



## **UW-Stout 'green' project is one of country's best**

*By LeAnn R. Ralph, Reporter*

The idea is brilliant in its simplicity.

Place the more than 50 tons of food waste generated annually by UW-Stout into 55 gallon plastic drums that roll down a 300-foot concrete trench over a 40-day period, and when the barrels reach the end, the food waste will be turned into an organic soil.

In fact, the idea generated by three students in Noah Norton's industrial design class at UW-Stout is so good that it is among the top 10 of more than 100 projects submitted to the first-ever mtvU/GE Ecomagination Challenge.

The students, Jason Burbank, Tobias Leidke and Tim Parmer, say they knew the idea was good, but that they are surprised and pleased to find their project in the top 10 alongside projects from the Massachusetts Institute of Technology (MIT), the University of Southern California and Vanderbilt University.

Last fall, college students around the nation were invited to submit ideas on how to "green" their college campuses.

"Green" refers to efforts that are good for the environment.

Norton said his graduate thesis was on eco-design, so when he found out about the Ecomagination Challenge, he decided to integrate it into the course work.

The class was divided up into four groups that focused their efforts on four areas of the campus: dormitories, waste management, groundskeeping and food service.

"And one of the groups came up with a winning project," Norton said. "They're a talented group of people. They're hard workers who came up with something great."

"Simple is better if it works," Parmer said. "I'm happy to be part of a project that has a chance of having an impact."

### **Happy MicroOrganisms**

Burbank, Leidke and Parmer have named their project the Happy MicroOrganism Compost Train.

Well, that's actually the English translation.

Since Leidke is a German exchange student at UW-Stout, the team gave its project the German name for "Happy MicroOrganism" — "Glueckliche MicroOrganismen" (pronounced "glook-likie meekro-organeezman").

Leidke, who is on an exchange with a Stout student living in his apartment and attending his school, Hochschule Fur Angewandte Wissenschaft Und Kunst In Hildesheim (The College for Applied Science and Art at Hildesheim), noted that the pace of an American university is much faster.

“There are many more projects for each class,” Leidke said. In Germany, students are expected to produce one project each semester, but that one project must be perfect.

## Video

Part of the application to the Ecomagination Challenge included a video to both illustrate and sell the project.

“I did the voice-over,” Burbank said, “and every time we got to the name, I would turn to Tobias (pronounced “tow-bee-us”) so he could say it in German. It was funny. We wanted our video to explain the project, but we wanted it to be humorous, too.”

## The process

According to the script for the video, “composting works best when you keep aerobic microorganisms happy, which means they’re kept warm, not too wet or too dry, they have the right ratio of carbon to nitrogen in their food and access to oxygen.” Shredded waste paper or cardboard would be placed at the top and the bottom of the drums.

To begin the process, food waste would be put into the 55-gallon plastic drums with vents on the lids to supply oxygen to the composting process.

“Food has excessive nitrogen, and paper and cardboard have excessive carbon. Together they create the correct ratio to keep the microorganisms happy, and happy microorganisms mean faster composting and less smell,” the script says.

Compost needs to be mixed regularly, and as the barrels roll down the ramp, the contents of the barrels will be turned over.

The concrete ramp would be sunk into the ground as a trench to help keep the barrels warm when the temperature is cold in the winter and cool in the heat of summer.

To help keep the compost warm on the coldest of days, the top of the trench also would be covered with polycarbonate greenhouse windows.

“This combination of capturing solar energy and thermal mass is known as passive solar design,” the script says.

The drums would be transported to the composting area with the small landscaping trucks used by the Stout maintenance staff. The beginning and end of the ramp would be elevated to the height of the truck beds so the barrels would only need to be rolled off the trucks or onto the trucks.

## Advantages

When asked how the soil would be used, Burbank said the Stout groundskeeping staff would use the compost around campus and that it would eliminate some of the chemical fertilizers currently being used.

The advantages of the compost system are: it eliminates the use of fuel to haul the food waste to the Seven Mile Creek Landfill near Eau Claire; it saves landfill space; it turns the food waste into compost; little labor is needed to make the compost; it will eliminate the use of some chemical fertilizers; and it would provide an additional use for used 55-gallon plastic industrial drums.

“We hope we win so we can build it,” Burbank said.

**Votes needed**

The winning college campus in the mtvU/GE Ecomagination Challenge will receive a \$25,000 grant to build the project as well as receive a free mtvU concert on Earth Day in April. The winning team also will be featured on mtvU and mtvU.com.

The winner will be selected by mtvU and GE, and part of the decision will be based on the vote tallies for each project.

To cast a vote for the Happy MicroOrganism Compost Train, visit [www.ecocollegechallenge.com](http://www.ecocollegechallenge.com). The Ecomagination Challenge winner will be announced in March.