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Household Compost in Rock Island

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During my trip to Germany last summer, I was fascinated by a plethora of different aspects about the culture and style of living. Overall, it is safe to say that they simply have a more sustainable lifestyle than we do here in America. This can be seen in both the people's actions and the government's policies. One thing that particularly caught my attention was their waste system. I first noticed it in the kitchen, where I was so amazed to find four separate compartments for different types of waste that I was driven to take pictures. You can tell that from the eggshells and coffee filters that the lower left bin is specifically for compost (fig. 1). Further investigation showed that each house has several separate bins for paper and plastic for curbside recycling pickup (fig. 2) and they bring their glass back to the store for cleaning and reuse. This is pretty similar to most (but not all) cities in the United States, but one thing that I was rather surprised to find was a curbside pickup bin for compost, appropriately coded by a green bin as seen in fig. 2. They even get fined if their waste is not sorted properly. I certainly was no expert on composting; I had only gotten a taste of the topic during my high school AP Environmental Studies course. Still, I knew that curbside compost pickup was very rare in the


fig. 1


fig. 2

*Both pictures taken by Scott Fick, Summer 2009

United States; a select few cities do it – a few in the Pacific Northwest, and I later found out that even Davenport has a curbside pickup compost system.

It may very well take a while before we see curbside compost trucks driving though our neighborhoods, even in Rock Island, with a number of green initiatives. For now, it is probably still much too cheap to dump everything in a landfill; it only costs $12.75 to put two thousand pounds of Rock Island waste in the Milan landfill, compared with $43.55 per ton in Henry county and $100 in Peoria (*Landfills Transfer Stations Compost Facilities*). One thing that does not have to be so far in the future, but just within reach is household composting. This is precisely why, for a number of reasons, household composting is something that should be seriously considered by households in Rock Island.

Our landfills are being used up rapidly and there is no doubt that there is a finite amount of space in the world, much less Rock Island. The state of Iowa, for example was forced to set a goal back in 1990 to reduce landfill waste by 50% (Griswold). This illustrates that even the state had to recognize the fact that the landfills were filling up too quickly and they did not want to have to keep looking for new areas in which to put obscene landfills. One example of a recent landfill closure is given by the Congress Landfill in Hillside, Illinois. It measures an enormous 55 acres, and was stopped taking in waste in 2008, even though it only opened in 1980. Because of the potential hazards of the landfill, the company has to monitor it at all times, so it certainly could not be used for other development ("Congress Landfill Closure Project"). When a landfill can no longer fit any more waste, we have to find space for a new landfill. Nobody wants a huge, hideous landfill with the potential to commit atrocities upon one's nostrils. Also, if we do not need to make more landfills, that land can be used for other, more productive purposes, such as community gardens.

If people put their organic waste into household compost gardens, we could divert a significant amount of waste going into the landfills. Dr. Michael D Woods, the County Director at the University of Illinois Extension of Rock Island County held a lecture about household composting at the Quad Cities Earth Week Fair this year. As an avid, experienced composter with a PhD in agricultural and extension education, he is highly a highly credible source in regards to composting. He points out that according to the National Composting Council estimates, a U.S. household produces about 650 pounds of compstables every year (Woods). This is a massive amount of waste taking up space in landfills, especially when multiplied by over three hundred million citizens. On a similar note, he says that about 34% of our garbage consists of food scraps and another 30% is paper (Woods). Both paper and food scraps byproducts of our consumptive culture can be composted and kept out of landfills. While much of our paper can be recycled, composting our food scraps and non-recyclable paper like paper towels would make our landfills last much longer than they now do. As Dr. Woods suggests, "we should save our landfills for our hazardous waste" (Woods). This is what landfills are for, and we obviously cannot compost everything. However, the point is, that which we can compost should not waste space in a landfill.

As for those who are skeptical as to whether household composting can significantly reduce waste, there is scholarly research that demonstrates substantial reductions. A team from the University of Otago in New Zealand examined 37 households, with 20 experimental households that would start composting and 17 non-composting, control households. The experimental households saw a weekly 3.7-kilogram reduction – 29% – in the weight of their landfill-destined rubbish (Gillan et al 323-234). These results are impressive, in favor of composting. The study also concides with the fact that 34% of our waste is garbage, especially if

you account for meat scraps and bones which are typically not included in composting. In an example closer to home, according to Ann Brockway, the Communications Coordinator for the Waste Commission, "[t]he Davenport compost facility helps divert an additional 20 percent of what had been landfill waste" (Griswold). While this is an example of curbside pickup composting, it still suggests that composting can prevent a considerable amount of organic waste out of landfills, in the Quad Cities, no less. Furthermore, waste reduction can even be noticed on the household level. Leah Mortenson, a student at Augustana College offers testimony for this. She lives at the Local Culture "eco" house, complete with its very own compost pile, and so has first-hand experience with the matter. In an interview, she explained that they "rarely have to set out our garbage to be picked up" (Mortenson). If there is a noticeable difference even at the household level, then the difference made by every able household in Rock Island would be tremendous. Clearly, composting is an excellent way to make our landfills last longer.

To bring these numbers the scale of the city, The City of Rock Island Public Works Department publishes an annual report, which includes the statistics on waste collection for Rock Island. First of all, the data shows an overall trend for increasing in total tonnage of waste over the past five years, which calls our attention to the fact that the city as a whole is not in fact reducing the amount of waste it produces every year, so we have to do something about what we do with our waste (Hawes E1). Another important fact to note is the reduction in regular waste tonnage with the growth of curbside recycling from 2008 to 2009. As you can see from Table 1, in 2009 alone, the City of Rock Island collected a total of 20,461 tons of waste from its residents.

Table 1 Source: City of Rock Island Public Works Department (Hawes)

Solid Waste Quantities	2009	2008	2007	2006	2005
Regular Waste (tons)	18,156	18,980	16,662	17,978	17,753
Yard waste (tons)	1230	1287	1097	1313	867
Recycling Drop-Off (tons)	572	831	803	800	1120
Curbside Recycling (tons)	503	354	N/A	N/A	N/A
TOTAL	20,461	21,461	18,562	20,091	19,740

The report also shows that 88.7%, more than 18,000 tons, of this waste was landfilled, which took up a substantial amount of space in a landfill (Hawes E1. Some simple calculations with the fact that we could reduce waste by 29% (as was done in the New Zealand study) suggest that more than 5,220 tons of waste if every Rock Island house composted their organic waste. So household composting really can make a difference in Rock Island. Furthermore, even at the cheap rate of $12.75 per ton, putting 18,000 tons of waste in a landfill costs residents of Rock Island a total of a more than $229,500. A considerable portion of that money could be saved if each house did household composting, meaning citizens could save money and the city could use some of that money to fund some other projects, like their Green Team initiatives.

The next thing people probably want to know is how much composting will cost them. One of the nice things about composting is that you can pretty much choose how much you want to invest in it. Dr. Woods assures us that there are many options when it comes to containing your compost. You can buy bins for prices between tens to hundreds of dollars, build them yourself for even cheaper, or build a space to contain your pile if you choose not to have a bin (Woods). In the New Zealand study, the researchers calculated that it would only take 1.56 years for the compost bins to pay for themselves, based on the cost of throwing garbage away (Gillian et al 324). While this number may vary significantly from place to place, putting organic waste in a compost pile is completely free after the first cost is paid for. In Rock Island, it is particularly significant because the Public Works Department charges annual subscriptions of one hundred dollars just for yard waste collection. You could completely avoid this fee if you simply put your yard waste into a compost pile to be recycled into your yard once it is composted.

Other than monetary cost, people always want to know how much of a time commitment it will cost them. When I asked Mortenson, she told me that it is not very time consuming at all and explained that it becomes routine like taking out the "real" garbage (Mortenson). So it may take a little bit of time from people, but they probably will not notice that it is gone, since nature does most of the work. However, one important thing to consider, as pointed out by Christiana Datz-Romero, the Director of the Lower East Side Ecology Center in New York City, is "[t]he more time you put into it, the better your compost will be" (Royte 120). This logical piece of information may frustrate people who overlook this fact, but it does not mean that people without time cannot get good compost. Probably the most time consuming activity with household composting is turning the compost. Although, Woods advocates for this turning to allow oxygen to get circulated better, he also says that people do not have to turn their compost piles, but it will just take longer for unturned compost. Still, he estimates only about 12 months for unturned compost piles to decompose and be ready for use (Woods). So people can opt out of this turning if they really want, and they will still probably have compost to use for the next gardening season. This flexible factor is great because it allows people to put whatever time they can into their compost piles, so there is little room for excuses when it comes to time.

In addition to all of these points, the process of composting instead of landfilling is much more similar to how nature intended it. Much of the genius of composting is due to the fact that it is based on how natural systems function. Composting is a form of organic recycling that breaks down nutrients for other plant life to use. I think Mortenson sums it up well when I asked her about the most important reason to compost: "[w]hen you compost, you are recycling nutrients that can be used again and again, and helping to perpetuate the cycle that sustains us, and our life system" (Mortenson). This addresses two very important things to consider. First, it gets at the

fact that the Earth is designed to break down organic matter, instead putting it in a landfill where even organic waste may take years to decompose. Secondly, it reminds us forget that we are dependent on this system that gives us life. As such, we should feel a responsibility to give back naturally to the system that we take from so often.

For all of the gardeners, fresh compost will be a welcome gift in their gardens. It can be used as a free form of fertilizer for the soil. What's more, because composting is completely natural, it does not present the negative aspects of artificial nitrogen fertilizers. It was not made from petroleum, like many artificial fertilizers, and nor does it pose a risk for damaging ecosystems by having too high concentrations of nutrients in the runoff water. An EPA study and a number of studies show "a direct relationship between nitrogen leaching to groundwater and nitrogen fertilizer use rates" (Ogg 49). The detrimental effects of this pollution have even made it mainstream media in the *New York Times*. An article from 2008 recognizes nitrogen-rich nutrients from artificial fertilizer runoff as the main perpetrator in oxygen starved "dead zones" of the ocean due to increased algal blooms from the presence of these disproportionately high levels of nitrogen (Venkataraman). These examples clearly demonstrate how increased use of artificial fertilizers has obvious, serious affects on our limited groundwater supply and hydrologic ecosystems.

Beyond that, the natural properties of good compost have some great benefits; people notice the effectiveness of compost when they use it in their gardens. Dana Swanson, another student at Augustana who works for organic farmer Jim Johanson of Wesley Acres Produce, shared her experience with using compost at the farm. She suggests using compost as mulch and that it quickly and thoroughly it will suppress weed growth (Swanson). This is great news for gardeners, especially when paired with Mortenson's good experience with compost. Mortenson

describes how helpful it was to integrate it into the vegetable garden, due to the disproportional clay content in the soil (Mortenson). So the compost can even help balance out soil for optimal growing conditions. Even for non-gardeners, there surely is a neighbor that would be more than willing to enjoy the fruits of your compost, so to speak.

On the topic of neighbors, many people are concerned as to whether composting is a neighbor-friendly activity. They may worry about the smell, appearance or potential pests. Dr. Woods offers advice for all three of these potential issues. Addressing all three, where you decide to put your compost is important; ideally, you would want it relatively far away from both you and your neighbors' houses, and possibly somewhere discreet if you are really worried about looks (Woods). This will minimize issues if they do arise. However, if a compost pile is taken care of, none of these should be a problem. Woods says that as long as you keep meat and dairy scraps out, and keep the "brown matter" (dead leaves, twigs, etc.) ratio up, smell should be minimal if any. So if it starts smelling, adding more brown matter should help with the smell (Woods). Leah Mortenson shared her recent encounter with a neighborly problem, explaining that a neighbor had recently contacted the college about the smell of this student-run compost pile (Mortenson). However, their compost pile is particularly close to the neighbor's house, so a different location and maybe a little more brown matter in the pile could solve the problem. As for the pest issue, keeping these things in order and keeping the smell down should, in turn, keep away most pests. Also, adding fences or grates to piles will prevent pests (Woods). As for appearance, Woods says that you can buy or design bins to either blend in or at least look somewhat ornamental. If these simple measures are taken, friendly relations will probably be maintained with your neighbors and city ordinances should not be a problem.

Yet another frequent question deals with the seasonal changes that we have here in Rock Island. At first, many people, including myself, wonder if composting can even happen during the winter. In short, the answer is yes, and thus you can keep adding to your pile during the winter. This is because of the heat that is generated by the decomposers during the process (Woods). Granted, the process will probably be a little bit slower than in would be during the warmer months, but it still happens. Even the worms at the Local Culture house survived the winter in their outdoor compost pile, simply migrating towards the bottom, as they would in nature (Mortenson). Even in climates with dramatic temperature changes with the seasons, composting can continue throughout the year.

One of the biggest reservations people have about composting is simply the fact that they are not soil scientists, so it will be too difficult for them to handle. On the contrary, many people argue that nearly anybody who wants to can be a very successful composter. Swanson and Mortenson agree that they would not consider composting difficult at all. Like learning any other skill, the best was to learn is simply a process of trial and error. To help in the learning process, there are plenty of beginner's guides and how-to's, as well as plenty of helpful, experienced people if you look for them.

In conclusion, there are few to no reasons why a Rock Islander should not at least consider starting a compost pile in their household. The only major, difficult problem to solve, is simply lack of knowledge about composting. If people are aware of its benefits, and the consequences of just throwing compostables away, they would probably be more likely to . Other than the occasional article in the *Radish Magazine,* there are very few articles about it in the media of the area. This demonstrates the absence of knowledge about composting in mainstream culture. But we can solve this problem as well. If everyone who hears about the

importance of composting at least takes a chance to learn about it, consider starting their own pile and telling other residents about it, we may be able to bring it into the everyday lives of the people of Rock Island.

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