

Fertile ground: Sustainable practices in prison lead to sustainable futures

by Taylor McAvoy | October 4th, 2017



The composting technician team at Monroe Correctional Complex.

After years behind bars, Nick Hacheny was walking alongside a prison wall when he noticed a plant growing from a crack in the concrete. He identified with the plant and decided he would find a way to make something of his time in prison. He used this metaphor in his [2014 TEDx talk at Monroe Correctional Complex \(MCC\)](#).

With the help of his friend Rory Brown and correctional staff, Hacheny began developing a vermiculture program: a composting method using worms. A portion of the prison's food waste could be composted instead of sent to a landfill.

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Hacheny and Brown started with one compost bin and 200 worms. The vermiculture program has since grown to 22 bins housing more than 7 million worms.

It also gave inmates a chance to learn a valuable skill they could realistically use upon release. At the TEDx talk, Hacheny described a parallel between his vermiculture composting work and his own experience with incarceration. People used to disregard the cost to the planet of throwing garbage in a hole in the ground. Likewise, people don't pay enough attention to the cost of releasing someone from prison without any support.



Juan Hernandez, left, explains the sorting process for collecting worm castings. Worm farmers sort out the cardboard and worms from the bins and filter the soil into a nutrient-rich fertilizer. Photo by Taylor McAvoy

Hacheny says part of the solution to recidivism can be summed up in one word: relevance. This is the main reason he gets up every day to take care of millions of worms. "Everybody wants to feel relevant, that their lives and actions count for something," Hacheny said in his TEDx talk.

"Especially prisoners who, in our society, have lost virtually all relevance. Sustainable programs can restore that relevance."

It also helps prisoners build sustainable practices in their own lives so they don't end up incarcerated again. A 2014 study from the RAND Corporation, a research and analysis nonprofit, suggests educational prison programs significantly reduce recidivism.

While incarcerated in 2010, Hacheny became a member of a sustainability committee including inmates and corrections staff in 2010 at MCC's Washington State Reformatory Unit (WSRU). The committee was formed partially in response to the Sustainability in Prisons Project (SPP), a nonprofit partnership with The Evergreen State College and the Washington Department of Corrections (WDOC), to bring education and sustainability to prisons.

The sustainability committee found in 2010 that the prison was spending nearly \$65,000 per year disposing of food waste, so they found a way to reduce the cost and fossil fuels used to transport food waste.

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While taking a correspondence class through the mail on sustainable practices, he discovered vermiculture composting.

Hachenev and his team at WSRU lay cardboard and paper shreds as a bed for millions of worms who then eat the prison kitchen's leftover scraps of fruits and vegetables. The worm farmers harvest worm castings, or dirt, to use as a nutrient-rich fertilizer that they donate directly to the community.



Prisoners showing bokashi. Photo by Taylor McAvoy

The work done in the vermiculture program is groundbreaking. Many texts on the subject advise against feeding worms acidic foods, but the WSRU program uses a technique called bokashi before feeding the worms. The process acidifies the food waste but makes it easier for worms to digest at the same time.

The worm farm still had room for improvement. It needed a way to break down foods the worms couldn't eat, such as protein and dairy. Hachenev read that black soldier fly larvae will eat proteins as well as fruits and veggies. Rudy Madrigal, a worm farm participant, stepped up when everyone else was too squeamish and started a composting method with black soldier fly larvae.

Many texts on composting also note the process could not break down materials like Styrofoam. Madrigal discovered a way using the bokashi technique in conjunction with the black soldier flies. This practice could significantly reduce the amount of artificial waste sent to landfills.

Using the worms and flies in conjunction with bokashi, the team has the capacity to compost 75 percent of the WSRU food waste on site.

The composting program has been used as a model for other prisons within the MCC and throughout the state. Hachenev and the worm farm team developed a worm breeding program and donated more than 2 million worms to Walla Walla Penitentiary, Washington Corrections Center for Women, Clallam Bay Corrections Center and Stafford Creek Correction facilities to start programs there.

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The men working in the program have also built worm bins for community organizations, including the Snohomish Boys and Girls Club, Snohomish Conservation District, Department of Social and Health Services (DSHS) Fircrest Residential Habilitation Center, DSHS Rainier School, Olympic School, Northwest Trek, Monroe Senior Center and various charities.

The program also helps participants such as Madrigal and Juan Hernandez, who now runs the worm farm, make positive changes in their lives.

The community connection is important to Hernandez. He says it's a good way to connect with society again.

"Now it's a passion of mine," he said. "I really like the sustainability part of things. It feels good to give back and not just keep taking."

Madrigal was initially averse to joining the worm team for reasons other than the obvious dirty work it involves. For two years Madrigal waited for a teaching assistant job that opened up at the same time he decided to interview for the worm farm. He ultimately chose the worm farm position after a personal recommendation from Hacheney.

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"It's changed my world view, it's changed my conversations," Madrigal said. "In a world like this, where people sometimes tend to hang out with their own, it's good to work with people from different backgrounds and learn from them. It comes down to wanting to make a difference. We can change our ways and make a positive change."

Inmates can receive certification through Hacheney's class about the vermiculture composting process. Hacheney teaches a sustainability class where inmates can learn the methods behind vermiculture composting using worms, black soldier flies and the bokashi process.

His class also covers environmental issues, such as global warming, and he teaches participants sustainable business plans so they can use the skills in their lives upon release.

SPP partnered with a local sustainability nonprofit, The Tilth Alliance, and the Washington Department of Corrections (WDOC) to create the certification.

SPP Co-director Kelli Bush says this certification is unique because it is directly endorsed by a community organization outside SPP or the DOC. And that, Bush says, adds weight to its significance.

"I'm a firm believer that we need to have more investment from community organizations," Bush said. "That's how we are going to change the cycle of incarceration by investing in people."

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The vermiculture program at WSRU has not awarded any of the new certificates yet, but Bush said participants in a butterfly captive rearing program with a similar certification at Mission



Black soldier flies. Photo by Taylor McAvoy

Creek Corrections Center have been awarded up to 15 credits upon release.

Hernandez, who has nearly completed the program, should receive his certification for the vermiculture program when he is released.

“For me, it’s really changed my outlook on life,” Hernandez said.

“The more of these programs implemented in prisons, I think it would really help people. It’s given me a purpose in life.”

The first certificates for the composting program at WSRU are expected to be awarded in February 2018.

Certification requires 1,000 hours of field work, class participation, reading suggested texts and taking exams on the material. Certificates can be reviewed for academic credit through certificated learning programs like those at The Evergreen State College.

Inmates at WSRU earn 42 cents per hour on the worm farm. Officer Jeffrey Swan submitted a policy exception request to have the workers paid for actual hours worked without the cap at \$55 per month in an effort to increase retention of the workers in the program.

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Tilth Alliance Program Coordinator Justin Maltry says the men at the worm farm are some of the world’s leading experts on vermiculture composting. For him, giving them the support to continue teaching and learning is important for the entire community.

“It sometimes doesn’t feel like people are given a fair shake to build themselves a new life,” Maltry said. “So if people left with skills, opportunity and something they feel invested in and

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can contribute to society ... I think this kind of certification and other kinds of skill-building programs in prison can be life-changing.”

Now, prisoners are educating people from the outside on their work. Maltry organized three trips to the prison with two to four Tilth Alliance staff members each visit. The coordinators and volunteers have since used what the inmates at WSRU taught them to build worm-composting bins for the University District food bank.

“We’re being recognized for what we’re doing, and you don’t see a lot of that around here,” Madrigal said. “It’s small; I’m just one person, but it starts with one person.”

Nearly every prison in Washington has a composting program. SPP hopes to adapt the certification developed at MCC for other prison programs so that they can eventually offer certification for every composting program participant. Because the scale and composting methods are unique for WSRU, certification for the other programs would have to be adjusted.

Hachenev said part of the problem is funding. SPP has helped the program grow through providing educational materials and a microscope for the soil science component, but their reach is limited as a nonprofit.

Since the worm farm began, Hachenev and his team have used scrap materials. They saved food carts, laundry bins, mattress carts and any scrap they could reuse for more worm bins.

“We’re a program that saves the prison money and we still have a hard time having programs like this,” Hachenev said. “There is a massive need for more programs like this.”

Part of that, he said, is a needed culture change in society.

“Somehow, I believe that narrative has got to change,” Hachenev said, “and have people say we want something different out of our prison system than just houses and punishment.”