout the month of September. We were eager to begin harvest and arrive to the market with an early crop of ginger, yet this hastiness may have been ill planned. Late September ginger, in addition to higher yield, was far more attractive and juicy. In the future, I would delay ginger harvest as late as possible, beginning in late September and harvesting until frost.

Lastly, we would like to thank the Mill City Farmer's Market Project Grant committee for alleviating the risk of trialing a new crop and providing us funds for experimentation. We are happy to share more detail and nuances with other farmers and interested growers. We believe that success in alternative crops and sustainable agriculture in general will come from transparent, open communication among farmers.



Prairie Hollow Farm • Elgin, MN

Hoop houses retain heat, shield crops from damaging cold and wind and extend the growing season. This grant helped fund experiments to increase heat retention in hoop houses.

Hoop house A: We installed an inner layer of heat and moisture barrier to sidewalls, and installed an inner layer of clear insulating materials to end walls and doors. We also installed a Tek-Foil insulating barrier on the

north wall. The inner layer on the sidewalls was about 3 inches inside of the exterior wall. The insulating materials on the end walls were flush with the walls. Additional heat retention showed an increase in soil temperature of two degrees over previous years.

Hoop house B: We installed inner layers of heat and moisture barrier to sidewalls, with the bottom of the barrier flush with the frame and the top attached to the second purlin on the rafters. This allowed a wedge shaped air space that was approximately fourteen inches deep at the apex. Clear insulating materials were installed at the ends, allowing a six-inch airspace between the wall and curtain. A second layer was installed over the doors to inhibit loss of heat when entering or departing the hoop house. Additional heat retention showed an increase in soil temperature of 8 degrees over previous years. Daytime air temperatures registered 6 to 18 degrees warmer than air temperatures in Hoop Houses A and C; with the greatest increase in air temperatures noted under high wind conditions.

Mill City Farmers Market Inc.

Our mission is to inspire and nurture a healthy community by building a local, sustainable, and organic food economy in a vibrant, educational marketplace.

Hoop house C: We installed inner layers of heat and moisture barrier to sidewalls, offset from the frame and sidewall by 3-inches. Clear insulating materials were installed at the ends, allowing a 3-inch airspace between the wall and curtain. Additional heat retention showed an increase in soil temperature of 3 degrees over previous year. Air temperatures ran 2 to 8 degrees warmer than Hoop House A but were always cooler than Hoop House B.

Conclusion

The addition of the heat and moisture barrier was most effective in Hoop house B. It is our conjecture that the placement of the barrier, allowing a larger airspace and angling the barrier to lessen the reflection of the sunlight, was the reason for the significant increases in both soil and air temperatures. We will be installing permanent hardware inside the hoop houses to simplify installation of the heat barriers in the fall and removal in the spring



Urban Roots • St. Paul, MN

The grant allowed us to expand our sales through increased production and improved quality of the produce and to upgrade our market stand infrastructure.

The trailer we purchased was critical to expanding our growing

space, allowing us to transfer produce (eliminating crowding/bruising), tools, hay etc. in an efficient manner. The new tent and weights were easily carted to market in the trailer and added a more polished look to our stand. We also purchased a high quality produce scale, which increased the youth's sense of professionalism when prepping and selling produce-they loved the new tool! Our youth crew's commitment to their work improved when they were provided with the real-world tools needed to deliver a quality product. A new sanitizer also enhanced the educational piece of our production as well as the assurance of safe food distribution.

We learned how to improve post-harvest handling and how the aesthetics of your market stand (tent) helps to promote the quality produce. All of the items purchased in the grant aided our efforts to teach youth what quality entrepreneurship looks like and how it contributes to successful marketing of your product.

Mill City Farmers Market Inc.

Our mission is to inspire and nurture a healthy community by building a local, sustainable, and organic food economy in a vibrant, educational marketplace.

Loon Organics • Hutchinson, MN • 40-acre certified organic vegetable farm

The Loon Organics' project goal was to put up a third hoop house to extend the growing season and provide more protected growing space for three season production of greens and high-value summer crops, specifically tomatoes, sweet peppers, and cucumbers. This hoop house will increase the quality, availability, and diversity of crop offerings for the summer Mill City markets, and allow us to sell for a longer season. It will also give us a complete 3-year crop rotation between our hoop houses so that we can continue to build healthy soils and prevent disease and pest buildup. The increased growing space means we will also have extra quantities of tomatoes to test value-added products for 2015 market sales.



In late September 2014, we finished completion of our third hoop house which is 110' long and 34' wide giving us an additional 3740 sq. ft. of hoop house growing space. The hoop house was from Nolt's Produce Supply in Iowa, and we have found that they by far have the best price and quality for their hoop house structures. The total cost of the structure and plastic was just over \$10,000. We built a sliding end-wall door on one end this fall and will build another end-wall door, plus install some passive ventilation windows above the doors. The hoop house has 5 foot straight sides to allow for growing on the edges of the hoop house and the sides roll up so that we can open sides for ventilation.

This hoop house is nearly doubling the amount of space we will have under cover going into the 2015 growing season, and we are excited to be able to switch out our main crop of hoop house tomatoes into this new house where tomatoes or nightshade family of crops have not been grown. This will allow us to grow sweet peppers and basil in our other houses, and to experiment with Asian cucumbers, and break the disease cycles that were building up in our other two hoop houses. Tomato leaf mold especially was becoming a fungal disease problem for us in our tomato

Mill City Farmers Market Inc.

Our mission is to inspire and nurture a healthy community by building a local, sustainable, and organic food economy in a vibrant, educational marketplace.

houses, and we are participating in a research project with Michelle Grabowski from UMN Extension to study leaf mold in hoop houses, test leaf mold resistant varieties, and in general gather more information about leaf mold, if it winters over in soil or plant tissue left behind in the hoop house, etc. We can share more about leaf mold and our crop rotation cycle as we enter into full production in the 2015 season.

We have also been wintering over spinach in our new unheated hoop house on a trial basis. Seven 100' beds of Space variety of spinach was seeded and was harvestable by the end of October for our Fall CSA boxes and for the first November Mill City Farmers Market winter market. We continued to harvest the spinach for restaurant customers and ourselves heavily through December. The remaining three beds that were not harvested, were hooped and covered with 1-2 sheets of ree-may row cover. We as a family have been able to eat freshly harvested spinach through the whole winter! The flavor and texture of the overwintered spinach is remarkable—the sweetness enhanced by the cold as the spinach creates more sugar in the leaves as a type of “anti-freeze” in cold weather. The texture is dense yet not at all tough even when the leaves are very large in size.

We are excited to continue experimenting with winter production of greens and summer production of tomatoes, peppers, and other high-value crops. We will also look into the production of some value-added tomato products for the summer of 2015 from our excess fruit. Thank you so much to the Mill City Farmers Market and their supporters for helping us make this project a reality! The grant was an economic incentive for us to take on this big project, and I'm not sure we would have tackled it otherwise. The hoophouse growing space will continue to move our farm forward economically as well as be a useful tool in our increasingly erratic weather patterns.



Mill City Farmers Market Inc.

Our mission is to inspire and nurture a healthy community by building a local, sustainable, and organic food economy in a vibrant, educational marketplace.