

Penn Current

News, Ideas and Conversations from the University of Pennsylvania

March 25, 2010

Garbage in, nutrient-rich compost out

By Tanya Barrientos

For a long time, the mountains of chicken bones, eggshells, potato peels, lettuce leaves and other leftovers from the food that is prepared for thousands of students, faculty and staff at Penn was just garbage. But now it's more than mere rubbish; it has become a key part of an ambitious composting initiative that started in early February and is already sending about 4 tons of organic waste per week from Penn to a recycling center in Wilmington, Del.

"We always knew a lot of the waste could be composted, the real issue was finding a facility that would be large enough to handle the volume we would create," says Joel Blice, campus executive chef. "For large institutions the challenge has always been the transportation of the waste, and finding a facility that can handle the volume."

Fortunately, Blice says, a brand new state-of-the-art composting center opened a few months ago less than 30 miles from Penn, near the Port of Wilmington. The Wilmington Organic Recycling Center is the largest waste composting facility on the East Coast, and the first to open in this region. According to Brian Schaffer, executive vice president of the recycling center, it is capable of processing 160,000 tons of organic waste annually, producing 100,000 tons of compost. The center is expected to divert 120,000 tons of organic waste from area landfills, reducing greenhouse gas emissions by the equivalent of removing 88,000 automobiles from area roads per year.

Penn's organic garbage, which includes food waste, compostable cardboard, napkins and paper towels, is transported to the recycling center in "tipping bins" that look like dumpsters. When the matter arrives, Schaffer explains, it is mixed with wood chips and other carbon matter and put through a shredder. Any stray plastic wrap and metal items such as forks or spoons are removed (and recycled separately) before the eight-week composting process begins. During that time, Schaffer says, the material is covered with a special Gore fabric and the oxygen level and the temperature of the waste is closely monitored to optimize decomposition and to eliminate contamination.

Near the end of the process, the matter is uncovered and placed into "wind rows," which are, essentially, heaps that stand 13-feet high, 30-feet wide and 185 feet in length, Schaffer says. The end result is a high-grade, nutrient-rich organic compost for use in agriculture, horticulture and landscaping.

At Penn, food waste is being collected from Hill College House, King's Court English College House, 1920 Commons and Houston Market, and Blice says about 80 percent of the waste produced in these facilities is now being routed to the compost center.

"Of course we'd like to be at 100 percent, but there are still some items [mainly packaging] that is not manufactured as compostable," he says. Nonetheless, Blice believes enthusiasm for the composting effort will continue to grow within the Penn community.

"I'm proud of what we've already accomplished in the short term," he says. "It's nice to have everybody with the same goal in mind working together."

Originally published March 25, 2010