

Kansas State University Increases Sustainability with Farm-to-Fork Programs and On-Campus Recycling

MANHATTAN, KANSAS



Kansas State University (KSU) in Manhattan implemented sustainability programs into existing operation without having to completely renovate existing facilities. In early 2000, KSU commissioned Johnson Controls to help with an effort to reduce the university's energy consumption. The university took many measures between December 2000 and January 2004 in order to cut costs.

With the goal of reducing the amount of energy used, KSU decided to replace current light bulbs and fixtures, install water-saving faucets and lavatories and employ other energy-saving measures. Hobart and Alvey machinery replaced outdated equipment in the largest dining hall. Both of the new warewashers had significant effects on the total water usage.

Because the university was losing a significant amount of steam energy each year, steam-trap leaks were found and repaired. By fixing the four 3/16-inch steam-trap leaks, KSU saved more than \$28,000 annually on steam alone.

Recycling Materials and Food

Cardboard boxes, newspapers and food are the largest contributors to solid waste in KSU's dining facilities. In order to cut down on the solid waste being created, the university implemented several recycling strategies, including recycling 100 percent of cardboard boxes received from suppliers on a daily basis. Students are urged to recycle their newspapers in designated bins in the Kramer Dining Center. KSU is also working on recycling programs in its other two main dining facilities.



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The university has also initiated food and plastics repurposing programs. The local food pantry benefits from the food repurposing program. All food deemed safe but not meeting the quality guidelines for re-service is eligible for donation. Plastic containers from food products are washed, sanitized and saved for later use. Additionally, a Dining Services intern has created a campaign called “All Taste, No Waste” to educate students about the amount of plate waste in the dining halls.

Since KSU saw great success with their food and plastics repurposing programs, they decided to try it out on glass and tin materials. Glass is reused as much as possible on the KSU campus. Glass items that cannot be reused are shipped to local recycling centers. Large foodservice operations such as Kramer Dining Center at KSU generate a tremendous amount of tin-can waste. In order to combat such waste, Kramer Dining Center rolled out a pilot program to collect and recycle tin cans. The program proved successful and is now part of a standard operating procedure that will also be implemented at Van Zile and Derby Dining Centers.



Purchasing Food Locally

For more than a decade, KSU has focused on the importance of purchasing food locally. Over the last several years, its Farm-to-Fork program has grown. The program now purchases numerous products and services from local vendors. All hamburger patties, sausage links, steaks, beef roasts, fajita meat and other meat products are purchased from Weber Hall, a USDA-inspected facility operated at the university by the Department of Animal Sciences.

All fluid milk is also purchased on campus. A USDA-inspected milk processing plant is located in Call Hall. Call Hall is a university entity that provides opportunities for students interested in food science and dairy processing. Call Hall ice cream is also featured in the dining halls once a week on “Call Hall Ice Cream Tuesday.”

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KSU purchases produce locally year-round. Dining Services has partnered with a local grower to purchase fresh, seasonal produce during the summer and fall. A special Thursday night dinner called “Change-Ups” is a way for students to gain a better appreciation for the freshness and flavor achieved when buying locally.

KSU also purchases high-quality flour from Kansas-grown wheat that is milled in the nearby town of McPherson. The products are used to make bakery products from scratch. Between August 2006 and July 2007, KSU purchased more than 73,000 pounds of total flour locally.

Composting Program Reduces Waste

The Department of Agronomy’s composting facility and Housing and Dining Services teamed up to help the Department of Horticulture Willow Lake student-run farm. The members of Willow Lake created a composting program to help divert approximately 85 gallons of pre-consumer vegetable and fruit waste from the waste stream each day. The savings on landfill and transfer station fees will be close to \$3,000 annually for Derby Dining Center alone.

The ultimate goal of this program is to incorporate pre-consumer waste from all three dining centers. The finished compost would then be sold or given to various projects around campus and also used on the student farm to grow vegetables and at the Agronomy Department farm for land-remediation purposes. The compost sites would be used to host tours for composting schools and KSU classes and visitors.

Specialty crop growers, especially fruit and vegetable producers, rely heavily on compost as a source of soil fertility and soil improvement. This project not only helps divert solid waste from the waste stream, but it helps the local crop producers as well.



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Significant Saving

The energy audit from Johnson Controls revealed a significant amount of saving for the university. Replacing the light bulbs aided in a monthly saving of almost \$7,000 on the utility bill. In addition, the reduction of greenhouse gases, volatile organic compounds and nitrogen oxides represents the equivalent of preserving 4,272 trees.

Switching to a Hobart warewasher saved KSU 252 gallons of water per hour. The total amount of water saved in one dining facility alone was nearly \$5,000 per year in water costs. Furthermore, the sewage cost incurred from the wastewater produced by this machine was reduced by almost \$5,000. Using the Hobart equipment creates an annual total saving of \$9,750. Combined with the replacement of the pots and pans machine, KSU is reaping a total saving of \$10,830.

Realization on the return on investment for Farm-to-Fork programs is difficult to measure, as the benefits are primarily intangible. However, it is clear that purchasing locally saves in transportation costs and lowers fuel emissions. Additionally, revenue is being recycled back into the community and supports the local and statewide economy.

More Changes to Come

KSU is working toward improving its sustainable practices on a much larger scale as it prepares for a new dining facility to be completed in 2010. The new dining facility is a retail outlet featuring a convenience store, coffee shop/bakery, sports bar and restaurant. The project has been registered for Leadership in Energy and Environmental Design (LEED) certification for Commercial Interiors project with the U.S. Green Building Council and aims to achieve LEED Silver certification.

