Commentary

The Power of Postconsumer School Food Waste Audits

Jimmy Nguyen, USDA Food and Nutrition Service

July 21, 2016

I am sure many of you do not want to hear the word “audit” now that tax season is over, but the type of audit I am going to write about can be fun and enlightening. A food waste audit can help any organization better understand how much food, which types of food, and why certain foods are being thrown away in their operation. Waste reduction strategies derived from this data can help organizations save money and increase customer satisfaction. It is almost like getting a nice big tax return and spending it on someone you care about.

One of the best places to conduct a postconsumer food waste audit is in K-12 schools. Audit organizers can involve student volunteers and incorporate the activities into the math and science curriculum. In addition, student volunteers and participants can learn about the societal and environmental impacts that food waste can have on their community and world. In a survey by John Hopkins University, only 24 percent of survey respondents said that they were very knowledgeable about reducing wasted food (Neff et al., 2015). If we are to sustain the food waste reduction movement and reach the U.S. Department of Agriculture’s goal of reducing food waste by 50 percent by the year 2030, we have to motivate younger generations to take up this mission and help us change their peers’ perceptions about food waste.

Melissa Terry, M.P.A. graduate student and K12 food policy researcher at the University of Arkansas, has organized and conducted food waste audits in several elementary schools. In organizing some of her first audits, she created a technical advisory group of school nutrition staff and county environmental professionals. Stephen Sturdivant, the Environmental Protection Agency (EPA) representative in her region, is also a member of the group. Sturdivant works on EPA’s Food Recovery Challenge (EPA, 2016), which helps organizations such as schools collect food waste data and then implement waste reduction strategies. Both Terry and Sturdivant recommend student involvement in facilitating the data collection during the audits, as well as interviewing their fellow students as they move through the audit stations.

“Knowing what is being thrown out is one thing, but knowing why that food was being thrown out to begin with can really help a school implement a relevant waste reduction strategy. That is why I feel it is important to hear from the students themselves on why they are not finishing particular entrées and food items,” said Sturdivant (2016). However, interviewing students as they go through the audit station may be more appropriate at higher grade levels. It may not be feasible in elementary schools where students need to be escorted to their next class.

Let’s quickly walk through a school food waste audit to show how simple and fun it can be. See Figure 1 to get an idea of how your audit setup could look. Obviously, a lot more planning and organizing will be involved, but these are the basic steps:

---

1 The author is a participant in activities of the Food Forum of the National Academies of Sciences, Engineering, and Medicine.

1. Organize your team. Ideally, it should be a mix of school nutrition staff, teachers, students, and possibly parents. Be sure you work with school staff, especially the nutrition staff, from the beginning.

2. Set a date for your audit and find out the items that will be served that day.

3. Decide which items on the tray you want to measure individually. For example, you can have one 5-gallon bucket to measure the entrée waste, one 5-gallon bucket to measure milk waste, one bucket for fruits waste, and so forth. The more buckets and categories you have, the more detailed your data will be.

4. On the day of the audit, set up your audit station in a convenient location. If possible, put the audit station near where the students generally discard their trash.

5. When students first come to your audit station, they will be asked by a student volunteer the reasons why they did not finish particular items on the tray. Helpful answers such as “It was too cold,” “It was too soggy,” or “I was too full” should be recorded. Answers such as “I didn’t like it” will require the student volunteer to ask follow-up questions to ascertain a more helpful answer that nutrition staff can use to possibly make changes.

6. After each student has been interviewed, his or her tray is taken by another student volunteer. The food left on the tray is then separated into the different buckets. Each tray is counted at the end to get an accurate count of how many students took part in the audit.

7. Data is recorded and analyzed, and then, we hope, specific strategies can be implemented to reduce food waste.

Schools can take this process a step further and conduct another food waste audit after they have implemented some food waste reduction strategies and then compare the results to the previous audit. Did slicing those apples into smaller pieces reduce its waste by 10 percent? Did giving your entrée a more exciting name reduce its waste by 40%?
percent? The only way to find out is to do the audit.

In her audits, Melissa Terry found that milk was one of the most wasted items on the lunch tray. These findings prompted her to have conversations with nutrition staff and students, after which Terry concluded that confusion about mandatory milk is often the greatest predictor of high milk waste. Milk is an option, not a requirement, in schools that use the Offer versus Serve (OVS) provision in the National School Lunch Program and the School Breakfast Program. OVS allows students to decline food they do not intend to eat or drink that is offered through the National School Lunch Program and the School Breakfast Program. In 2010, 69 percent of elementary schools and 77 percent of middle schools used OVS (USDA, 2012). OVS is required in high schools. Indeed most schools utilize the OVS provision, but some of these schools still mistakenly require students to take milk.

“To a large extent, current nutrition staff grew up in a school environment where milk was mandatory. We found that milk waste is often the result of children having to take milk even in schools that use Offer Versus Serve. Some solutions are to provide better training for staff and place signs with clear instructions for students in the lunch line so they understand their options. Lastly, we worked with our Parent Teacher Organization to provide eight-ounce reusable water cups in the cafeteria so that students could have easier access to water. After taking these simple steps, we did follow-up audits where we saw milk waste being reduced by 21 percent,” said Terry.

To encourage similar positive results, the USDA and EPA are working on a variety of resources that can help schools conduct food waste audits and implement food waste reduction strategies. Each school is unique, so there can be many ways to organize an audit, just like there are many ways to tackle the problem of food waste. We would love to hear your experiences and ideas. You can e-mail Jimmy Nguyen at jimmy.nguyen@fns.usda.gov, Melissa Terry at mat023@email.uark.edu, and Stephen Sturdivant at Stephen.sturdivant@epa.gov with any additional questions or requests for more information.

Jimmy Nguyen is program analyst for the USDA Food and Nutrition Service External and Governmental Affairs, whose mission is to be the creative force that builds alliances to feed our communities. Jimmy is also an agency lead on food waste reduction efforts.

References


Suggested Citation


Disclaimer: The views expressed in this Perspective are those of the author and not necessarily of the author's organization, the National Academy of Medicine (NAM), or the National Academies of Sciences, Engineering, and Medicine (the Academies). The Perspective is intended to help inform and stimulate discussion. It has not been subjected to the review procedures of, nor is it a report of, the NAM or the Academies. Copyright by the National Academy of Sciences. All rights reserved.

3 Melissa Terry, M.P.A. graduate student and K12 food policy researcher at the University of Arkansas May 12, 2016.