

Composting Case Studies: Keene Central School, Keene, NY

In the spring of 1995, Keene Central School (KCS) students, faculty and staff began composting food scraps from their cafeteria. With the assistance of the Cornell Waste Management Institute, the scraps were successfully incorporated into the existing program to divert campus yard waste from landfill disposal. The school has been able to cut disposal costs, freeing up resources for other uses, while preventing valuable organics from ending up in a landfill. KCS has also developed meaningful ways to incorporate the compost project into learning experiences for their students. To date, they have diverted more than 6,080 pounds of food scraps.

Bunny Goodwin, Compost Coordinator and parent volunteer, says the project was an easy sell to the schoolboard, which was looking for ways to cut waste disposal costs. Since buying a pig was the only other option on the table at the time, composting the food scraps was the most logical solution!

Separation and Collection

Goodwin encouraged student involvement from the project's inception. Two high school Biology students and one custodian collected data on the amount of compostable food scraps generated by the cafeteria for 15 days. With a school population of 207 K-12 graders, their findings indicated that anywhere from 14 to 46 pounds of compostable scraps were generated each day. In addition, 15 pounds of milk, juice and soup were discarded daily.

Students at KCS scrape their own food scraps from their plates into plastic containers. Parents initially supervised this process but have been replaced by students trained as monitors. Cafeteria workers separate food preparation scraps. There was some initial difficulty with the children correctly separating their food scraps in the cafeteria. The student monitoring system was initiated and is now working quite well.

Compost Method

Since snowbanks and cold temperatures are significant obstacles for Keene in the winter months, the school composts food scraps during the first and last eight weeks of the school year. The school custodian is responsible for taking the food scraps to the compost bins. He transports the barrels daily using a pick-up truck. KCS uses leaves from the school grounds and neighbors' yards as the bulking agent. The leaves are run through a 3 1/2horse power leaf shredder since shredded leaves compost much more quickly.

KCS uses four Nature's Backyard, Inc.'s Brave New Composters. Initially, they set the compost bins up according to the manufacturer's directions with the bottom supported with empty jugs to allow airflow. However, the jugs were all squashed flat once the bin was filled. To remedy this, they simply set the bins on pallets covered with chicken wire. They also had difficulty with dogs tipping the bins over, so they now have the bins wired to the pallets. Initially, students, under adult supervision, turned the piles every two to three weeks using shovels and pitch forks. Now, KCS has been granted permission to use the town's Bobcat front-end loader, which has greatly reduced the amount of effort required to turn the compost. KCS is currently exploring alternative composting methods that would allow more efficient use of the Bobcat.

The temperature of the pile is monitored periodically and the ratio of food scraps to leaves is adjusted or water is added accordingly. Older students also test the pH of the finished compost, which was 6.5 for their first batch, using soil test kits. Goodwin says that in about four months, two full bins of scraps and leaves are converted to one full bin of compost.

The final product is ready for use in the next school year and is used primarily in the school's garden. Plots are available to students, teachers, and community members. Produce from the garden is used in the cafeteria and Home Economics cooking classes, and some is given to the local food bank. The compost is also used for soil experiments and starting seeds in classes.

Savings

Keene Central School currently pays \$.10/pound to landfill their waste. Since the program began, KCS has saved about \$1300 in landfill fees. The savings have been reinvested into the program by purchasing a bucket for the school's tractor. The bucket will be used to turn the compost in the new bin.

The school has realized many educational benefits from the composting program. A poster depicting the compost process hangs in the school cafeteria. It displays how composting fits into the recycling loop, showing students the importance of their composting efforts. A slide show and manual on program are available from Keene Central School.

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