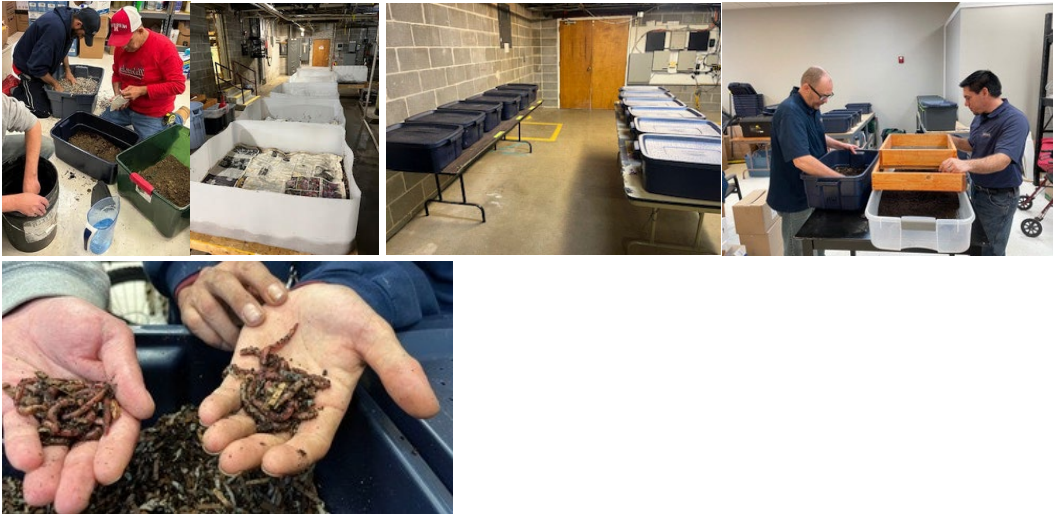


A Beautiful Nebraska Story: Conversation with a Local Vermicomposter
By Carina Olivetti



Daniel Buller and his family love gardening, and his kids enjoyed collecting worms while doing so. This led them to wonder if worms could be bred, which sparked an interest in vermicomposting. Through research, he discovered the process and became excited about its potential. He also considered food waste and how much is discarded at the homeless shelter, Crossroads Mission Avenue. This food could be saved from landfills and repurposed for the homeless, with millions of pounds of food rescued every year for those in need.

In 2024, nearly 1.5 million pounds of food were rescued in Central Nebraska. However, what happens when large quantities of food, like bananas, go bad? Vermicomposting offered a potential solution. Daniel Buller, Executive Director of Crossroads Mission Avenue, began learning about it by using small totes with worms and developed a vermicomposting program. This program provides part-time jobs for people facing employment challenges, teaching them to care for worms and harvest the castings. The initiative has the potential to address both environmental waste and poverty, creating a win-win situation for both the community and the environment.

NRC: Do you have data on how much food waste is going to your worms?

DB: The operation has not previously tracked the amount of waste fed to the worms. In the first year, an estimated 8,000 lbs. of paper and food waste was vermicomposted. This year, the worms are being raised in larger containers to expand their population and handle more waste. The process will be more closely monitored to track waste processing. We are feeding the worms a variety of produce from a food recovery program, along with 50% cardboard and newspaper for carbon content, and adding some peat moss for worm health.

NRC: How many worm bins do you have going on at once?

DB: Currently, we have 6 large bins, each approximately 4'x4'x36", along with smaller household totes, typically keeping about 20 of those going. We started with 5 bins last year, and the plan is to continue learning and growing as we scale our operations.

NRC: Do you have breeder bins or separate cocoons from feeding bins?

DB: Currently, we don't have dedicated breeder bins but have observed rapid population growth in our bins since switching to larger ones. We've noticed an increase in cocoons and are experimenting with this setup. Our goal is to get funding to purchase a harvester that can separate the cocoons from the castings to further boost population growth. For now, our bins are functioning as both feeders and breeders.

NRC: How many people and hours does it take to run this operation?

DB: The current feeding process involves about two hours per week for 2-3 people. The prep work takes around an hour daily, where 2-3 people source and chop the food, much of which is then frozen to aid in breakdown by the worms. Harvesting is a full-day task, as it is done manually by hand-sifting in a box. Additional labor is required for packaging, labeling, and stocking shelves.

NRC: Have you had success marketing your worm castings?

DB: Crossroads has seen success with selling the vermicompost product in our six Mission Avenue Thrift stores across central Nebraska. The thrift stores themselves help reduce waste and also support efforts to address homelessness and poverty. Initially, plastic containers from salad and spinach were reused for packaging worm castings. Last year, one-pound and five-pound containers were used and gardeners quickly became interested, making the product popular and hard to keep in stock. Recently, a gardener expressed interest in purchasing the product in

bulk, which confirms the success. The next step is to focus on learning more about scaling production to meet demand.

NRC: Are you thinking of expanding?

DB: We want to keep expanding.

What's truly remarkable about this initiative is how it not only contributes to waste reduction and creates an eco-friendly soil amendment but also changes lives. One of the men overseeing the growing project has struggled with alcoholism for many years, which deeply impacted his life, leaving him homeless and estranged from almost all his relationships. At 50, as a recovering alcoholic, he was finding it difficult to re-enter the workforce. When offered the opportunity to work as a worm farmer, it became a turning point. This job helped him achieve two years of sobriety, and he has continued to thrive in his role, even driving conversations about growth in the operation.

This is a true win-win for the community in central Nebraska: it provides jobs, supports life-changing programming, and sustainability for a program that helped over 1,300 people find safe shelter in 2024 and benefits the environment. It's clear that expanding this initiative could amplify all these positive impacts even further, and that's the goal—creating a larger-scale operation that supports all three areas of impact. Could it really get any better than this?

NRC: What are some lessons learned along the way?

DB: We initially envisioned rapid growth and expansion but have learned that slow and steady progress is more effective. We still need to master best practices and bring people along, even if they have no prior experience. Space has become increasingly important for maintaining a clean, safe environment, especially since our operation involves food and is conducted indoors. We've realized that many people are interested in what we're doing, and it's our responsibility to help them learn. For example, recently, Girl Scouts volunteered with us, and we had the opportunity to show them our worm farm. In terms of recycling, it's crucial to teach future generations about environmental care and stewardship. As a Christian organization, we believe in being good stewards of everything God provides and aim to pass this value along.

NRC: Is this a profitable venture or more about waste diversion?

DB: We've been focusing on learning how to divert some of the waste we generate. I believe this initiative could not only be profitable but also help reduce

waste in our facility. Additionally, we see it as an opportunity to educate others. Last year, we sold some totes to a local UPS delivery worker. We took the time to explain how it works and guide him through the process. Last I heard, it's going well, and he's successfully reducing waste while also enjoying fishing with his own bait.

What a beautiful story of how something as simple as gardening and worms has turned into an impactful initiative that supports both the environment and the community. Daniel Buller's journey from teaching his kids about worms to creating a sustainable solution for food waste and poverty is truly inspiring.

It's incredible how vermicomposting can serve multiple purposes - turning food waste into valuable compost while also providing jobs and training for individuals facing challenges in entering the workforce. The ability to tie the success of a gardening hobby to something so meaningful for the homeless community shows how creative thinking can lead to solving big problems, like food insecurity and environmental sustainability.