



Inset, Keith O'Dell, owner of Castaway Compost

solution for both Kenyan and American problems.

Or maybe he'd found the proverbial pirate's treasure. It turns out that feeding waste to worms creates gardener's gold: a natural fertilizer that improves soil structure and boosts plants' overall health. Loaded with microbes when fresh, vermicompost is commonly used as a top dressing throughout the growing season and can be applied at one pound per 100 square feet on crops.

He passed the information along and two weeks later took his new-found knowledge into the workplace.

There he began turning coffee grounds, café waste and shredded office paper into a fertile soil amendment. "We're not saving a ton of money," he says, "but nine tons will stay out of the incinerator this year." Some 10 gallons of kitchen waste gets diverted to worms' hungry mouths each day.

Worm composting is usually thought of as an indoor endeavor, with bins holding kitchen waste and some form of bedding, from shredded paper to coconut coir. But it can just as easily be done outdoors, O'Dell says. Many compost piles already benefit from free agent wigglers if conditions are right. And contrary to popular belief, worms are perfectly capable of surviving a cold winter outdoors, if they have space to burrow. That's how the Raytheon worms live, and if their population explosion is any indication, they've been happy with the arrangement.

At home, O'Dell added worms to his outdoor compost bin, where they've continued to multiply, chewing up layers of compostables and freeing him from the need to turn the pile. He also obtained his wife's blessing to give indoor worm composting a try, as long as the bins didn't smell.

Soon every possible bit of trash from home and office was on its way



One Man's Trash

Keith O'Dell capitalizes on well-fed worms to fertilize the soil

BY SHAWNDR A MILLER | PHOTOGRAPHY BY JOSH MARSHALL

WITH HIS JAUNTY GRIN, ponytail and beard, Keith O'Dell would make a convincing pirate. Though he's really just a mild-mannered Fishers resident, he lives out his alter ego as the owner of Castaway Compost, a vermiculture business. Motto: "Yer trash be treasure."

He estimates that over half a million red wiggler worms have passed through his hands on their way to customers over the last five years. He keeps dozens of worm bins in his basement and garage, cycling paper and vegetable matter through the digestive systems of these small invertebrates. And at Raytheon, where O'Dell works as a facilities engineer, he manages a waste reduction program that relies on the same process.

But before the pirate jokes and wiggly helpers, there was Africa. About six years ago O'Dell's buddy, Ned Campbell, founded a nonprofit to help a Kenyan village's agricultural efforts. Intensive farming practices had depleted the soil to a lifeless dust. O'Dell agreed to research solutions.

He'd grown up in a rural area north of Lafayette, where his first jobs involved detasseling corn and baling hay. So although he didn't grow up on a farm, he knew a few things about agriculture. He'd already begun gardening and composting on the small suburban lot where he lived with his wife, Shelly, and their two daughters. When he hit on worm composting, he knew he'd struck gold with a potential



to being treasure. Now he markets his worm bins, along with everything associated with them: the worms themselves, finished vermicompost and aerated worm compost tea. (This "tea" is not for human consumption; the mix allows the benefits of vermicompost to stretch further when used in lawn applications, which he also offers

as a service, as well as the installation of custom raised beds for clients.)

O'Dell also offers a workshop on the topic, according to Maggie Goeglein, executive director of Fall Creek Gardens/Urban Growers Resource Center. "Keith's a really friendly guy," she says, "and he's very knowledgeable about his topic. He's an instructor that I know is

going to give great information and be able to answer questions."

His passion for waste reduction, coupled with worms' high reproduction rate, gives the project seemingly unlimited expansion potential. At times he is working 20 tubs of worms in the finished basement, with more in the garage, and as long as he keeps his promise about the smell factor, domestic peace is maintained.

To O'Dell, worm composting is an obvious choice. "I don't understand from a logic standpoint why everyone wouldn't be doing this," he says.

His list of potential worm food includes the detritus of much of modern life: shredded newspapers, office paper and junk mail, except for glossies and plasticized envelopes; Q-tips and cotton balls; toilet paper and paper towel holders; tissues and napkins; pet fur and

animal hair; and kitchen waste from eggshells to most veggie scraps. (In keeping with his stink-free pledge, he avoids putting things like onion skins and cabbage scraps in the indoor bins.)

Over the years his worms have devoured all kinds of things: droppings from rabbits and alpacas; old jack-o'-lanterns from his neighbors' front steps; and a guacamole-maker's avocado scraps — even the pits, which sprout into a worm-worthy snack food.

Once he plunked an old moldy textbook, cover and all, into a bin, where the worms consumed most of it. Even the pizza boxes from his church youth group's meetings go through the shredder to become worm food.

Padding about barefoot on a warm early November day, O'Dell gives an overview of his indoor and outdoor homesteading projects. Like most



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subdivision lots, the yard started out a blank canvas: green grass planted on clay subsoil. In the 21 years since moving there with his family, O'Dell transformed it to an urban gardener's oasis, collecting water, composting waste and raising vegetables.

In an indoor aquaculture experiment, he raises fish and plants using an integrated closed system. Just off the back deck, he combines rainwater catchment with habitat creation, as a rainwater-fed pond harbors goldfish year-round. He's an avid researcher and dreamer, tinkering with techniques like hugelkultur, which involves planting a garden atop a mound of wood. This scant quarter acre gives him room for ongoing experimentation. Next year he hopes to try growing mushrooms on wood chips from felled ash trees.

"I'm a little too Clamptt sometimes," he admits with a grin.

Always one to be a little bit "out there," he's started experimenting with black soldier fly larvae, which are

voracious eaters of all things rotten. Meat and manure are among their delicacies, although he hasn't gotten that far yet. "My wife's not home, so I can say the word 'maggot,'" he jokes, standing in the garage and digging through a bin's half-decomposed compost to find a white larva.

Lacking mouths, adult black soldier flies can't bite humans, so there's no danger of them spreading disease. The same fly could be used in a composting toilet, though so far O'Dell has refrained from setting one up.

Instead of purchasing larvae, he creates conditions that attract these flies in hopes of using their natural affinities to the fullest. He considers their presence a triple win, not only reducing waste and producing usable



A red worm egg.

soil amendments, but also potentially serving as a food source for chickens or fish. In permaculture parlance, that's called "stacking functions" — creating multiple positive results from a single project.

"If you have this thing that takes care of waste," he says, "turns it into soil and also becomes a food for your chickens? OK, that's stacked three times. That's a good thing." He himself has no desire to keep chickens (and even if he wanted to, Fishers residents are prohibited from keeping a backyard flock). But if all goes well, he might soon offer the larvae to other urban chicken farmers.

And what about the Kenyan villagers who inspired this quest? Well, they've begun cover cropping, mulching, rotating crops and planting at a more

efficient seed rate, but they still aren't practicing vermicomposting. O'Dell doesn't mind; he's traveled there a few times and has seen incredible progress even without this innovation. "Baby steps," he says.

Closer to home, customers like Maureen Keen like the way worms get busy on kitchen waste while producing a potent — and free — garden product.

The northside Indy resident purchased a Castaway bin as a Christmas present for her husband, David Feinberg. Though some might consider worms an odd gift to put under the tree, she knew her mate would be thrilled. "He was so excited," she says. "That was the best present ever."

Feinberg and Keen had already shifted to a greener lifestyle: A compost pile, rainwater catchment and vegetable garden are prominent features of their yard. But vermicompost takes their urban homesteading to a whole new level. "The quality of compost that comes out of it is just amazing," she says.

Keen appreciates O'Dell's soft-sell approach, noting "you have to be ready for (vermicomposting)" — even though in practice, worm composting turns out to be fairly foolproof.

"Keith kept telling us how easy it was," she says. "I didn't quite believe him. ... But he just gives his customers such a good setup with the worms that it's really easy."

O'Dell would like to see the waste of every single home and workplace cycled through a worm bin or compost pile of some sort. "If everybody did it," he says, "I'd cut prices in half and still be happy."

As the pirate in him might say, "What a barrrrrrgain."



A compost bin.

» Keith O'Dell's workshops demystify vermicomposting and regular composting for gardeners. Whether a gardener goes in for hot composting, cold composting or worm composting, he tells them to include "four colors":

- Green (nitrogen-rich items like food waste, manure or grass clippings)
- Brown (carbon-rich items like leaves, straw or paper)
- Blue (water for moisture)
- White (air for oxygenation)

In hot composting, a gardener speeds up the process by mixing these regularly and sizing the pile at least one cubic yard. The result is compost in as little as three months.

In cold composting, it's a "mix and wait" scenario; the

pile size is "whatever you have room for." The result is compost that can take up to a few years to finish.

In worm composting, the four colors are augmented with red wigglers, and greens are tucked under the browns as food for worms. O'Dell advises feeding a handful a week and observing the response, but that can go up to nearly daily, depending on the feeding rate of your "herd." The result: roughly a gallon of compost per month, per pound of worms.

"You can have all the elements in the right proportions and get compost fast, or you can have them in the wrong proportions and get compost slow," he tells his classes. The line brings a laugh of self-

recognition. Most gardeners are unlikely to follow the rules of composting to a T, and many end up feeling vaguely guilty about a neglected pile.

But O'Dell takes a relaxed (and realistic) view of things. This process is going to happen, with or without gardeners' ministrations. It's just a matter of time.

The important thing? "Start doing it," he urges. "It's easy and makes all the sense in the world."

"If you don't want to do it, find somebody who does and give your trash to them." Then you, too, can have your trash transformed into treasure.

For more information, visit castawaycompost.com.

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