



BUL 1080

Minimizing the Impacts of Home Food Waste

Bridget Morrisroe

Extension Educator, University of Idaho

Catherine Milner

Materials Management Environmental Analyst, City of Boise

Ariel Agenbroad

Extension Educator, University of Idaho

Annie Roe

Extension Educator, University of Idaho

Julie Buck

Extension Educator, University of Idaho

Contents

- 1 Introduction
- 2 The Persistence of Home Food Waste
- 2 Minimizing Food Waste at Home
- 4 Moving Forward
- 4 Further Reading
- 5 Appendix 1: Home Food Inventory
- 6 Appendix 2: Minimizing Home Food Waste

Introduction

APPROXIMATELY ONE-THIRD OF THE FOOD produced in the United States is never eaten, including food that never reaches consumers and food that is discarded by consumers. Food waste results in negative environmental, financial, and social impacts: the emission of methane, a potent greenhouse gas, as it decomposes in landfills; elevated home budgets (an average family of four spends approximately \$1,500/year on uneaten food); and squandered energy and other resources in food production and distribution. Yet if effectively managed, unused food can feed the over forty-four million Americans (including one in nine Idahoans) who experience food insecurity, divert waste from the landfill, and streamline food production (United States Environmental Protection Agency 2024).

This publication presents an overview of persistent home food waste and provides tips for minimizing it for both consumers and educators who wish to address this problem.



The Persistence of Home Food Waste

Studies conducted by food producers, retailers, and materials management organizations reveal consumers' awareness of and frustrations regarding food waste. In 2019, the City of Boise conducted a waste reduction survey to understand citizens' thoughts and actions about waste prevention. The results affirmed that Boiseans care about waste reduction. Of the 3,000 respondents, over 93% said that they think about reducing their waste "often" or "every day." The study also provided valuable feedback on the barriers that inhibit waste reduction. Community members cited a lack of waste-reduction options, inconvenience, lack of knowledge, and cost as factors preventing them from reducing waste.

Other recent consumer-focused studies find that although individuals feel frustrated and guilty about throwing food away, they struggle to reduce household food waste. During a food waste-prevention pilot project conducted in Dakota County, Minnesota, in 2016, participants cited "busy lifestyles, poor planning and cooking execution, finicky children, and bulk purchasing" as their main challenges to preventing food waste (Schueller and Kedward n.d.). Similarly, the Oregon Wasted Food Study (2017–18) identified the top three contributors to household food waste as spoiled food, lack of interest in eating a prepared meal, and poor leftover food quality (McDermott et al. 2019). A 2022 research review in the *Journal of Dairy Science* described consumer food-waste behaviors as "broad and convoluted" and purported that industry-related factors encourage home food waste through inconsistent and confusing food labels (Campbell and Feldpausch 2022).

Minimizing Food Waste at Home

Despite all the barriers, reducing food waste at home is achievable and affordable. Use the following tips to develop your own strategies:

Meal Planning

Create weekly menus and make a shopping list; use food items in the home as the guide for both. Write

down your meal plan on a notepad or use one of these online tools or apps:

- Meal Planning | USDA (<https://www.myplate.gov/tip-sheet/meal-planning>)
- Mealime – Meal Planning App for Healthy Eating (<https://www.mealime.com/>)
- Diabetes Meal Planning | American Diabetes Association (<https://diabetes.org/food-nutrition/meal-planning>)
- Meal Prep Mate | Natural Resources Defense Council (<https://savethefood.com/meal-prep-mate/>)

Kitchen Audits

Examine your refrigerator, freezer, and pantry to determine what food items need to be used before they expire, spoil, or are impacted by pests. Note items you did not use and be mindful of future purchases. You can download and use our Home Food Inventory tool (Appendix 1) or consider one of these online tools or apps:

- Kitchen Inventory Sheet | Dakota County, MN (<https://www.co.dakota.mn.us/Environment/Residential/Organics/Documents/KitchenInventorySheet.pdf>)
- Kitche it, don't ditch it! (<https://kitche.co/>)
- MyFridgeFood (<https://www.myfridgefood.com/>)

Understand the Date Labels on Your Food

Currently no federal regulations mandate the inclusion of food date labels. Most labels indicate food quality, not safety, except on infant formula. The following defines each type of date label currently in use:

- **Best by** indicates when the food will be of the highest quality.
- **Use by** means that before the displayed date, the food is at peak quality; after, it may decline in quality.
- **Best if used by** indicates both **best by** and **used by**.
- **Sell by** is a date that retailers use to manage their inventory.
- **Freeze by** identifies the date that food should be frozen to maintain peak quality.

If no food labels appear on a product:

- Perform the “sniff test” to check for odors that may signal microbial growth (bacteria, yeast, mold) and do a visual inspection to check for contamination, like pests.
- Put the food in the freezer. As a rule of thumb, leftovers can be safely kept in a refrigerator for three days. But if you do not think you will eat your leftovers within this time frame, freeze them.
- Rely on the overarching rule, “When in doubt, throw it out.”

Hosting

When planning a get-together, use a [Guest-imator](https://savethefood.com/guestimator) (<https://savethefood.com/guestimator>) to calculate how much food you will need to prepare for each guest. Encourage guests to bring containers for any leftovers.

Compost

Transform leftover food into a soil amendment. If you have municipal compost services, follow their guidelines. For home composting, you have many options, from worm bins to backyard tumblers (Figures 1 and 2). You can refer to the University of Idaho Extension publication, [CIS 1066 Composting at Home](#), or see the [US Composting Council](#)’s website.

Many people collect food scraps in an inexpensive countertop bin, freezer bag, or container and transport it outdoors or to a worm system. Some new electronic “food cyclers” are touted as another option for reducing food waste and they are growing in popularity. While these expensive and energy-intensive appliances reduce the overall volume of food waste processed, they are not technically composters. These electric appliances instead heat and mill food scraps into a crumbly dehydrated substance, what one food writer calls “a compost-adjacent product” (Figure 3) (Muzzi 2024). Because this end product has not undergone the complex biological processes required to make a true compost, the dehydrated food waste still needs to be composted to fully break down organic matter and reduce spoilage organisms and pathogens before it can be safely handled or used in the garden.

COMPOSTING—GREENS & BROWNS

- | | |
|---|---|
| <ul style="list-style-type: none">• Raw, cooked, or dried fruits, vegetables, herbs, or flowers• Fruit and vegetable peelings, cores, rinds, or stems• Moldy, bruised, or rotten fruits, vegetables, or herbs• Coffee grounds• Eggshells• Plant-based milks and meat substitutes like tofu or veggie burgers | <ul style="list-style-type: none">• Dry pasta• Corncobs• Shredded egg cartons• Paper coffee filters/tea bags• Paper muffin cup liners• Shredded paper bags• Nutshells• Dry crackers• Wooden toothpicks, popsicle sticks and chopsticks, and cork wine corks |
|---|---|

Figure 1. Items that can be composted include green materials (nitrogen rich) and brown materials (carbon rich). Both are needed, as well as water and air, to make healthy compost.

WHAT STAYS OUT

- Meat and fish
- Eggs and dairy
- Fats and oils
- Bones
- Cooked foods
- Sauces and condiments



Figure 2. Avoid including some food items in home and municipal compost because these items may stimulate pathogen development; attract animals or pests; create a foul odor; or delay the composting process.



Figure 3. Electric food cyclers dry and grind food waste into a pre-compost product.

Moving Forward

Government agencies, organizations, businesses, and professionals are working together to reduce food waste and mitigate its wide-ranging impacts. Not only is food the most common material disposed in US landfills, its decomposition emits methane, a potent greenhouse gas. Thus it's vital (as well as cost-effective) for individuals to strategically adopt better practices to reduce food waste at home. For a handy summary of the tips covered in this bulletin, see Appendix 2. Together, we can work to improve our food and waste systems and more positively impact the environment.

Further Reading

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DATE

APPENDIX 1: HOME FOOD INVENTORY

AVOID WASTING FOOD BY TRACKING ITEMS IN YOUR FRIDGE, FREEZER, AND PANTRY THAT NEED TO BE USED BEFORE EXPIRING

ITEM AND QUANTITY	USE BY	HOW WILL I USE IT?
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APPENDIX 2: MINIMIZING HOME FOOD WASTE

BEST PRACTICES TO PREVENT FOOD WASTE IN YOUR HOME TO SAVE MONEY AND CONSERVE VALUABLE RESOURCES



INVENTORY

Check your fridge, freezer, and pantry regularly to identify food that needs to be used soon.



STORAGE

When storing food, use airtight, moisture- and vapor-resistant containers to extend life and protect against pantry pests.



FOOD DATE LABELS

The following food date labels are provided by manufacturers to help determine when food is of best quality. They are not safety indicators, with the exception of infant formula.

BEST BY: Indicates when the food will be of highest quality.

USE BY: Before this date, the food will be at peak quality and may decline in quality after this date.

BEST IF USED BY: Indicates both best by and used by.

SELL BY: Used by retailers to help manage inventory.

FREEZE BY: If this date is reached, freeze the food to maintain peak quality.

NOTE: Food packages should be sealed and have no signs of damage for quality and safety.



LABELING

Label homemade food and leftovers with the item name and date packaged. Leftovers should be eaten or frozen within three days. If food has signs of spoilage, microbial growth, or pests, it is unsafe to eat. When in doubt, throw it out!



COMPOSTING

Before you discard expired food, consider composting.

Check if your area has compost services or try home composting.

Find more information at compostingcouncil.org.



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