If the United States went shopping in your store, it would leave with five bags, drop two in the parking lot, and leave them there.

This may seem crazy, but as a country we leave a full 40 percent of our food uneaten. And it’s not just food going in the trash: Up to about one-fifth of U.S. cropland, fertilizers, and agricultural water go towards growing food that’s ultimately wasted. Food waste is responsible for at least 2.6 percent of all U.S. greenhouse gas emissions (equivalent to more than that of 37 million cars), and wasting less food was ranked third of 100 solutions to climate change by Project Drawdown.

As retailers, you have a tremendous opportunity to reduce your carbon footprint and save money through food waste reduction efforts. This toolkit aims to arm you with the basic information on steps to help you do just that. It’s accompanied by a checklist so that you can do a quick self-audit. The good news is you’re likely already doing many of the things listed here. The better news is there’s even more you can do. Not everything will fit your store, so consider this a set of best practice recommendation that can be used as a tool to spark your own ideas on what you can do.

The Retailer’s Food Recovery Hierarchy

The EPA created a hierarchy to frame priorities for addressing food waste. It essentially says that having less excess in the first place is best, followed by donating food, and then only after that, feeding it to animals or composting it. Here, we’ve interpreted that hierarchy with a little more specificity and in a way that applies more to retailers’ operations.
#1 Track Your Waste

**Rationale**

You manage what you measure. Having detailed information on what’s being discarded arms you with the ability to fine tune purchasing and adjust practices to minimize waste.

**Devilish Details**

- Enforce systematic scan-out procedures for scannable items
- For non-scannable items, place buckets at every natural cull or trim location
- Create SKUs for each category of cull/trim with associated dollar value estimates
- Weigh buckets daily and create labels to scan into your system
- Assign a person to enter any written logs into your system
- Create weekly or monthly review processes for waste data

**Watch Outs**

- Some employees will want to skip this step. Creating a log with regular entry moments for each station can help identify when that’s occurring.
- While this can be time consuming at first, the time tends to decrease as staff become accustomed to it.

**Example**

Canyon Market in San Francisco has buckets at every trimming station and scans in weighed amounts regularly, such as this charcuterie trim:
#2 Use Detailed Data in Purchasing

Rationale

Local events, weather patterns, and days of the week impact sales. The closer you can get to having information on how well each product sells against these factors, and incorporating the findings into your forecast, the more accurate your purchases will be.

Devilish Details

- When making purchases, factor in the demand implications of:
  - Current on-hand inventory
  - Forecasted weather information
  - Local events, spring break, etc..
  - Day of week differences
  - Other product promotions that may affect sales
  - Food stamp payment timing
- Create a “do not run out” (DNRO) list for each category. For non-DNRO items that often get wasted, consider reducing par.
- Hi-tech: New software that uses artificial intelligence to more precisely determine sales patterns is emerging. Keep your eyes out for this, if its cost-feasible for you.

Watch Outs

- Often buyers think they are incorporating this information, but it’s through gut feel rather than data-backed. Working to incorporate information systematically will help improve forecasting accuracy.
- To get the most out of this information, compare it across a range of factors. For instance, what are sales of rotisserie chicken like on a hot Tuesday versus a hot Friday versus a cold Friday?

Example

Canyon Market in San Francisco documents preparation, staffing, sales, weather, and other relevant information for every holiday and local event. They then review that information in preparing for the same day the following year. Here are their forms:
Rationale

As said by the owner of Canyon Market in San Francisco, “Ask me the secret to this business? It’s inventory. You need to be a fanatic about inventory. The second it comes to your door, you’re losing money. The way to make money is not to throw it away.”

Devilish Details

- Be as current as possible with inventory
- Conduct quarterly counts if possible.
- Use a perpetual inventory system if possible—make employees responsible for regular shelf checks to ensure accuracy
- Re-evaluate SKU performance on regular basis and discontinue low-performing SKUs.
- Minimize in-store excess
  - Minimize product displays
  - Use small baskets, props, and varied colors to make your produce section look appealing without needing volumes of produce piled up.
  - Use small bowls and garnishes in deli displays
  - Use small trays in hot bars and salad bars, even if they must be replenished more often.
- Limit food preparation before closing
  - Reduce hot bar offerings as they run out near closing time. Use signage to explain, if necessary.
  - Prepare fewer rotisserie chickens or other hot meals, but offer to cook customers these products with 10 or 15 minutes notice.

Watch Outs

- Having too many SKUs for similar perishable items can overwhelm consumers and lead to slower inventory turns (and less fresh product) for each SKU. While most stores choose to carry some slow-moving SKUs (such as spices), it’s important to be selective and intentional in that choice.
- A significant amount of hot, prepared food gets wasted in order to provide full offerings all the way up until closing. Reducing options slightly and offering to custom prepare products in that timeframe can help.

Example

- Northeast supermarket chain PriceChopper conducted an analysis that led to elimination of 680 SKUs from their bakery department, reducing shrink by $2 million and producing a 3 percent lift in sales the first year after implementation.¹

- New Moon Naturals uses drawers and small dividers to display produce.

¹Mathew Enis, "Retailers Reduce Shrink, Improve Fresh Food Waste,” Supermarket News, July 27, 2005
#4 Maintain Cold Temperatures

**Rationale**
Exposing products to warm temperatures is the fastest route to spoilage.

**Devilish Details**
- Maintain daily temperature logs. If possible, do so for ambient store temperatures as well as coolers.
- Incorporate alarm systems that alert you if temperatures fluctuate out of the set range
- Regularly maintain and calibrate refrigeration equipment
- Enforce SOPs to check product temperature upon arrival, and quickly unload and store all refrigerated and frozen products
- Enclose refrigeration equipment
- Install night shades on open refrigeration equipment

**Watch Outs**
- Small things like employees getting into the habit of leaving cooler doors open can have a big impact.
- Having an SOP does not mean its practiced. Find ways to emphasize the importance of maintaining temperatures.

**Example**
- Alameda Natural Grocery sells berries, one of the highest spoilage items, out of a closed refrigerator.

- New Moon Naturals covers tubers at night with burlap and sells bulk greens in a drawer that prevents wilting.

- Valley Natural Foods in Burnsville, MN has a refrigerated bulk section for nuts and seeds.
#5 Help Your Customers Waste Less at Home

**Rationale**

Households are the top contributor to food waste. Helping your customers waste less product at home adds value for them and helps build loyalty.

**Devilish Details**

- For products packaged in store, adopt standard date label phrases using this industry standard that’s been endorsed by FDA and USDA. In particular, change “sell-by” dates to “best if used by” dates to tell consumers when they should use the product by, not purchase it by. Consumers tend to treat all dates the same, so this allows extra shelf life. Be sure to adjust timeframes accordingly.

- Provide as much explicit information on product storage, freshness, and use as possible. This can be done via signage in produce section, on package for products packaged in-store, and via handouts or social media.
  - [Save the Food](#) has downloadable materials in the Community Outreach tab of its partner kit.

- Vacuum-pack in-house packaged meats. This extends shelf-life by 5-7 days and gives consumers longer to use.

- Do away with “buy one, get one free” promotions that encourage overbuying. Instead, offer “mix and match” or unit-discount deals.

- Help customers with meal planning either a-la-carte or via meal kits.

- Enable flexible purchase sizes to cater to customers needing only small amounts. This can be done through bulk bin sections, but also through halving larger produce such as cabbage or watermelon, encouraging ingredient shopping from salad bar, and offering to cut meat cuts, cheeses, and fresh breads in half.

- Provide taste samples, which help consumers avoid purchasing something they don’t like.

**Watch Outs**

- In some cases, smaller portions can mean more packaging. Many of the life-cycle studies have found that the food inside packaging has a bigger footprint than the packaging itself. Therefore, if the change really will result in less food wasted, it may be worth it. This needs to be evaluated on a case-by-case basis though. It’s generally more warranted to meat and dairy products since those have larger footprints.

- In the end, there’s a tension between wanting to sell as much as possible, and helping your customers not over-purchase. However, consider that if they’re throwing product out, they’re not really getting the full value out of it and may not buy it again. Helping your customers waste less is a way to ultimately deliver them more value.

**Example**

- New Moon Natural in Truckee, CA provides half-cabbage sale options.

- Publix has signage throughout the store offering to open packages should consumers want smaller portions.
#6 Mark Down Shorter-Life Product

**Rationale**

Selling product at a discount captures potential losses and can attract bargain-hunting customers.

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**Devilish Details**

- Establish a policy and regular systems for product mark-downs
- Be sure to mark down with enough time for products to be used
- If establishing separate area for selling marked down products, include signs to educate customers that expiration dates are about quality, not expiration
- Include dairy, produce, and other perishables as part of program
- Designate employee to ensure review of dates and mark down of products that qualify

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**Watch Outs**

- Some worry that discounted products will cannibalize sales of full-price products. Others believe that these discounts may attract new customers, who buy other products while in the store. There’s no research to support one or the other, but retailers that mark down products tend to continue the practice.
- Some POS systems may cause mark-downs to be logistically challenging. If so, use a stickered coupon that cashiers can scan.

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**Example**

- Berkeley Bowl in CA had a bargain shelf for bags of culled produce priced at $.99-1.39 per bag. After reaching around $1,500/day in sales, the shelf was so successful opened an entire bargain room.

<table>
<thead>
<tr>
<th>Sale</th>
<th>Original $</th>
<th>Quantity over 12?</th>
</tr>
</thead>
<tbody>
<tr>
<td>2/$1</td>
<td>$1 to $2</td>
<td>Go down 1 tier</td>
</tr>
<tr>
<td>$1.99</td>
<td>$2 to $3</td>
<td>Go down 1 tier</td>
</tr>
<tr>
<td>$2.99</td>
<td>Over $5</td>
<td>Go down 1 tier</td>
</tr>
</tbody>
</table>

- The Green Grocer in Newport, Rhode Island has a short-date program with a date-checking protocol, including a chart with discounted prices according to original retail price.

- New Moon Natural Foods has a simple basket for selling culled produce at 50% off.
#7 Repurpose Near-Expiration Food

## Rationale
Near- or even past-expiration food can be used in other ways throughout the store.

## Devilish Details
- Incorporate these items into prepared foods
  - Cut produce into pre-cut offerings
  - Offer standard dishes with recipes flexible enough to absorb a variety of produce types and quantities
  - Offer seasonal dishes that feature the most commonly culled produce of the season (e.g. berries or stone fruit)
- Package small quantities of deli salads at end of day into grab-and-go options for following day
- Divide whole cakes and pies to sell as pieces
- Provide staff meals, regularly or occasionally, using culled product
- Allow staff to take home culls and other pulled products
- Develop communication protocols between departments about products that will be available for repurposing
- Designate staff responsible for finding and repurposing products

## Watch Outs
- Often stores are repurposing only a small portion of what they could be reusing.
- Lack of communication between departments can be a big barrier.
  - Ideally, it should happen around ordering (so deli kitchens aren’t ordering product that produce expects to cull) and when products are culled.
- Sometimes there are only small quantities of culled produce. Soups and pasta (or grain) salads are good ways to use even small amounts.
- For products that are harder to repurpose, such as citrus, try to focus on more precise forecasting.

## Example
- Bi-Rite Market in San Francisco provides staff lunch daily using culled food and sees it as a core employee benefit; Palace Market in Point Reyes Station, CA does so occasionally, which they believe keeps it special.
- Several stores had employee grab areas where produce could be taken as desired.
- Canyon Market in San Francisco has an “In-House Forager” position dedicated to finding near-expiration food internally and ensuring it gets repurposed. They say this position easily pays for itself.

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**Job Description**

**Position Title:** In-House Forager

**Supervised By:**

**Reports To:**

**Position Summary:**
The forager is responsible for maintaining food efficiency. While maximizing waste, consistently working with departments to reduce waste and ensuring the store’s waste streams, the forager saves money and ensures that as little food possible goes to waste. This job training is to focus on reducing food waste and enhancing the environment.

**Essential Duties and Functions of Position:**
- Carefully monitor product and kitchen waste and plan accordingly, produce waste and ensure products are planned for use.
- Conduct scheduled physical inventories, cycle counts and guarantee food and other products are in good condition.
- Ensure waste streams of compost, recycling, and landfill garbage are organized for staff to improve compliance and minimize waste.

**Additional Responsibilities:**

- Additional responsibilities, although not detailed in this job description, may be added by the manager or manager at any time.
#8 Donate As Much Food As Possible

**Rationale**

Donating food helps your community and enhances your tax deduction, and puts surplus food to its highest use.

**Devilish Details**

- Establish relationships with local agencies that can take different types of food:
  - Food banks often can’t take prepared foods, but shelters and other service agencies tend to really need it. You may need a few different established relationships to donate different categories of food. Your local food bank may be able to provide a list of agencies in the area for products they’re not able to take. [AmpleHarvest](https://ampleharvest.org/) has a list of food pantries by zip code (note: pantries are only one type of food agency that provides groceries, not prepared meals).
  - Services have popped up to help link food donors with agencies. Some of these also transport the product for you (at a small fee). These include: [MealConnect](https://mealconnect.org/), [Replate](https://replate.org/), [Copia](https://www.copia.com/).
- Understand health and safety requirements in your area; these vary, especially around hot foods, but liability is protected (see below)
- Consider donating a steady supply of food beyond whatever surplus you have; this can help local agencies in their own planning and provisioning
- Track donations carefully to take advantage of enhanced tax deduction:
  - The enhanced tax deduction allows the donating business to deduct the lesser of (a) twice the basis value of the donated food or (b) the basis value of the donated food plus one-half of the food’s expected profit margin, up to 15% of their taxable income for food donations. See this guide for more detail.

**Watch Outs**

- Liability is not an issue! A federal law called the Good Samaritan Act protects any business donating food in good faith from liability should someone get sick, and there are no recorded cases of any lawsuits ever being brought around this issue.
- Many stores are donating food in one or two categories, but not others.
- You’re likely tracking donations you are making, but do your employees know? Reporting back on food donations can help build morale and encourage employees to follow SOPs around donation.

**Example**

- Ahold USA, which owns Stop and Shop, freezes meat prior to its expiration and donates it to food bank partners as part of its Meat the Needs program. In 2015, the retailer donated more than $10 million worth of protein, accounting for one-third of their total food bank donations that year.
- Palace Market saw food donations of their surplus food drop one year, which concerned their recipient, West Marin Senior Services. They sat down with them to understand their needs and now provide a few hundred dollars’ worth of dairy, bread, fruits, vegetables, and eggs, in addition to unexpected surplus.
#9 Recycle Food Scraps

## Rationale

Food scraps can be repurposed as animal feed or recycled through compost or anaerobic digestion. All of these processes make use of the nutrients that are still in those food scraps. Composting also helps soils retain water and build organic matter, and negates the need for synthetic fertilizer. All of these options avoid the methane released from food decomposing in landfills.

## Devilish Details

- Build relationships with livestock farmers in your area to pick up food scraps
  - If commercial livestock farmers are not a feasible option for your location, offer food scraps to local residents who keep chickens
- Enlist commercial compost services, if available in your area
  - If no commercial services are available, build relationships with local produce farmers to take fruit, vegetable, and grain scraps for compost

## Watch Outs

- Municipal and some commercial compost services can typically accept meat and dairy products, but smaller services cannot. Be sure to ask your provider.
- Compostable containers and service-ware are not always accepted by commercial compost services. Be sure the kind you’re using is acceptable with your provider.
- Packaged foods are difficult. While some stores take the time to de-package products, it likely makes more sense to first focus on careful buying, marking products down, and giving them to staff.
- Farmers are not always reliable at coming regularly for pick-ups. Consider a joint agreement to pay someone to transport.

## Example

- Alameda Natural Grocery has about four local residents with chickens who pick up food scraps on a regular basis.
- The Green Grocer in Rhode Island has relationships with pig, chicken, and goat farmers in their area to pick up food scraps.
Key to Success: Enlist Your Staff

Rationale

At the end of the day, it’s your people making decisions about how much to order, which products to cull, and what to do with them. Connecting those decisions to a bigger mission can help motivate staff, particularly when extra steps are required for success. Setting company goals, incorporating them into company culture, and tying incentives to reduced waste can all be part of this.

Devilish Details

- Create company or store goals that the whole staff can rally around. Include short-term, achievable components and track progress along the way
- Include information on company goals and values around food waste in employee on-boarding
- Include waste reduction (via increased margins) as part of employee raises, bonuses, or other incentives

Example

- Bi-Rite Market in San Francisco has a “Respect the Food” doctrine that is included in all of their employee on-boarding.
- Palace Market in Point Reyes, CA ties raises and bonuses to margins, effectively incorporating waste reduction performance into employee evaluations.

Watch Outs

- The only way to know if you’re making progress toward a goal is to measure a baseline and then continue to measure along the way. Be sure you have a method to do this before you begin (see Part 1 on tracking waste above.)
- Employee on-boarding is a great time to set the tone and expectations for your store. If possible, have a passionate existing employee participate.