Overview

Food waste management is becoming an increasingly difficult issue. According to the U.S. Department of Agriculture (USDA), more than one-fourth of the food produced in the United States spoils, is tossed out, or goes uneaten on the plate. The USDA estimated that food lost in retail stores, restaurants, and private homes in 1999 amounted to more than 100 billion pounds. Retail grocery stores alone are responsible for six billion pounds of food loss through overstocking and by discarding perishable items. Food waste can comprise 30 to 70 percent of the total waste generated by food service businesses and institutions such as restaurants, cafeterias, grocery stores, and prisons. These wastes help make up eight to 15 percent of the total waste disposed at landfills.

Food waste can have several environmental impacts. Food materials discharged to a wastewater treatment plant will contribute to increased levels of BOD (biological oxygen demand), COD (chemical oxygen demand), TSS (total suspended solids), and FOG (fats, oils, and grease). Examples of these food materials include preparation wastes, uneaten portions, grease, batter waste, dairy products, beverages containing sugar, and condiments. Also, food materials discarded into the solid waste stream contribute to odor and methane generation at disposal facilities and to increased BOD and COD levels in landfill leachate.

The first way to make a difference is for food service establishments to reduce food waste. Significant secondary ways to manage food waste include composting and donating to food banks and hog farmers. This fact sheet, however, discusses food waste topics related to licensed garbage feeders and food service businesses and institutions. For more information on waste reduction, composting and donation of food waste, contact the N.C. Division of Pollution Prevention and Environmental Assistance at 1-800-763-0136 or visit www.p2pays.org.

Did you know that more than 90% of restaurant and food service waste can be composted, donated to local food shelters, or given to local hog farmers?
Donating to Hog Farmers

- Businesses and institutions may want to donate food scraps to local farmers to reduce the amount of waste requiring disposal as well as reduce their hauling costs. Facilities may be able to reduce the size of their dumpsters or the frequency of their pickup. They can also avoid weight surcharges as most disposal companies charge extra for handling food or wet wastes because they are heavier and cost more to landfill.
- Restaurants may be billed additional fees for BOD, TSS, and FOG in their wastewater. This cost may be reduced if food grinders or disposals are not used and if limited food waste is permitted to enter the sewer system. The local utility department can provide information about fees.

- Other incentives for food service establishments to donate food waste may include the positive public image and increased employee morale. Businesses can benefit the community and the environment while serving as a model for other institutions that produce food waste, and enthusiastic employees may become advocates of a waste reduction ethic.

Licensed Garbage Feeders

According to the USDA, a licensed garbage feeder is a “person” that feeds “garbage” to swine and who possesses a permit.

- “Garbage” is defined as material consisting in whole or part of animal waste resulting from handling, preparing, cooking, and consuming food, including the offal parts thereof; provided that the commissioner of Agriculture or his authorized representative of the commissioner is empowered to exempt from this definition the waste resulting from the processing of seafood.
- “Person” is defined as an individual, the state, any municipality, political subdivision, institution, partnership, public or private corporation, or any other entity.

Getting Started

Where to Look

Food service establishments and institutions may refer to the list of North Carolina licensed garbage feeders provided by the USDA.

Reducing waste at the source, donating food to the needy, and composting food scraps are all important ways to divert food waste. Another alternative for businesses and institutions is to donate food waste to hog farmers. The USDA lists licensed garbage feeders in North Carolina. Contact Zyphilia Leach of the USDA (919) 856-4170 for a complete directory.

Campbell Soup is Doing m-m-m m-m-m Good!

Campbell Soup Company of Maxton, N.C., is diverting six million pounds of food waste from local landfills while saving more than $23,000 in haul charges and more than $97,500 in tipping fees for a combined savings of more than $120,000 per year. Don Fleming, of the Maxton plant remarked, “It’s not only a cost thing, it’s the right thing to do.”

Campbell Soup Company manufactures heat-processed soups and other canned products. According to Don Fleming of Campbell Plant Services, the Maxton plant donates six million pounds of food waste per year to a local hog farmer. Approximately 10 years ago, Fleming noticed that large quantities of food waste were simply being thrown out and landfilled. Once a farmer himself, he realized that hog farmers could readily use the scraps that Campbell produced. Increased hauling costs and newly established tipping fees further motivated Fleming to divert the food waste, and he attended food diversion seminars and called on local governments. Campbell’s first association with a hog farmer resulted from a lead provided by a USDA inspector who worked with farmers in the area.

The current farmer provides the containers, transportation, and gasoline. Campbell Soup provides and cooks the food scraps, which are 75 percent vegetable matter. For more information on Campbell’s food recycling or its other recycling programs, contact Don Fleming at (910) 844-5631, ext. 1240.
by the USDA. For list updates, contact Zyphilia Leach of the USDA at (919) 856-4170. Unlisted hog farmers may obtain a permit within three weeks of contacting the USDA. Parties interested in donating food scraps may contact their local county government or cooperative extension agent for more information.

**Considerations**

- Food service establishments are neither responsible nor liable if the garbage feeder is not licensed; however, the hog farmer may be fined.
- Food service establishments may need to train employees on types of food materials suitable for feeding to hogs. Food scraps need to be checked for paper products, straws, and other miscellaneous items before they are donated to the hog farmer.
- Consider the type of container used to store food scraps. Since most food service establishments place their full containers outside for pickup at the end of a shift, a sturdy container with a tight fitting lid may help prevent insect and small animal infestation. Find out who is responsible for the sanitation of the containers.
- Consider a farmer with a good track record for dependability. Get references from other establishments that the farmer has worked with or with whom he is currently working.
- Establish a plan for success from the start. Work out pick-up times, container(s) location, employee duties, days scheduled for pick up (including holidays), with all parties involved.

**Permits**

Licensed garbage feeders are required to cook all donated food waste to kill disease organisms. Permit regulations state that the food waste must be heated throughout at boiling (212 degrees F or 100 C at sea level) for 30 minutes. Food scraps must also be agitated during cooking, except in steam cooking equipment, to ensure that the prescribed cooking temperature is maintained throughout the container for the prescribed length of time.

Persons interested in feeding food waste to swine must first obtain a permit from the North Carolina Commissioner of Agriculture or the commissioner’s authorized agent. Permits are effective for one year and are renewable on the date of expiration. Permits are not necessary for individuals who feed their household food scraps to swine, provided that any such swine sold or disposed shall be solid or disposed of in accordance with rules and regulations promulgated by the State Board of Agriculture.

Persons interested in donating food waste to swine farmers do not need a permit. Licensed garbage feeders are responsible for the donated food waste material. “Persons” donating food waste are not held responsible for problems that may occur when the food waste is fed to swine, unless injury is caused by gross negligence, recklessness, or intentional misconduct.

Donated food seldom goes to waste. **Inter-Faith Food Shuttle**, a non-profit organization in Raleigh, rescues edible food from local food service establishments and delivers it to recipient agencies to feed the needy. Rescued food items not suitable for human consumption for various reasons are donated to other causes or needs such as the Carnivore Preservation Trust (CPT). The CPT in Pittsboro accepts over-ripe fruit and vegetables from Inter-Faith to help feed the rainforest animals. Other inedible foodstuffs go to a local farmer for hog feed. For more information, contact Jill Bullard-Stanton at (919) 250-0043.

The **Grease Goblin** is the mascot for DPPEA’s Oil and Grease Management Program. He serves as a reminder to keep grease out of sinks and drains before it becomes a nuisance.