Food waste is a growing problem that affects all consumers. In this lesson we will be learning about food waste, and how it impacts hunger, food insecurity, food costs and the environment. We will explore ways you can reduce food waste in your own home. By learning to reduce food waste not only will you save money, but you will also help conserve natural resources like air, soil and water quality, and make a positive impact on food insecurity & hunger.

**Food Waste:** Edible food that is discarded and goes uneaten.

**Food Insecurity:** Food insecurity is a condition that occurs when there is a lack of access to safe and nutritious food, preventing people from living healthy and active lives. It can occur when people do not have physical or economic access to the food that meets their preferences and dietary needs. In the US, 1:5 children experience food insecurity.

**Hunger:** Hunger is an individual-level physiological condition that may result from food insecurity.

**Food System:** A food system includes all processes involved in keeping us fed: growing, harvesting, processing, packaging, transporting, marketing, consumption, and disposal of food and food packaging. It also includes the inputs needed and outputs generated at each of these steps. Each step or element of the Food System interacts with the social, political, economic and natural environment.

At each step in the Food System there is potential for waste of food, natural resources and human energy. This waste can have impact on food distribution, food cost and food availability.

*Buy what you need, and eat what you buy.*
America wastes 40% of food!

When we waste food, we affect the following:
- Food security
- Our food budgets
- Natural resources
- Greenhouse gas
- Wasted water

What we all can do to waste less food:

1. **Shop “refrigerator first”**
   - Eat food before it goes bad.
   - Cook or eat what you already have at home before buying more.
   - Refrigerate take-home food within 2 hours (1 hour when temperature is above 90°F). Use within 3–4 days. Reheat to 165°F using a food thermometer.

2. **Keep perishable foods cold**
   - Refrigerator: 40°F
   - Freezer: 0°F

3. **Keep fresh food longer**
   - Do not refrigerate potatoes, onions, winter squash or garlic.
   - Do not refrigerate tomatoes, avocados, bananas, peaches, watermelon, or nectarines.

4. **Read the label**
   - Food stored constantly at 0°F will always be safe.

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<table>
<thead>
<tr>
<th>“BEST IF USED BY”</th>
<th>“SELL BY”</th>
<th>“USE BY”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not a purchase or safety date; food may be eaten after this date</td>
<td>Buy before “Sell By” date passes. Fairly set time period before food goes bad.</td>
<td>Refers to a PEAK DATE for best quality; not a specific safety date</td>
</tr>
<tr>
<td>Product has best flavor and quality if used by this date</td>
<td>Eat or freeze by the time on chart below unless the package gives a specific date</td>
<td>Form of date used on foods considered to be perishable from a microbiological point of view</td>
</tr>
<tr>
<td>A less specific date than “use by”</td>
<td>Refrigerator/Freezer Storage Chart at <a href="http://bit.ly/Refrigerator-Freezer-Storage-Chart">http://bit.ly/Refrigerator-Freezer-Storage-Chart</a></td>
<td>Gives last date when a food is expected to be at peak quality; eat by this date for best taste and quality</td>
</tr>
<tr>
<td>Often found on canned fruits and vegetables</td>
<td></td>
<td>Often found on fresh and chilled foods such as fruits, vegetables, salad mixes</td>
</tr>
</tbody>
</table>

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Keep It Cool: REFRIGERATOR/FREEZER FOOD STORAGE CHART

Properly storing foods can help maintain their quality. Make sure perishable foods never sit out of refrigeration for more than two hours, and follow the expiration dates to ensure taste and safety. If no expiration date is available on the package, the following refrigeration guidelines provide a helpful gauge. Freezing is also a smart storage option for shoppers who wish to extend the shelf life of perishable foods beyond their expiration dates. But whether you’re freezing or refrigerating, one basic rule applies: When in doubt, throw it out!

<table>
<thead>
<tr>
<th>Perishable Foods</th>
<th>Refrigerator (below 40°F)</th>
<th>Freezer (at or below 0°F)</th>
<th>Perishable Foods</th>
<th>Refrigerator (below 40°F)</th>
<th>Freezer (at or below 0°F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEAT (BEEF, PORK, VEAL, LAMB)</td>
<td></td>
<td></td>
<td>BACON, SAUSAGE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Steaks</td>
<td>3 to 5 days</td>
<td>6 to 12 months</td>
<td>Bacon</td>
<td>- opened</td>
<td>1 week</td>
</tr>
<tr>
<td></td>
<td>- unopened</td>
<td>2 weeks</td>
<td>- raw</td>
<td>1 to 2 days</td>
<td>1 to 2 months</td>
</tr>
<tr>
<td>Chops</td>
<td>3 to 5 days</td>
<td>6 to 9 months</td>
<td>- pre-cooked/smoked</td>
<td>1 week</td>
<td>1 to 2 months</td>
</tr>
<tr>
<td>Roasts</td>
<td>3 to 5 days</td>
<td>6 to 9 months</td>
<td>Summer sausage</td>
<td>(labeled “Keep Refrigerated”)</td>
<td>3 weeks</td>
</tr>
<tr>
<td>Liver, variety meats</td>
<td>1 to 2 days</td>
<td>1 month</td>
<td>- opened</td>
<td>3 months</td>
<td></td>
</tr>
<tr>
<td>Cooked meat</td>
<td>3 to 4 days</td>
<td>4 months</td>
<td>- unopened</td>
<td>1 to 2 months</td>
<td></td>
</tr>
<tr>
<td>Ground meat</td>
<td>- uncooked</td>
<td>4 months</td>
<td>2 to 3 months</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- cooked</td>
<td>3 to 4 days</td>
<td>4 months</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>POULTRY (CHICKEN, TURKEY)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poultry, whole</td>
<td>1 to 2 days</td>
<td>1 year</td>
<td>Ham, corned beef</td>
<td>(in pouch with pickling juices)</td>
<td>5 to 7 days</td>
</tr>
<tr>
<td>Poultry, pieces (breasts, thighs, wings)</td>
<td>1 to 2 days</td>
<td>9 months</td>
<td>Fresh ham, uncooked</td>
<td>- uncured</td>
<td>3 to 5 days</td>
</tr>
<tr>
<td></td>
<td>- cured (cook-before-eating)</td>
<td>5 to 7 days</td>
<td>- whole</td>
<td>3 to 5 days</td>
<td>3 to 4 months</td>
</tr>
<tr>
<td>Giblets</td>
<td>1 to 2 days</td>
<td>3 to 4 months</td>
<td>- half</td>
<td>3 to 4 days</td>
<td></td>
</tr>
<tr>
<td>Cooked poultry</td>
<td>3 to 4 days</td>
<td>4 months</td>
<td>- slices</td>
<td>1 to 2 months</td>
<td></td>
</tr>
<tr>
<td>Ground poultry</td>
<td>- uncooked</td>
<td>3 to 4 months</td>
<td>Ham, fully cooked, store wrapped</td>
<td>- whole</td>
<td>2 weeks</td>
</tr>
<tr>
<td>- cooked</td>
<td>1 to 2 days</td>
<td>3 to 4 months</td>
<td>- half</td>
<td>Use-by date</td>
<td></td>
</tr>
<tr>
<td>- slices</td>
<td>1 to 2 days</td>
<td>3 to 4 months</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HOT DOGS, LUNCH MEAT</td>
<td></td>
<td></td>
<td>Ham, fully cooked, vacuum sealed</td>
<td>- undated, unopened</td>
<td>2 weeks</td>
</tr>
<tr>
<td>Hot dogs</td>
<td>- opened</td>
<td>1 to 2 months</td>
<td>- dated, unopened</td>
<td>Use-by date</td>
<td></td>
</tr>
<tr>
<td>- unopened</td>
<td>1 to 2 months</td>
<td>1 to 2 months</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lunch meat</td>
<td>3 to 5 days</td>
<td>2 weeks</td>
<td>Ham, canned (labeled “Keep Refrigerated”)</td>
<td>- opened</td>
<td>1 week</td>
</tr>
<tr>
<td>- unopened</td>
<td>2 weeks</td>
<td>1 to 2 months</td>
<td>- unopened</td>
<td>6 to 9 months</td>
<td></td>
</tr>
<tr>
<td>EGGS</td>
<td></td>
<td></td>
<td>DAIRY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fresh, in shell</td>
<td>3 to 5 weeks</td>
<td>Do not freeze</td>
<td>Cheese, hard or processed</td>
<td>- opened</td>
<td>3 to 4 weeks</td>
</tr>
<tr>
<td></td>
<td>- unopened</td>
<td>6 months</td>
<td>- raw</td>
<td>2 weeks</td>
<td>1 year</td>
</tr>
<tr>
<td>Egg whites and yolks (raw)</td>
<td>2 to 4 days</td>
<td>1 year</td>
<td>Cheese, soft</td>
<td>1 week</td>
<td>6 months</td>
</tr>
<tr>
<td>Egg substitutes</td>
<td>- opened</td>
<td>3 days</td>
<td>Cottage/ricotta cheese</td>
<td>1 week</td>
<td>Do not freeze</td>
</tr>
<tr>
<td>- unopened</td>
<td>10 days</td>
<td>Does not freeze well</td>
<td>Cream cheese</td>
<td>2 weeks</td>
<td>Do not freeze</td>
</tr>
<tr>
<td>Butter</td>
<td>1 to 3 months</td>
<td>6 to 9 months</td>
<td>1 year</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: All recommendations assume refrigerators are set below 40°F and freezers are set to 0°F.
## Store in the refrigerator

<table>
<thead>
<tr>
<th>FRUIT</th>
<th>VEGETABLES</th>
</tr>
</thead>
</table>
| Apples (more than 7 days) | Berries
Cherries
Cut Fruit
Figs
Grapes |
| Apricots | Artichokes
Asparagus
Green Beans
Beets |
| Asian pears | Belgian Endive
Broccoli
Brussel Sprouts
Cabbage
Carrots |
| | Cauliflower
Celery
Cut Vegetables
Green Onions
Herbs (not basil) |
| | Leafy Vegetables
Leeks
Lettuce
Mushrooms
Peas |
| | Radishes
Spinach
Sprouts
Summer Squashes
Sweet Corn |

1. Place fruits and vegetables in separate, perforated plastic bags.
2. Use within 1-3 days for maximum flavor and freshness.
3. Store each group in different produce drawers in the refrigerator to minimize the detrimental effects of ethylene produced by the fruits on the vegetables.

## Ripen on the counter first, then refrigerate

<table>
<thead>
<tr>
<th>Fruit</th>
<th>Vegetable</th>
</tr>
</thead>
</table>
| Avocados | Artichokes
Asparagus
Green Beans
Beets |
| Kiwi | Belgian Endive
Broccoli
Brussel Sprouts
Cabbage
Carrots |
| Nectarines | Cauliflower
Celery
Cut Vegetables
Green Onions
Herbs (not basil) |
| Peaches | Leafy Vegetables
Leeks
Lettuce
Mushrooms
Peas |
| Pears | Radishes
Spinach
Sprouts
Summer Squashes
Sweet Corn |
| Plums | Basil (in water)
Cucumber†
Eggplant† |
| Plumcots | Garlic*
Ginger
Peppers† |

1. To prevent moisture loss, store fruits and vegetables separately in a paper bag, perforated plastic bag, or ripening bowl on the counter away from sunlight. Ripening fruit in a bowl or paper bag can be enhanced by placing an apple with the fruit to be ripened.
2. After ripening, store in refrigerator and use within 1-3 days.

## Store only at room temperature

<table>
<thead>
<tr>
<th>FRUIT</th>
<th>VEGETABLES</th>
</tr>
</thead>
</table>
| Apples (fewer than 7 days) | Berries
Cherries
Cut Fruit
Figs
Grapes |
| Bananas | Artichokes
Asparagus
Green Beans
Beets |
| Citrus fruits | Belgian Endive
Broccoli
Brussel Sprouts
Cabbage
Carrots |
| Mangoes | Cauliflower
Celery
Cut Vegetables
Green Onions
Herbs (not basil) |
| Melons | Leafy Vegetables
Leeks
Lettuce
Mushrooms
Peas |
| Papayas | Radishes
Spinach
Sprouts
Summer Squashes
Sweet Corn |

1. Many fruits and vegetables should only be stored at room temperatures. Refrigeration can cause cold damage or prevent them from ripening to good flavor and texture. For example, pink tomatoes ripen to a better taste and red color if they are left at room temperature. In the refrigerator, they do not turn red, and even red tomatoes kept in the refrigerator lose their flavor.
2. Keep away from direct sunlight.

*Store garlic, onions, potatoes, and sweet potatoes in a well-ventilated area in the pantry.
†Cucumbers, eggplant, and peppers can be refrigerated for 1-3 days if they are used soon after removing from the refrigerator.

## Cleaning Your Produce

Always keep produce separate from raw meat, poultry, and seafood. Never use detergent or bleach to wash produce. Instead, rinse produce under running tap water immediately prior to use, including those with skins and rinds that are not eaten. Washing too far in advance removes some of nature’s natural preservatives. However, head lettuce or leafy greens remain crisper when washed right away and then refrigerated. Packaged fruits and vegetables labeled “ready-to-eat,” “washed,” or “triple washed” need not be washed. Refrigerate all cut, peeled, or cooked fruits and vegetables within 2 hours.

For information on how to store other fruits and vegetables go to FruitsAndVeggiesMoreMatters.org

Source: UC Davis Postharvest Technology