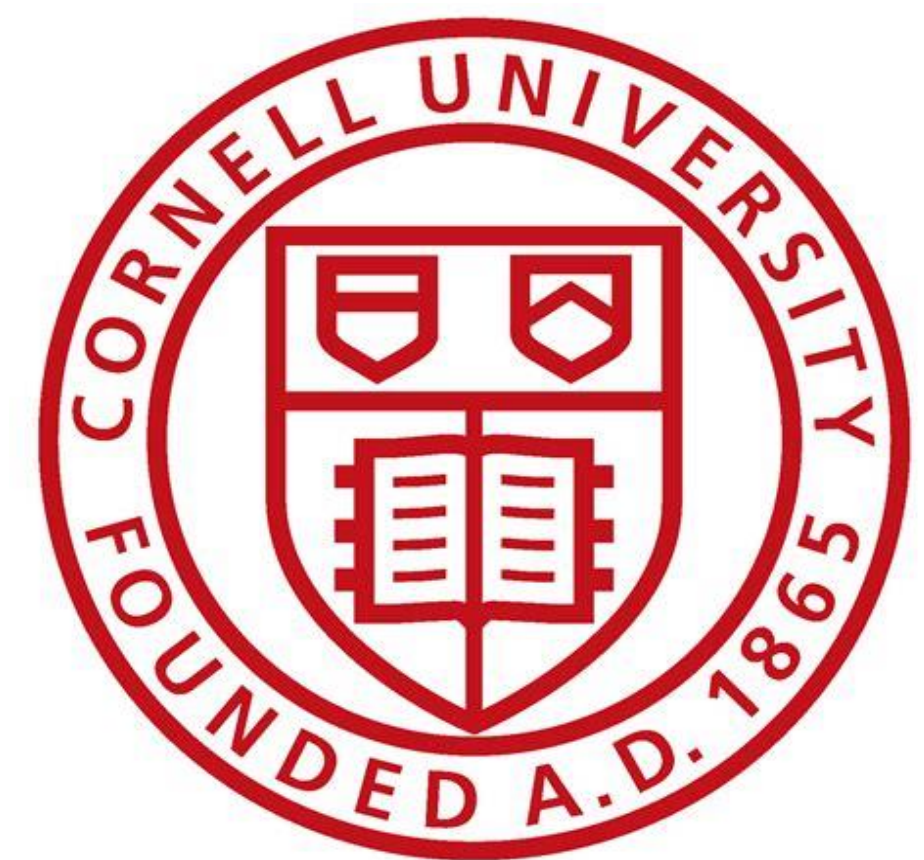


Addressing Food Insecurity and Learning About Post-disaster Resilience Strategies in Central New York



Chris Rivera
 CALS | Class of 2024 | E&S

Community Gardens

One of the women participating in the class, Rebeca Caceres, was chosen to have her home given a sustainability beauty makeover, which I partook in. While her home provided a considerable amount of yard space, it had essentially become a junkyard, and she was ready to change that, especially for her two children, Amelia and Ben. Professor Law introduced the idea that children and education are two of the most important things, in relation to solving some of the world's most pressing challenges, and this was the perfect opportunity to exercise such a concept.

Eager to cultivate the land below their feet, these children helped plant flowers and vegetables around the property. They are now able to grow and access fresh produce, right from their backyard.



Children Creating a Garden

The installation occurred over a series of sessions, which fostered hands-on experience and the communication of knowledge. For instance, I helped with the installation of a French drain system—allowing for the even distribution of rainwater—and spoke about how it would benefit the sustainable living model. In addition, I helped build a Norwegian brush fence, and spoke about why everyone in the class should consider implementing one into their greenspace.

In terms of food insecurity, certain elements of Rebeca's installation can be used as a means to promote and establish food sovereignty, such as the starting of a compost bay or vegetable garden.

Brushwood fencing, in particular, is an important implementation when thinking about post-disaster resilience strategies, as there are many benefits. For my talk, I broke these down into six sections: Provides a natural look, affordability, low-maintenance, versatility, protects soil from erosion, and insect advantage. Brush fences are handmade using small branches, twigs, and undergrowth. In addition to providing a natural look to one's garden, it reduces the number of trees that need to be logged, which helps protect the environment. Being a nature's product, there are no manufacturing costs, meaning that anyone who would wish to have one, could.



Completed Norwegian Brush Fence



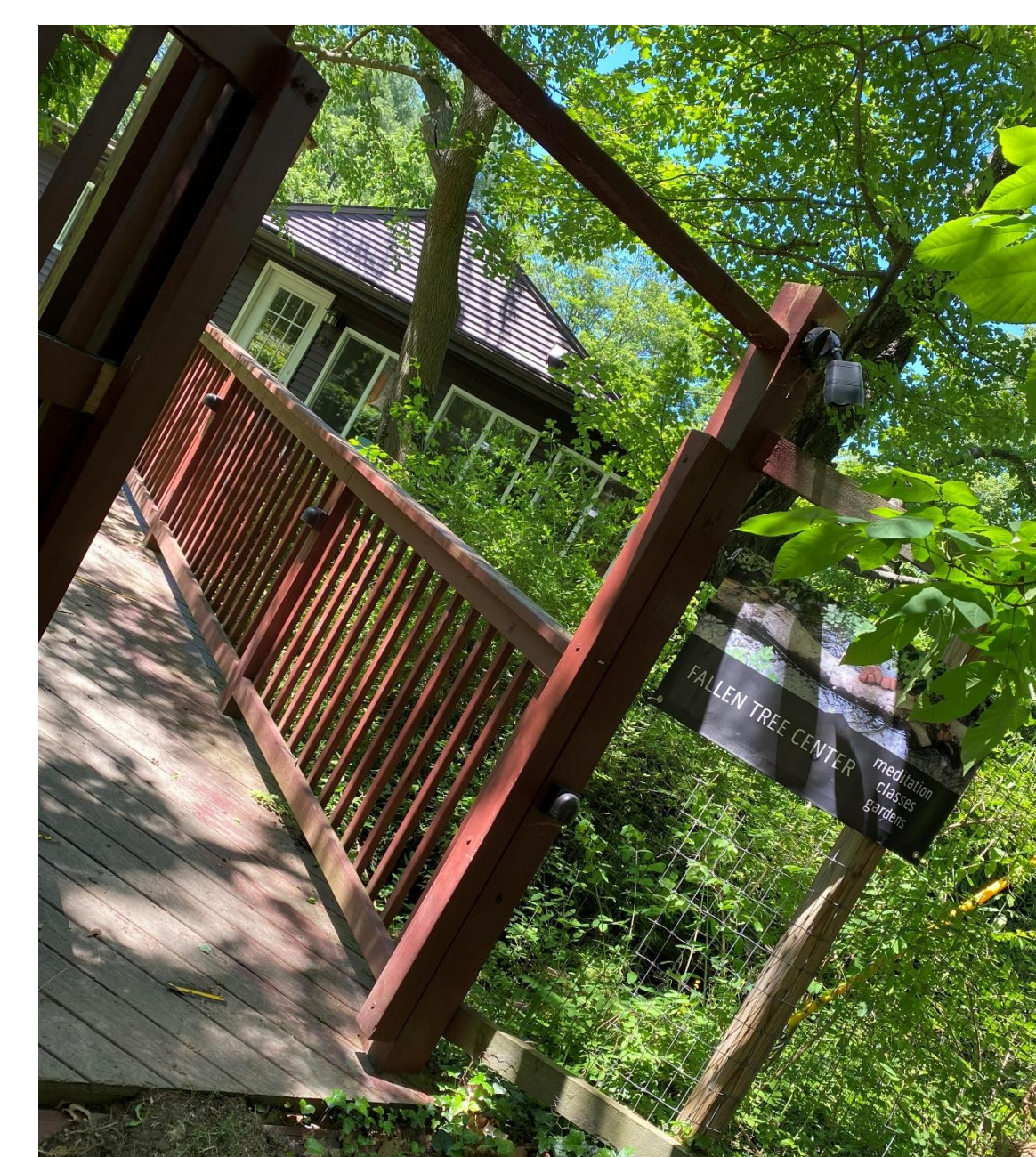
Planting Herbs

I spent my summer in Central New York, living and researching at Fallen Tree Center for a Resilient Future, a non-profit organization recognized under the Center for Transformative Action (CTA), under the direction of Professor Jane-Marie Law. Fallen Tree is a small sustainability center, operating on Zen principles, set on ¾ of an acre in Northeast Ithaca. In preparation for the second summer, which will take place in Japan, I developed skills and an understanding of how communities can directly engage children in community gardens, effectively rebuild following disaster, and foster systems of aid. My areas of research are rooted in a Japan-specific statistic and event. Statistic: Although Japan has one of the most developed economies in the world, about one in six of its children are impoverished. Event: Following the Triple Disaster of 3/11/11, many of the small-scale organic farms that had settled in the Tōhoku region in the 1960's, following the post-war depopulation of this historically poor area, were utterly destroyed either by the earthquake, the tsunami, or the radiation. How do we establish food sovereignty? How do we rebuild after disaster?



Herb Drying Lesson

Every Tuesday and Thursday during my time at Fallen Tree, I would help teach a class to local residents interested in transitioning their lives to be more engaging, sustainable, and ecological. The class was entitled: An Introduction to Suburban Homesteading. Some of the topics covered include: Setting up a safe and effective composting system, planting and maintaining a productive vegetable garden, using and drying herbs, adding a flock of chickens to your backyard, supporting pollinators/beekeeping, making Norwegian brush fences, hügelkultur, vermiculture, log inoculation, and creating community through food systems participation. It is important to note that none of this is artisanal knowledge that is for sale to the highest bidder, but rather our birthright.



Fallen Tree



Fallen Tree Interns

Introduction

Mutual Aid

At various points during the summer, I worked with Mutual Aid of the Finger Lakes (MAFL). MAFL is a mutual aid group that organizes free distributions of food, clothing, household goods, and other necessities to the people of Central New York. On a given day of the week, we would drive to a location geared toward low-income housing and/or known for heightened poverty rates, and set up a free stuff pop-up.

I also got involved with No Más Lágrimas/No More Tears, a non-profit organization that supports individuals and families affected by economic and social barriers. Founded by Ana Ortiz, the organization delivers food boxes, and various other necessities, all around Tompkins County on Thursdays.



Installation Team



MAFL Pop-up



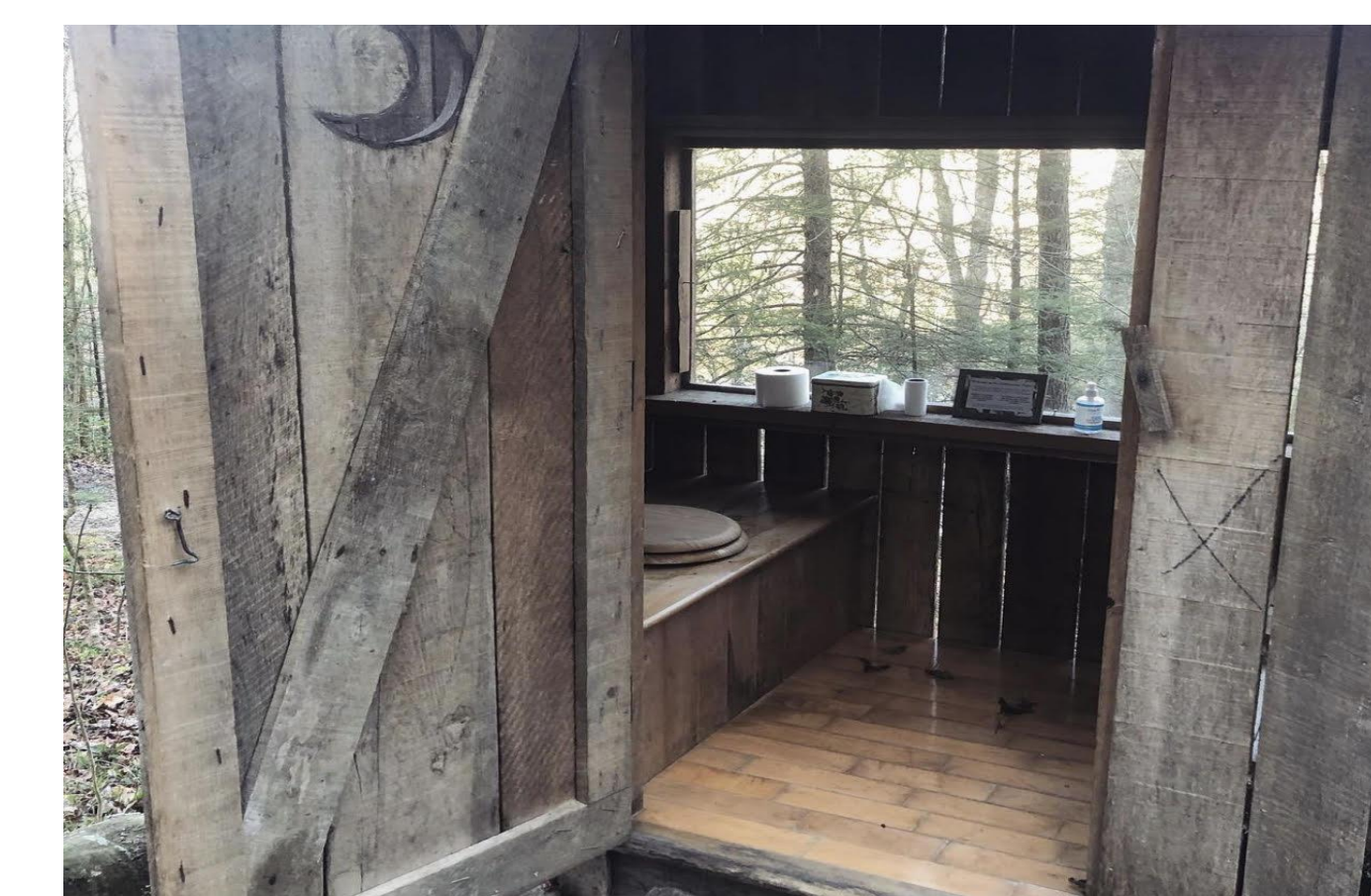
MAFL

Humanure Composting Toilets

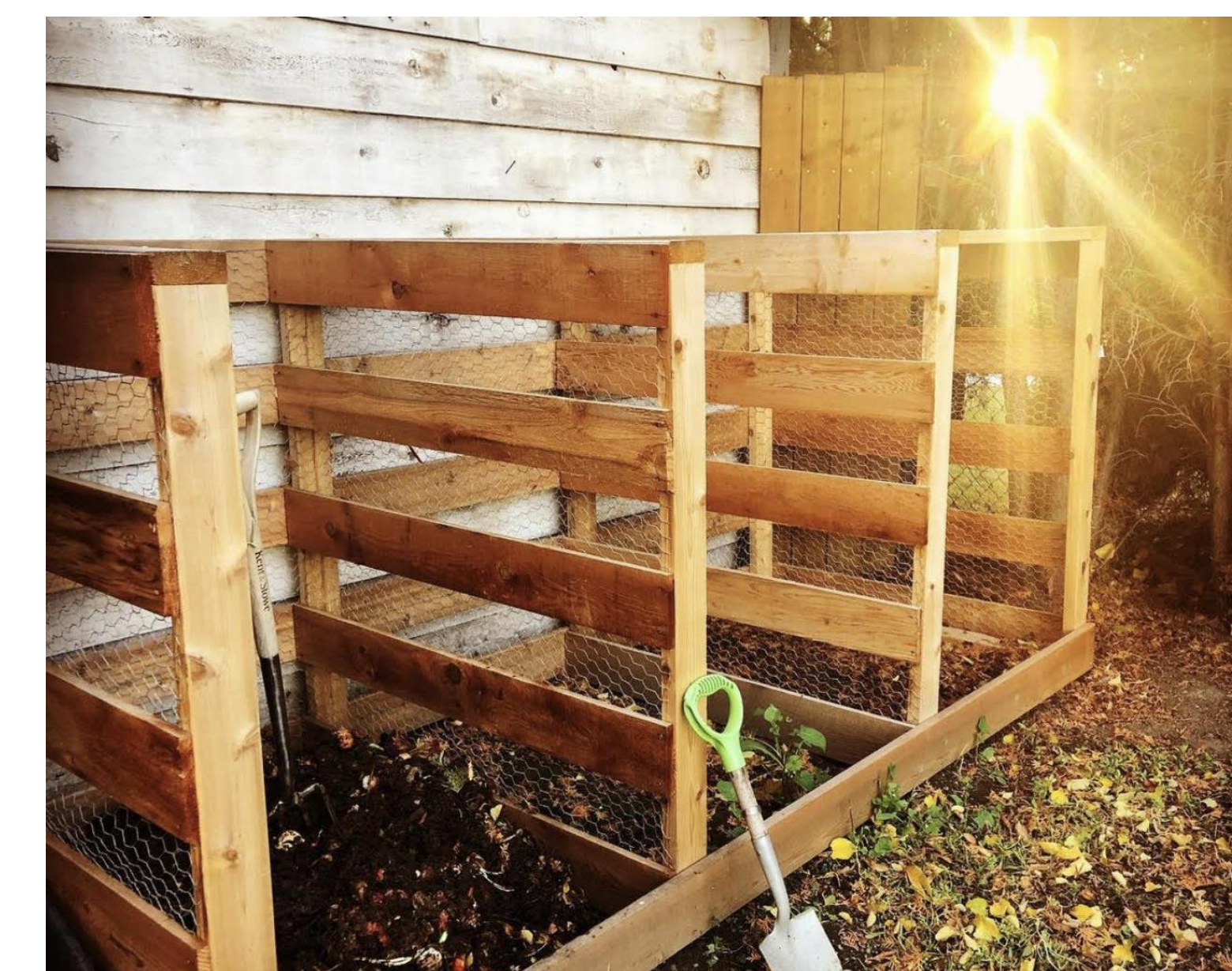
Humanure toilets promote the concept of toilet to garden, which is extremely beneficial. When setting up the toilet, a five-gallon bucket is an ideal collection method. With such a set up, it is important to keep sawdust handy, as this is used to cover waste—it reduces odor, and acts as a carbon-rich material. Ideally, one would have an accompanying three-bay composting system, which Professor Law showed me how to assemble and work, as such acts as a place to empty the contents of a full bucket. When starting a three-bay composting system, it is essential to layer the bottom with composting material—leaves, straw, grass clippings, food scraps—as this ensures good drainage upon adding humanure.

Each time the bucket is emptied, the contents should be covered with composting material. Once the compost bin is full, it should sit for one year before being applied to garden beds, as this gives time for the final stages of decomposition to take place: maturation. In terms of safety, such compost piles can reach up to 160°F, which is high enough to eliminate any harmful pathogens.

Within the context of a post-disaster society, people still need to use the facilities, and rather than wasting waste, it is worth considering how it can be harnessed to reap its benefits.



Humanure Composting Toilet



Three-Bay Compost System

Norwegian Brush Fencing

It can provide privacy for one and one's family, block out any unwanted noise, and provide shelter from the wind. Such a fence also acts as wood storage, meaning that if one should need firewood, one could utilize the wood that the fence is made of and simply replace it. Similarly to the French drain system, rain is filtered through the branches and prevents any washing away of soil. Finally, bees, butterflies, and spiders need places for nesting and overwintering in order to thrive in one's garden, and brush fences act as the perfect spot for such.

Should a disaster strike, and there is a need to rebuild quickly, but resources are limited because of circumstances, brushwood fences are a reliable and speedy solution. Outside of the benefits listed, such fences can be used to keep livestock, which is a key element in the rebuilding process.