



What is food waste?

Food waste occurs when an edible item goes unconsumed. Surplus or excess food may include unsold food, untouched prepared food, or trimmings from preparation. Surplus food is not spoiled but includes unsold food from retail stores, and untouched prepared food or trimmings from restaurants, grocery stores, or cafeterias. The terms surplus or wasted food are often used when discussing food recovery for donations to feed people. Food waste includes food inedible for human consumption that is sent for disposal¹. The two categories of food waste are pre-consumer and post-consumer. Pre-consumer food waste includes trimmings from preparation and food brought back to the kitchen from serving lines. Post-consumer is better known as plate waste — what the consumer leaves on his or her plate to be thrown away.

Why should we care?

Each year America spends \$218 billion a year processing, transporting and disposing food that never gets eaten. Food waste consumes 21 percent of all fresh water, 18 percent of cropland and 21 percent of waste in landfills — all while one in seven Americans are food insecure². When food is sent to the landfill, it emits greenhouse gases (GHGs) that can cause heat to be trapped in our atmosphere. Higher temperatures can affect crop yields and extreme weather events, increasing the risk of hunger from lack of food and increased prices on certain foods with increased demand and lack of supply³.

The following are suggestions of best management practices schools can implement to help reduce costs, improve the GHG footprint or help feed hungry people by diverting food from landfill disposal.

Track food waste. Without tracking how much food is being wasted, it is impossible to measure improvements and notice areas of opportunities. Tracking can be done on the pre-consumer side (what kitchens throw away during and after preparation) and on the post-consumer side (what students throw away).

Plan ahead. Menu cycling helps create efficient ordering. Poll students and staff on popular and unpopular items for useful information when menu planning⁴.

“Offer versus serve.” Allow students to decline some of the food options offered while still meeting federal nutritional standards. This strategy reduces food waste by not making students take food they won't eat.

Recess before lunch. Schools that schedule recess before lunch have experienced a 54 percent increase in fruit and vegetable consumption, and an overall decrease in food waste⁵. One study showed an 88 percent decrease in food and beverage waste by students when recess before lunch was implemented⁶.

Eliminate vending machines. The availability of competitive foods can contribute to food waste in the school cafeteria. Students may pass over the healthier lunch options and go for the chips, candy and other junk food in the vending machines.



The name game. The name, appearance and reputation of a food forms our expectations of it. By creatively naming foods on the menu and enforcing them with students, consumption rates have been found to increase by 40 percent. Food names can be funny, inspired by location or contain a sensory adjective to increase the appeal. Adding stickers with familiar cartoons has also led to higher consumption rates⁷.

Start a “share table.” Share tables are designated tables where students may place unwanted and unopened drinks or snack packages, along with whole fruits or prepackaged cereal, to share with other students who want them — provided it is in compliance with local and state health and safety codes. For Kansas, review standard operating procedure (SOP) #23 (p 55) of the [Hazard Analysis Critical Control Points \(HACCP\) Food Safety Plan](#).

Donate food. Excess food not served or that remains in packaging should either be saved and served again, or redistributed to food banks, pantries, or shelters. The USDA has published a [guidance document](#) that details food recovery and donation options. Donating to animal farms can also be an option when food is inedible for humans. This option only needs approval from the school administration. For information regarding donor liability, review the [Good Samaritan Act](#).

Be creative. If overproduction occurs, find creative ways to make new use of leftover food. Stale bread can become croutons; fruit can become a dessert topping or smoothies; and vegetable trimmings can be used in soups or sauces⁸.

Food education. Gardening increases students’ awareness of where their food comes from, and increases their consumption of fruits and vegetables. Composting can be integrated into course curriculum to educate students on food waste and chemical processes, and lessens the school’s GHG emissions from food waste.



When in doubt, follow the EPA’s food recovery hierarchy. This guideline prioritizes actions organizations can take to prevent wasted food, with each tier focusing on different management strategies for wasted food. The top levels are the best ways to prevent and divert wasted food, because they create the most benefits for the environment, society, and the economy.

Sources

1. <https://www.epa.gov/sustainable-management-food/sustainable-management-food-basics#what>
2. <http://www.refed.com/?sort=economic->
3. <https://www.wfp.org/climate-change/climate-impacts>
4. <http://articles.extension.org/pages/73463/schools-reduce-food-waste-through-improved-front-and-back-of-the-house-techniques>
5. <https://www.smarterlunchrooms.org/articles/recess-before-lunch-research-tested-parent-approved>
6. <https://schoolnutrition.org/5--News-and-Publications/4--The-Journal-of-Child-Nutrition-and-Management/Fall-2010/Volume-34,-Issue-2,-Fall-2010---Bark;-Stenberg;-Sutherland;-Hayes/>
7. <http://articles.extension.org/pages/73787/the-name-game:-sending-the-right-message>
8. <https://www.epa.gov/sustainable-management-food/how-prevent-wasted-food-through-source-reduction>

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