The RDN's Guide to Reducing Food Waste

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Food waste has long been a problem in the United States and around the world. During the past decade, food waste and its consequences have received a lot of attention; and many organizations and new programs have emerged to help reduce or redistribute food waste. The United States wastes the most food as nation. Nearly 80 billion pounds of food is wasted each year, which is 30% to 40% of the food supply, and a majority of it ends up in the landfill. This averages to 219 pounds per person annually and roughly $1,160 yearly for a family. Food waste comprises 22% of municipal solid waste.[1] These are troubling numbers considering more than 37 million people struggle with hunger in the United States, including more than 11 million children.[2]

In the developed world, the greatest food waste occurs at the consumer level. This means that after food is grown, processed, harvested, and transported, we are throwing out the end product which is perfectly good and edible food. Households are not the only ones responsible for food waste. US restaurants generate an estimated 22 billion to 33 billion pounds of food waste; and institutions such as schools, hotels, and hospitals generate an estimated 7 billion to 11 billion pounds of food waste.[3] The most commonly wasted foods are fruits and vegetables followed by cereals. Food is wasted for many reasons including:

- Physical damage during handling
- Expired use by date or confusion with label dates
  - Did you know that the only food that legally has to have an expiration date is infant formula? All other dates are optional and decided by the food manufacturer.
- Biophysical degradation of product (dehydration, wilting, discoloration)
- Over-purchasing or inappropriate purchasing while grocery shopping
- Excessive portioning at meals
- Incomplete emptying of container
- Trimmings and other food prep waste
- Not consuming leftovers

With COVID-19, there are new issues and challenges within our food system and food is now being wasted in different ways. According to the American Farm Bureau Federation, it is estimated that only 8% of US farms supply food locally through avenues such as farmers markets, Community Supported Agriculture (CSAs), grocery stores, etc. The rest of US farms supply national food chains that involve many suppliers and handlers. The two main food supply chains are grocery stores and food service establishments. When stay-at-home orders went into effect, many food service establishments such as restaurants, hospitals, nursing homes, and schools closed or began serving limited numbers of people. This was especially troublesome for farmers who only produce food to supply these types of institutions. The farmers were then left with a product that their normal supplier did not need. This forced many farmers to either forgo harvesting, leaving their product on the field to be plowed under or bring it into landfills. Farmers are not able to quickly and simply change their supplier or process their product for a different type of need. For example, 30% of eggs produced in the United States are sold in a liquid form to be used by larger institutions such as hospitals, nursing homes, and restaurants. When the demand dropped suddenly, the facilities that raise chickens for liquid eggs were unable to simply switch to selling whole eggs.[4] These types of disruptions in the food supply chain forces farmers to make difficult decisions about what to do with their product.

Diverting food waste to those who are hungry would be ideal, but there are several factors that make this difficult to do. One includes storage issues. Food banks and other antihunger organizations often do not have adequate refrigerated storage for such a large amount of perishable food. Another challenge is transportation. Shipping hundreds or thousands of pounds of food is very expensive, and farmers and food banks most likely do not have the funds to pay for it.

Food waste is not just a social issue, but it is also an environmental issue. Growing food requires many inputs and resources such as land, water, soil, organic and chemical fertilizers, labor, fuel, equipment, and packaging materials. When food is wasted, those resources are wasted as well which leads to environmental implications:

- Land
  - 28% of the world's land is used for food that is never consumed.[5]
- Water
  - According to the World Resources Institute, food waste uses 45 trillion gallons of water, which is 24% of all water used in agriculture.[6]
- Packaging materials
  - A lot of food is wrapped and shipped in plastic which winds up in the landfills along with the food.
- Greenhouse gases
  - When food is sent to landfill, it rots and emits methane which is a potent greenhouse gas. According to the Food and Agriculture Organization, this is responsible for 8% of total greenhouse gas emissions.[7]

The Environmental Protection Agency has a Food Waste Hierarchy of the most and least preferred usages for food waste.[8] Although landfill is ranked as the least preferred, it is currently where a majority of our food waste ends up.

As food and nutrition experts, RDNs can have a positive impact on reducing food waste through the following actions.

1. Educate patients and clients about the importance of reducing food waste and the steps they can take to reduce food waste in their own homes:

   - Meal planning
   - Re-using leftovers
   - Proper storage practices
   - Conscious grocery shopping
   - Food label education

2. Work with the food service director at hospitals, nursing homes, schools, etc. to look at how food is being wasted. UCSF Medical Center at Parnassus reduced food waste by 50% by tracking and educating staff about how to handle and serve food with intentions of wasting less.

3. Learn and teach others about composting. While composting is still considered wasting food, it is a much more environmentally friendly step than sending it to landfills. Composting at home is not a daunting process and can even be done in small apartments!

4. Consider purchasing food from food waste gleaners. There are now several online companies that purchase excess food from growers that would normally end up in the landfill and sell it to consumers for less than supermarket prices. Some of these companies include Imperfect Foods, Misfits, and Hungry Harvest.

It is important for RDNs to be aware of and to address the issue of food waste. Since we are so involved in working with people and with food, we can have a positive impact and help to reduce waste.

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