

REFRESH NEBRASKA

Stop the Rot

1st Edition

IN THE SHADOWS: THE UNKNOWN TOLL OF FOOD WASTE

Mention recycling, and the last class of material likely to pop into the head of most people, also happens to be the only one we all need to survive – food. So few of us give it a second thought in fact, that EPA actually found it to be the number one household item sent to landfills each year, accounting for 21% of all Municipal Solid Waste (MSW). As incredible as it may sound, of all food produced in the U.S., some 37 million tons or 40% goes unused. That's right - forty percent. They also found that food has the lowest diversion rate of any household material (5%), and represents an estimated \$163 billion loss to the U.S. economy each year.

Surprising as that is, consider the resources needed to produce our food in the first place. For example, one pound of tomatoes also represents the 5 gallons of water needed to grow it. 1 lb rice:12 gal; 1 lb chicken:21 gal; 1 lb cheese:24 gal; and 1 lb beef: a whopping 74 gallons of water. In fact, according to USDA nearly 80% of the country's consumptive water use and 10% of all energy produced, are utilized by agricultural concerns each year, making the loss far greater than the food itself. Mix in the labor, land, and fertilizers needed for production, and the staggering cost of food waste really comes into focus.

As startling as these numbers are, food waste's impact doesn't even end when it reaches the landfill. According to EPA, for every metric dry ton of food that ends up there, 1/4 metric ton of methane is created as it rots. Twenty-eight times more potent a greenhouse gas than carbon

dioxide, they estimate that 18% of all methane emissions in the U.S. are produced in landfills, and food waste is responsible for a significant portion of that.

While most food waste occurs before reaching consumer homes, EPA estimates that each of us toss nearly 300 lbs of food each year, and the average family of four spends \$1,500 on food that ends up going to waste. The irony is that it wasn't always this way, as anyone that grew up a



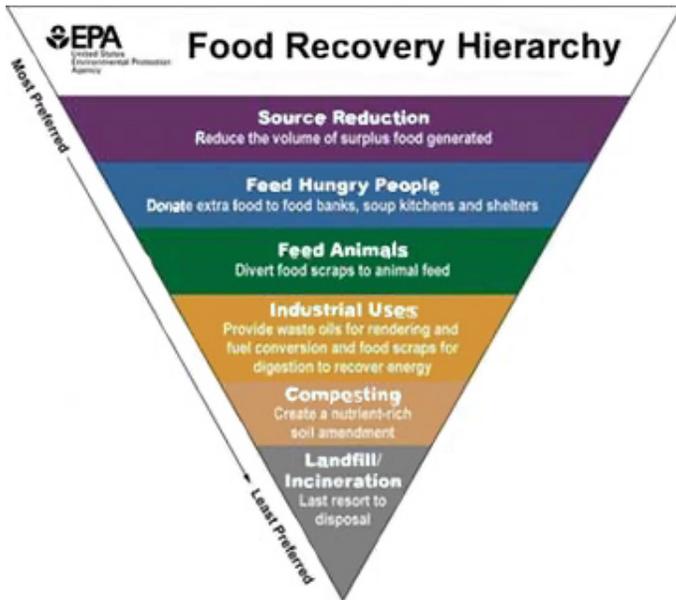
member of the clean plate club can attest. In fact, the National Institute of Health reports that since 1974, per capita food waste in America has increased a whopping 50%. That's right – over nearly the entire history of coordinated efforts to increase recycling in America, given all we've done to reduce, reuse, and recycle, our level of food waste has actually skyrocketed.

And if that's not enough to give one pause, consider this: reducing food loss by just 15% would provide enough food to feed more than 25 million Americans every year. That's not to say there aren't significant distribution issues that would have to be overcome, but at a time when 1 in 7 Americans is food insecure, it's

surely a goal worth focusing on.

So what's the take-away from all of this – what is to be learned, and what can we do to reduce food waste in America? In September of 2015, USDA and EPA addressed those questions by launching the first ever food loss and waste goal in the United States, calling for a 50% reduction by 2030. Two years later, and many of us are just now waking up to the seriousness of the issue, and Keep Nebraska Beautiful (KNB) is committed to helping spread the word. In this 1st issue of REFRESH NEBRASKA, we hope to begin a conversation with schools, businesses, and communities throughout the state, in an effort to learn more about what each of us can do to reduce food waste in Nebraska.

Far from experts ourselves, we are fortunate to bring you information from groups that are – including EPA, USDA, the AD Council, and Nebraska's own food authority, the UNL Extension. While straight forward in many respects, the overarching narrative of food waste in America can be complex, and our hope is to separate out important nuggets of information that promote common sense solutions for all Nebraskans. We'd also love to hear your strategies for reducing food waste, as well as any roadblocks you've faced, so that we can share your stories with others across the state, and throughout the Food Supply System. By working together to duplicate successes, and avoid or remove barriers, we can reduce both landfill impact, and food insecurity throughout Nebraska.



EPA'S FOOD RECOVERY HIERARCHY

There are numerous ways to deal with food waste - some considerably better than others. To provide guidance, the Environmental Protection Agency (EPA) created a food waste recovery hierarchy in order of preference regarding the environment, society, and the economy.

The most preferred method is "Source Reduction." This states that not creating food waste in the first place is the best solution. This can be accomplished at all stages of production and consumption, from the farm to the table.

After source reduction comes feeding hungry people. If we are able to recover unspoiled, healthy food and get it to the people who need it, we can reduce food waste and help the 1 in 7 Americans that are food insecure.

The third tier is feeding animals. Diverting unspoiled food scraps to animals rather than hauling them to the landfill can save money and help the environment. Learning to handle food safely and giving it to farmers or zoos can really make a difference.

The next tier on the Food Recovery Hierarchy is "Industrial Uses." This covers using waste oils for rendering or converting to biofuel and bio-products. It also includes the process of anaerobic digestion where microorganisms break down organic materials, to produce biogas or soil amendment from the waste.

The fifth tier is composting. After all of the above methods have been exhausted, there is still a certain amount of inedible food remaining that can be turned into compost. By mixing the food scraps with yard and other natural waste, a soil amendment can be produced to feed and nourish the soil.

The last option on the hierarchy is to landfill or incinerate food, and should only be considered after the other methods have been tried. Following the Food Recovery Hierarchy can help us to prioritize ways to reduce

the amount of food that goes into landfills, currently 95% of all food that is wasted. Careful management can lead to reducing food waste in the future...starting now!



LPS COMPOSTING

Just over a year ago, Keep Nebraska Beautiful proudly recognized two Lincoln schools with our top School Recycling Awards. Setting them apart was their enthusiasm for a new LPS program that collects organic cafeteria waste for composting.

Here's how it works: Before students are dismissed, they are asked to sort their tray into the appropriate categories.

Compost materials include:

- ALL food scraps: Fruits, vegetables, bread, dairy, meat, bones
- Paper products: Straw wrappers, bowls, napkins, cups, plates
- Other compostable materials: plant-based bowls and dishes

Landfill materials include:

- Plastic: Straws, cups, snack wrappers, cutlery, bags, drink pouches
- Styrofoam
- Foil

Three local companies then pick up and utilize the organic material in their composting processes.

The 2016-2017 school year marked the program's third full year, and saw participation grow to 29 schools – the most successful of which realized a 90% decrease in the amount of cafeteria waste sent to the landfill! So far, the composting schools have experienced an average diversion rate of 52%, which means over half of their waste is being recycled or composted instead of being sent to the landfill. Before the compost program, some of those buildings had a diversion rate below 20%, so this program is having a HUGE impact on waste management!

The program has proven so effective that the district expanded the program to 35 schools this year, and with more than 39,000 students in 55 Lincoln schools, generating some 4 million lbs of waste each year, the impact will continue to grow as the rest are brought on board.

Keep Nebraska Beautiful would love to learn what your family, school, or business are doing to reduce, reuse & recycle food waste. Drop us an email at pstadig@knb.org and we'll do our best to publish it in this space!

REFRESH RECIPES

Shopping your fridge first is an important strategy for reducing food waste. Here's a recipe idea that will help you use what you have before buying more!

BLONDE CHICKEN STOCK

This "blonde" chicken stock is made from raw instead of roasted bones, which makes it light in flavor (and excellent for adding to dishes).

SERVINGS:

3 quarts

USES UP:

Chicken Bones

USE THIS STOCK TO ADD FLAVOR, NOT 'CHICKEN' FLAVOR.

Bring a savory note to dishes, without competing with the other ingredients. This stock is a great go-to in dishes that spotlight vegetables, like pea soup or butternut squash risotto. You can even add aromatic vegetables in the last two hours of cooking, if you like.

INGREDIENTS:

4 lbs chicken bones (such as necks, backs, wings, and feet)

Salt

1 carrot (optional)

1 celery stalk (optional)

1 garlic clove, unpeeled (optional)

1/2 onion, 1/2 cup leek greens, or 1 shallot (optional)

DIRECTIONS:

Place the bones in a large stockpot, add a generous pinch of salt, and cover with about 2 inches of water (about 1 gallon). Place over medium heat and bring to a simmer, being careful not to boil. Lower the heat and gently simmer for 2- 6 hours, adding the vegetables (if using) in the last 2 hours of simmering.

Strain the stock through a fine-mesh sieve, chinois, or colander lined with a double thickness of cheesecloth into a heatproof bowl. Discard the bones. Allow to cool to room temperature, then refrigerate until completely cooled and the fat has solidified on the top of the stock. Remove the solidified cap of fat and reserve for another use (chicken fat is great for cooking).

The stock keeps refrigerated for 5 days or frozen for up to 6 months, or will be shelf stable for up to a year if pressure canned.

CREDIT: AD Council From "Eat it Up!" by Sherri Brooks Vinton, Da Capo Lifelong Books, 2016

SAVETHEFOOD.COM

For those of you dedicated to the old school card file recipe box, here's the recipe in a 3"x5" format to print

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BY THE NUMBERS - FOOD WASTE STATS THAT MAKE YOU GO HMMM...

- 1.3 billion The number of metric tons of food wasted around the globe annually, according to the Food and Agriculture Organization of the United Nations (FAO). This waste amounts to one-third of all food produced, indicating an enormous amount of wasted water, energy, land and labor used for production.
- 109.4 The number of pounds of food waste, per person, that the EPA and USDA aim to reduce by 2030. The national goal also calls for a reduction of 66 billion pounds of food waste at the retail and consumer level. Both of these goals represent a 50% reduction in current levels.
- 53% The amount of consumers willing to recognize food waste as a problem, but not willing to change behaviors. The Plos One study that reported this figure also reported that 24% of consumers consider themselves too busy to worry about food waste. The lack of consumer buy-in not only drives the food waste problem, but also creates a challenging environment in which the waste industry must present solutions.
- 103 The number of operational U.S. anaerobic digestion facilities that process food waste, including farms or wastewater treatment plants that accept food waste as a feedstock. The American Biogas Council reports there are only 39 stand-alone food waste biogas systems.
- 42.2 million The number of Americans who live in food insecure households, according to Feeding America. The nation's hunger epidemic is preventable, however, if food waste could be recovered or ultimately prevented. FAO reports that if even one-fourth of total food waste were to be donated, it would be enough to feed 870 million people.
- 6 The number of states with organics recycling policies, according to the American Biogas Council. California, Connecticut, Massachusetts, Minnesota, Rhode Island and Vermont have all passed various state-level legislation to promote efficient collection and processing of food scraps. Many cities have also passed local food waste regulations including Austin, TX; Seattle; and Washington, D.C.
- 3.3 billion The number of metric tons of CO2 emissions from global food waste, according to the book Food Foolish. In fact, its footprint is so large that, if food waste were a country, it would be the third-largest emitter of greenhouse gases, just behind China and the United States. These numbers are determined by the CO2 the food emits through its entire life cycle, including production and disposal.

QUICK TRICKS

Food tossed is money lost.
Refresh still edible foods, re-purpose leftovers
and reuse or "recycle" them in new ways.

GRAINS

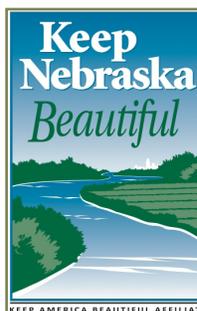
1. Use older bread to make croutons, bread crumbs, bread pudding, strata's and French toast.
2. Use leftover rice in stir-fried rice pudding and rice bowls.
3. Heat leftover pasta in a pan over medium heat with some olive oil. Sprinkle with Parmesan cheese. Add a little extra pizzazz by topping the pasta with fresh herbs.

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UNIVERSITY OF NEBRASKA-LINCOLN

Institute of Agriculture and Natural Resources
NEBRASKA EXTENSION

**FORTY
PERCENT**
OF FOOD IN AMERICA
IS WASTED

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