

Below is a list of food loss prevention ideas for restaurants and universities. Please use this document as a guide for potential activities that you can implement or feel free to add your own activities to the list.

**[Join the US EPA's Food Recovery Challenge! : http://www.epa.gov/smm](http://www.epa.gov/smm)**

- Perform a waste audit.** This is your essential starting point for all other activities. A waste audit will tell you what is being thrown out and why. Pick a day and be there at the dish return line with a few volunteers, buckets and a weight scale and record what is being thrown out, how much, and note down the reason the food is being disposed. In the kitchen, have only one food waste bin and give each staff a small waste container to keep with them. Have a log sheet and a scale at the main bin for staff to record what is being thrown out and how much. With the information you gain from this exercise, you can then adjust the menu, purchasing, or portion sizes accordingly. Contact your EPA representative for log sheets, signs, and other tools. Some example resources: [http://www2.epa.gov/sites/production/files/2015-08/foodwaste\\_audit\\_tool.xlsx](http://www2.epa.gov/sites/production/files/2015-08/foodwaste_audit_tool.xlsx)  
[http://www2.epa.gov/sites/production/files/2015-08/documents/r5\\_fd\\_wste\\_guidebk\\_020615.pdf](http://www2.epa.gov/sites/production/files/2015-08/documents/r5_fd_wste_guidebk_020615.pdf)
  
- Go trayless.** Numerous studies have shown going trayless can reduce food waste by up to 30%! Here are just a couple of studies: <http://www.youtube.com/watch?v=YLmt0qRvM1c>
  - <http://www.aramarkhighered.com/assets/docs/whitepapers/ARAMARK%20Trayless%20Dining%20July%202008%20FINAL.PDF>
  - <http://blogs.sodexousa.com/bettertomorrow/2011/02/28/emit-less-go-trayless/>
  
- Prep: Reduce batch sizes.** Batch cooking is preparing meals ahead of time and storing them for future use. Make these frozen portions smaller so when you have left overs, they are minimal.
  
- Prep: Provide cook-to-order instead of bulk-cooking either all day or toward the end of the day.** Prepare made-to-order foods after a certain time; Place a sign at the food ordering counter, for example “We prepare only made-to-order food one hour before closing.”
  
- Prep: Replace a buffet line with a cook to order line.** This allows you to prepare what is ordered to minimize leftovers. Experiment with one line and go from there. - <http://www.calrecycle.ca.gov/Publications/Documents/BizWaste%5C44198016.pdf>
  
- Prep: Use smaller serving containers toward the end of the day.** As the day winds down toward end of service time, most of the prepared food is used and smaller containers can be used for the remaining portions.
  
- Purchasing: Get rid of single use condiment packets. Use reusable bottles instead.** This also resolves a major obstacle for composting facilities when receiving food waste for composting; that these packets end up contaminating the food waste.
  
- Prep: Don't peel potatoes.** Leaving the skin on saves time and reduces potato skin waste.

- Prep: Train staff on knife skills.** Train your staff to make more efficient knife cuts to use more of the food and let them know this is important to you. <http://www.calrecycle.ca.gov/Publications/Documents/BizWaste%5C44198016.pdf> idea: use a spoon for cutting the skin off kiwi instead of a knife to get more kiwi!
  
- Prep: Finish preparation at the line.** Do not finish the food item until it's ready to go on the line. At Rice University, they roast the chicken and keep it in the hot box but do not add sauce until it's ready to go on the line. That way they can blast chill it if it is not used and they are able to use it for something else another time. Once the sauce is added to the chicken, that menu item is locked down and one is unable to use that chicken for something else. Also sauce tends to dry out or break when chilled. <http://dining.rice.edu/undergraduate-dining/about/sustainability/>
  
- Prep: Eliminate garnishes.** Eliminate garnishes that typically don't get eaten.
  
- Portion Size: Offer different meal sizes/portions.** Do not limit small portions to just children. Ex: offer smaller cuts of steak or slice a pizza into 16 slices instead of 8 before putting it on the serving line. Examples: TGIFridays, Au Bon Pain, Maggianos, and Cheesecake Factory - <http://www.nrdc.org/food/files/wasted-food-ip.pdf> Offer free seconds as part of the menu and inform students that initial portions will be smaller and they are welcome to have free seconds. This study showed reducing portion size for bags of French fries also reduced french fry consumption and waste: <http://www.ncbi.nlm.nih.gov/pubmed/20035274>
  
- Sales: Eliminate automatic sides.** Instead of automatically providing sides, ask if a student wants a side, and if so, provide them a choice. Charge different prices for meals with a side and without. Allow them to order individual items by themselves (a la carte) at a discount.
  
- Sales: Consider doing "pay-per-item" instead of "all-you-can-eat"** or consider charging guests for food left on plates. All-you-can-eat dining might result in more student plate waste. With all-you-can-eat dining, students tend to overfill their plate to feel like they are getting their money's worth. With each item priced out, students will be able to see the value of the waste they throw away more easily. Stanford University suggested this activity as a way to minimize waste at the following website: [http://bgm.stanford.edu/pssi\\_faq\\_more\\_recycling](http://bgm.stanford.edu/pssi_faq_more_recycling) .
  
- Storage: Position oldest products in the front of the refrigerator.** Older items in the refrigerator may spoil if not used up first. If they are left in the back of the refrigerator, they may get forgotten and not used. Be sure to periodically audit the refrigerator and train employees to ensure oldest items get put at the front of the line.

- Storage: Ensure expiration tags have both date and time.** Tags with just the date might mistakenly be thrown out a day too early. Also, consider reviewing current corporate policy on expiration dates because, with the exception of infant formula, expiration dates are not meant as food safety dates and food can be kept longer than the date indicates. More info on expiration dates: <http://www.nrdc.org/food/expiration-dates.asp>
  
- Storage: Invest in a blast chiller** to make it easier to chill and reuse leftovers foods. This improves food safety.
  
- Storage: Use see-through storage containers.** This allows one to see what foods are available and to keep an eye on freshness.
  
- Storage: different foods like different storage conditions. Consider refreshing staff on storage techniques for different foods.** Example: never store tomatoes and lettuce in the same container or near each other. Tomatoes emit a gas that will turn the lettuce brown. Another example: store product especially leafy greens as far from the condenser unit as possible to prevent freezing. For more ideas, you can visit: [http://www.makedirtnotwaste.org/sites/default/files/a-z\\_food\\_storage\\_guide-web.pdf](http://www.makedirtnotwaste.org/sites/default/files/a-z_food_storage_guide-web.pdf)
  
- Storage: Pre-cool steam-table hot foods (in an ice bath) before placing them in the cooler.** Similarly, always place hot foods into clean, shallow containers before storing in the cooler. This helps prevent premature spoilage and keeps your cooler from working overtime to keep things properly refrigerated. Preventing premature spoilage also gives more opportunity to donate the food to homeless charities. - <http://www.calrecycle.ca.gov/Publications/Documents/BizWaste%5C44198016.pdf>
  
- Storage: Marinating meats may extend shelf life 2-3 days.**
  
- Storage: Reconstitute stalky vegetables that have wilted** by trimming off the very bottom part of the stalk and immersing them in warm water (100°F) for fifteen to twenty minutes (e.g. celery, lettuce, carrots, broccoli, kale, etc.) - <http://www.calrecycle.ca.gov/Publications/Documents/BizWaste%5C44198016.pdf>
  
- Storage: Freeze surplus and near to spoil fresh fruits and veggies** instead of throwing them away - <http://www.ext.colostate.edu/pubs/foodnut/09330.html>  
[http://nchfp.uga.edu/questions/FAQ\\_freezing.html](http://nchfp.uga.edu/questions/FAQ_freezing.html)  
<http://makedirtnotwaste.org/sites/default/files/foodstorage-quickreference-web.pdf>

- Repurpose: Introduce left-over Fridays with menu specials.** Offer a unique menu item on Fridays (at least one day a week) devoted to using up leftovers. Get creative! Ex:
  - Use dairy items prepped for the coffee station to make chowder.
  - Rollover unused, brewed coffee into iced product.
  - Use day-old bread for croutons or bread crumbs, and use day-old tortilla chips to make tortilla soup
  - Use leftover soft serve ice cream from machine cleanouts to make ice cream sandwiches.
  - Use leftover and bruised fruit for smoothies, dessert toppings, jam, muffins, or chutney
  - Certain left over starches, like potatoes, can be pureed and used for thickeners in other entrees.
  - Use cooked, leftover oatmeal for muffins.
  - use leafy tops of beets in salads
  - Use vegetable and meat off-cuts, and cut up odd-shaped and bruised vegetables for soups, stews, sauces, burgers, pizza toppings, salads, pies, ravioli, and bread.

<http://www.calrecycle.ca.gov/Publications/Documents/BizWaste%5C44198016.pdf>
  
- Staff: Call a meeting with your kitchen staff to discuss ways of reducing food waste.** Your staff may have the best ideas. The meeting alone may inadvertently reduce waste because it will show your staff that reducing waste is important to the restaurant. You can hang a white board for ideas in the kitchen as well as in the dining area. Make waste reduction a key performance indicator or create a challenge for your staff. Remember a sustainable economy is a profitable economy. Offer rewards/incentives to staff or branches for participating.
  
- Waste bin: Segregate food waste from other trash.** Even if you don't yet have a place for it to go other than the landfill, simply segregating food waste helps to reduce it as it raises awareness in the kitchen. Try a transparent container for more visual effect.
  
- Waste bin: Make food waste bin distinctive.** This will encourage staff to segregate food waste. Signs on the bin may also help to raise awareness.
  
- Waste bin: Take away the trash can!** When staff have to ask permission to throw away food, they throw away less. Taking away the trash can or simply moving it can help remind staff to throw away less. Try moving it in more plain view of everyone, especially the manager. OR consider moving it a little further out of reach to discourage convenient wasting.
  
- Engage with Student: Provide taste samples.** Allow students to try the food before they buy it, thus reducing waste from food they will not eat due to taste preferences. Train staff to remind students as they walk up that they can try a sample. Sustainability tip: Provide taste samples on reusable service ware to minimize waste.

- **Engage with student: Educate students on how to minimize food waste and why they should.** Use wall graphics/table tops/hanging signs/glass clings/videos to remind students to be conscious about food waste. Example tips for restaurants:
  - Discuss how food's life cycle affects the environment (irrigation, pesticide and fertilizer manufacturing, land clearing, transportation, packaging) and why we should care about reducing food waste.
    - Graphical short clip on environmental impact and what to do to: environmental impact: <https://www.youtube.com/watch?v=RytEgwymDr0>
    - Another short clip about environmental impacts of food waste: <http://www.youtube.com/watch?v=VaouOWx3Bmo>
  - Show them how much a serving size is (ex: [http://www.youtube.com/watch?v=IYZ\\_SZa-hDA](http://www.youtube.com/watch?v=IYZ_SZa-hDA))
  - Show an example of a balanced plate (ex: one-half of the plate with fruits and vegetables, one-fourth of the plate with protein like beans or meat, one-fourth of the plate with grains) [http://www.choosemyplate.gov/downloads/mini\\_poster\\_English\\_final.pdf](http://www.choosemyplate.gov/downloads/mini_poster_English_final.pdf)
  - Display these messages while students are waiting in line to eat.
    - Ask for a sample first if you are not sure you will like something.
    - Take smaller portions and go back for seconds instead of piling up your plate. Example outreach video: <https://www.youtube.com/watch?v=VLSukxmM5Iw>
    - Do a lap before you choose a meal. Look at all options before putting food on your plate.
    - Ask for different portions sizes if you like.
    - Take only what you will eat. It's better to underestimate because you can always come back for more.
  
- **Engage with Student: Tell students about your food waste reduction achievements and commitments.**
  - Display to the students how much wasted food you reduced and announce your commitment for next year.
  - Tell your students/students that you joined the Food Recovery Challenge! Show them that the EPA recognizes the importance of reducing food waste and they support this establishment through this challenge. We can help get the word out!
  
- **Engage with student: Establish focus groups/surveys.** Bring students together and ask what are the menu items they enjoy eating, which do they not, and have them sample items during the focus group. Give them a voice.
  
- **Engage with student: Host a food fair!** Have a food fair with booths, speakers discussing several topics on food sustainability, and games of challenges to reduce food waste.
  
- **Engage with student: Display food waste (yuck factor):** Accumulate 30 minutes of plate waste and display the waste to students. The idea is to trigger an emotional response in students to reduce their food waste. Ex: <https://sustainability.uic.edu/events/weigh-your-waste-3/>

- Engage with student: Take the pledge.** Engage students/students waiting in the food line and ask them to pledge to reduce food waste! Encourage them to write what they will do to reduce food waste and post their picture on a board with their pledge.
  
- Engage with Student: Promote yourself:** Display signs and posters and table top cards letting your students know that leftover food will be donated to the hungry instead of being thrown away.
  
- Engage with student: Offer to-go containers to the student.** Train staff to make sure they ask the student if they would like a to-go container if they see that there may be food left over. Consider compostable to-go containers. Sustainability tip: offer a small percentage off the price if students bring their own to-go containers.
  
- Offer more foods associated with less deforestation and less greenhouse gas pollution.** Encourage these options through signage and other means. <http://mitigation2014.org/>
  
- Purchasing: Buy foods that are in season** to reduce possible emissions from increased use of greenhouses, freezing, and transportation associated with foods that are not in season.  
[http://www.unep.fr/shared/publications/pdf/DTIx1262xPA-PriorityProductsAndMaterials\\_Report.pdf](http://www.unep.fr/shared/publications/pdf/DTIx1262xPA-PriorityProductsAndMaterials_Report.pdf)
  
- Purchasing: Buy ugly produce at discount.** Many suppliers will waste slightly bruised or odd shaped/sized produce during their sorting process to give the student a more uniform product. Offer to buy ugly produce at discount to use for certain dishes like soup, etc. Examples:
  - <http://www.dcentralkitchen.org/foodrecycling/>
  - [http://www.npr.org/blogs/thesalt/2015/03/26/395160156/think-nobody-wants-to-buy-ugly-fruits-and-veggies-think-again?utm\\_campaign=storyshare&utm\\_source=twitter.com&utm\\_medium=social](http://www.npr.org/blogs/thesalt/2015/03/26/395160156/think-nobody-wants-to-buy-ugly-fruits-and-veggies-think-again?utm_campaign=storyshare&utm_source=twitter.com&utm_medium=social)
  - <http://www.endfoodwaste.org/ugly-fruit---veg.html>
  - <http://www.bamco.com/timeline/imperfectly-delicious-produce/>
  
- Purchasing: Check your produce deliveries carefully for rotten or damaged product.** Return any substandard product. Do not sign the delivery tag until the contents of every box have been inspected and approved - <http://www.calrecycle.ca.gov/Publications/Documents/BizWaste%5C44198016.pdf>
  
- Purchasing: Ask for your suppliers' policies for food waste.** Simply inquiring will show suppliers that their students care about reducing food waste. Tell your underperforming suppliers you would like them to improve their food waste reduction efforts.

- Purchasing: Buy local foods** to reduce impacts of additional travel distance and storage time associated with non-local foods. [http://www.nrdc.org/globalWarming/files/eatgreenfs\\_feb2010.pdf](http://www.nrdc.org/globalWarming/files/eatgreenfs_feb2010.pdf)
  
- Purchasing: Use smaller plates, bowls, serving scoops.** Smaller dishes makes the student think about going back for more and should discourage over-plating and food waste. Ex: moving from 9.5-inch diameter plates to 8-inch diameter plates could reduce food waste by 20% while keeping student satisfaction up: <http://foodpsychology.cornell.edu/outreach/large-plates.html>
  
- Purchasing: Do regular inventory checks** or consider increasing the frequency of them to reduce spoilage and overbuying and improve utilization of available stock.
  
- Purchasing: Buy foods that use less water to produce.** An example resource that shows how much water each food takes to produce can be found here: <http://waterfootprint.org/en/resources/interactive-tools/product-gallery/>
  
- Reach out to other businesses to exchange ideas for source reduction techniques.** Talk with your EPA representative to find other businesses focused on reducing food loss.
  
- When students move out:** pick up leftover packaged foods from dorms when students move out. Apparently they leave behind a lot of stuff!
  
- Weigh the waste:** Invite students to weigh-the-waste, by weighing the food waste on their plate before throwing it in the compost bin or garbage can. Here's a great [example](https://asunews.asu.edu/20141017-weigh-the-waste) from FRC participant Arizona State University". <https://asunews.asu.edu/20141017-weigh-the-waste>
  
- Another idea?** \_\_\_\_\_  
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