Appendix B

Memorandum on Informal Discussions Conducted by RTI

Exploratory Semi-structured Interviews on Retail Food Loss
Agency: Economic Research Service
Contractor: RTI International

To: Linda Kantor

From: RTI Project Team

Date: December 19, 2018

Subject: Retail-Level Loss Factors for Loss-Adjusted Food Availability (LAFA) Series:
Deliverable 5.1: Memorandum on Informal Discussions
Contract No. GS-00F-354CA

RTI International conducted a small number of informal discussions with representatives from trade associations, retailers, and other organizations to help inform the development of the instrumentation and data collection protocols for the nationally representative survey of retailers on retail food loss. The purpose of this memo is to describe the data collection methods, summarize the information collected in the informal discussions, and present our conclusions for the design of the instrumentation and protocols based on what we learned in the discussions.

Participants

Based on our knowledge of the industry, in combination with contacts provided to us by our expert panel members, we created a list of retailers, trade associations, and other organizations. Our initial list contained 25 retailers who have sales revenue greater than $1,000,000, 3 other companies that sell software/technology solutions for food waste prevention and measurement, and five national or state-level trade associations that serve retailers. We obtained contact information from our expert panel members, company websites, and LinkedIn, specifically looking for the contact information of the corporate director of sustainability or the sustainability manager. While conducting the informal discussions, it was suggested that we contact other organizations with insights on food loss measurement; thus, we added three nongovernmental organizations (NGOs) to our list of contacts.

RTI conducted the information discussions in November and December 2018. We conducted informal discussions with two trade associations, three national or large retail chains, four regional chains, and three NGOs (see Table 1). Additionally, Table 2 shows the final status for the 32 companies/organizations we attempted to contact.

One of our expert panel members identified several other independent/small chains that we plan to contact in early January 2019 (two more discussion can be conducted to remain within the limit of nine). Additionally, we sent a follow-up email to the retailers we talked with to collect more detailed information on the specific information available for shipment data (i.e., variables available on the data file), measurement of ingredients used to prepare products in the store, and measurement of loss from random-weight meat products. We plan to provide a revised version of this memorandum that

summarizes this additional information as well as information from discussions with up to two more retailers.

Table 1. Companies/Organizations that Participated in the Informal Discussions by Type

Type	Name of Company or Organization
Trade association	Food Marketing Institute (FMI)
Trade association	National Grocers Association (NGA)
Total	**2**
Retailer, national	[Removed names of retailers to protect privacy]
Retailer, national	
Retailer, national	
Retailer, regional	
Retailer, regional	
Retailer, regional	
Retailer, regional	
Total	**7**
NGO	Rethink Food Waste Through Economics and Data (ReFED)
NGO	World Wildlife Fund
NGO	Feeding America
Total	**3**
TOTAL	**12**

Table 2.   Status of Companies/Organizations Contacted for the Informal Discussions

Completed	12
Declined	5
Did not respond to contact attempts	13
Amenable to participating but did not participate[a]	2
Total	32

[a] We will likely contact these companies for the pretest.

Data Collection Methods

The informal discussions were conducted by telephone and lasted approximately 1 hour. At least two RTI staff participated in each call, allowing one person to ask questions and one person to take notes. We began each call by providing background information and explaining our reporting procedures. We followed a semistructured guide with questions that asked about methods used to track and measure retail shrink, including random-weight products; the extent and measurement of donations; their thoughts and opinions on our proposed data collection approach; and suggestions for nonmonetary incentives.

After each informal discussion was complete, we asked participants for their consent in sharing their names for the purpose of this memorandum. We summarized the call notes using an Excel spreadsheet organized by topic area.

Summary of Data Collected

This section provides a summary of the data collected in the informal discussions with retailers, trade associations, and NGOs.

Flow of Product

Retailer product can come from three sources: (1) self-operated distribution centers/warehouses, (2) wholesalers, and (3) direct store delivery. The percentage of shipments from each of these three sources varies by store type and size. For example, according to informal discussions, larger retailers (supercenters and large chain supermarkets) use distribution centers for 70% of their products (mostly center-aisle grocery and fresh produce); however, independent grocers likely do not have any distribution centers. One large retailer we spoke with has both regional distribution centers and additional localized distribution centers. Another retailer has specific chill distribution centers for refrigerated product separate from grocery (i.e., nonperishable product) distribution centers. Additionally, all supermarkets and supercenters have direct store deliveries of products such as bread, milk, and soda. Supermarkets also often use wholesalers to some extent (estimated as 10% of product for large chains to 80% of product for independent grocers). FMI said that of their 1,150 members only 100 self-distribute, while the other 1,050 depend on wholesalers. One retailer mentioned scan-based trading (called SBT) where vendors (e.g., Hallmark, sushi, meal kits) can bring their product into the store, but the retailer does not pay for the product until it is sold.

Although retailers may have shipment data, one of the difficulties may be obtaining data on product weights, especially for random-weight products. One NGO noted that some retailers may not have data in a usable format for researchers. For example, a multi-store chain they are working with sent the organization PDF files of inventory data. However, other retailers, particularly larger chains, will be able to provide data in a usable format (i.e., electronic data files).

Methods Used to Track and Measure Shrink

RTI's next series of questions asked about tracking and measuring retail shrink. All the retailers said that they tracked shrink, and one of the trade associations said that they would expect most of their members to measure shrink because it negatively affects retailers' bottom-lines. Results from a recent survey showed that 38% of NGA's members had shrink programs or action plans in place to curb shrink.

An issue of concern is that most retailers view waste and shrink differently. One of the trade associations we talked with also mentioned this as a potential problem. Shrink includes product that is thrown away, stolen, lost during transport, and/or donated. Retailers often view waste as a subset of shrink: the product headed for landfill. The trade association also noted that about half of its members consider donations to be waste, although most of the product will be consumed. It was noted during several of our discussions that only the larger chains track waste separately from shrink. Additionally, within larger chains, one employee may track shrink, while a different employee tracks waste. That is, a category manager or a supply chain manager may focus on retail shrink, while the sustainability or facilities manager may focus on waste.

The methods and level of granularity of tracking shrink differ across retailers. Among larger retailers, the measurement of shrink is also complicated by mergers because the retailer may track shrink using different methods within different banners. Most of the retailers measure shrink in terms of dollars because they use a cost accounting approach: the difference between dollars shipped in and dollars sold is what retailers consider shrink. In general, there are three types of shrink:

(1) throw-aways are tracked daily (product the store throws out, which is often expired [past the sell by or use by date] or damaged)

(2) mark downs (product the store marks down to try to sell it)

(3) unlocated (lost inventory that could be stolen product or mismanaged pricing)

The markdowns and unlocated product are often referred to as "paper shrink," and several retailers mentioned that separating throw-aways from paper shrink in their tracking systems is difficult. One retailer undertook an exercise in which they created value densities at the product level so that they can translate the sales of unsold food into weight and then map the weight of products to donations, recycling, or landfill. Value densities would vary by chain because they are price dependent.

One retailer mentioned measuring shrink by total pounds. They have a digester, and they conduct trash audits of the compactors and take pictures of the throw-aways going into the digester to better understand where food waste occurs. Another retailer mentioned only tracking shrink at the department level (e.g., deli, produce, grocery), which is the level of data frequently kept at smaller, regional chains, whereas a few of the large retailers interviewed track waste at a finer level of detail.

For retailers that prepare food products for sale in the store (not all retailers do this), they track ingredients from grocery products sold directly to consumers and use yield charts to match ingredients to

the prepared items sold. For example, a case of lettuce that is used to make sandwiches at the deli is scanned in as a case of lettuce but scanned out as part of the sandwich. The yield chart has how many sandwiches can be made with the carton of lettuce. Retailers noted that this is a challenging aspect of tracking shrink.

Of the retailers we talked to, all except one use internal databases to track shrink rather than off-the-shelf software. However, several off-the-shelf software programs mentioned by a trade association include Leanpath, Scan It All, Shrink TRAX, Grocery Order Tracking,[1] and Periscope. Leanpath is a software that was designed to prevent food waste and is mostly used in commercial kitchens. Periscope is a product of Invatron and is used for tracking product in fresh foods departments within a supermarket. One of the five modules of Periscope is a "shrink tracker" that captures and categorizes product discards, markdowns and conversions, and related sales data to provide users with an understanding of how and where shrink is being produced. One of the retailers we talked with had purchased Periscope and had rolled it out in two of their stores for testing.

One of the retailers uses software they refer to as Known Loss Tracking, which involves individual stores in the chain scanning unsold products and tracking them at the Universal Product Code (UPC) level. However, the retailer mentioned that a lot of estimation occurs in this process because an employee is "not going to scan every single apple." Another retailer mentioned that their stores scan out all unsold products except for fresh produce which would be very labor intensive.

Measurement Loss from Random-Weight Products

During our discussions, we came across several issues regarding the measurement of retail shrink in retail stores that cut and package random-weight meat and poultry products. These retailers noted that a lot of shrink happens during this process. More specifically, each retailer has a yield chart for what they can typically get from a subprimal (e.g., from a whole pork loin the retailer has an estimate of the number of center bone chops, thin cut chops, country style ribs, packages of stir fry, etc.). Once the box of meat for each subprimal is processed, then the retailer knows the amount of loss from the box, which is tracked by weight and dollar amount. For example, if the box had 50 pounds of meat and 40 pounds get processed and packaged, then the retailer knows that 10 pounds were lost during processing, including bone and fat trimming, which the retailer considers shrink.

When we asked retailers how their stores track the shrink from random-weight meat and poultry products, two retailers mentioned that their stores measure shrink in relation to price using a process in which the result is a markdown of the price to zero. The retailer has the weight and cost for the subprimal and knows how many cuts and the weight of the cuts that can be obtained from it. They price the product and mark it down until it needs to be discarded with the aim of selling more in terms of dollars than the cost of the subprimal even if some cuts are discarded. Although retailers may have an idea of the amount of fat and trim discarded, one of the NGOs mentioned that it is rare for retailers to keep this data. Additionally,

---

[1]   We attempted to contact Invatron several times but were not successful in scheduling a call. We plan to explore Scan It All, Shrink TRAX, and Grocery Order Tracking to determine if the information collected by these systems would be useful.

some retailers mentioned that they track the amount of product packaged in the store, which could be used in calculating loss estimates instead of shipments data for meat and poultry packaged in the store. The issue of in-store processing is not a challenge for all stores because two retail chains mentioned that they do not do any in-store meat processing. One of these two retailers mentioned having a meat facility where the subprimals are processed and packaged before being delivered to the store.

Measurement of Donations

All the retailers we spoke with track donated products at some level. Retailers have different rules for what products they donate and when the product gets donated. Food safety is the most important consideration. One retailer noted that their chain does not donate any meat or poultry products, while another has a program in which they take animal proteins going out of code that day (i.e., past the sell by date), freeze them, and donate them to their foodbank partners. Others are uncomfortable donating prepared foods. Many retailers have a "donations" code that can be used when products are scanned out, but one retailer was not confident of the quality of the data because sometimes stores use other codes such as "outdated" or "discard" even when the food is sent to donations. Another retailer commented that even donated food is tracked under "throw-aways" in their system and it cannot be separated out.

Many retailers work with Feeding America to donate product to local food banks. The retailer tracks the dollar amount donated (often for tax purposes) while Feeding America and/or their member food banks capture the weight of product donated. These organizations do not obtain UPC data from retailers; however, because they report to organizations such as Charity Navigator, Feeding America internally calculates an average price per pound to use for their own reporting purposes. Food banks often provide a report to the retailer using general product categories on how much product was donated (e.g., produce, deli, dairy, frozen, nonperishables).

Response to National Data Collection Effort

RTI described the potential approach to data collection (i.e., national random sample of about 300 stores) and asked if they would be able to provide us with sales and shipment data at the UPC level. About half of the retailers said they would be able to provide us with the information requested at this level of detail. However, more than half of the retailers also mentioned that smaller retail stores would likely not have these data. As one retailer stated, "*You could probably get that level of detail from selected retailers, but the majority aren't looking at the data at that level. What a retailer does is buy and sell groceries every day and they will look at the inventory on their shelves every three months to measure their shrink. They aren't going to know how many cases of bananas or pounds of tomatoes went out due to shrink.*" One smaller regional retailer does track sales and shipment data at the UPC level but said they would be very reluctant to share the data and ultimately said the decision would have to come from corporate.

One of the trade associations we talked with was confident that retailers would have the level of data needed for this study, and the other was unsure and plans to follow up with a response to this question. One of the trade associations noted that it has conducted three iterations of a survey with manufacturers,

retailers, and restaurants on food waste in 2013, 2014, and 2016[2] and had planned to conduct another survey in 2018. They decided to postpone the 2018 survey to 2020 because of the low response in 2016, which they attributed to estimates of food waste not changing much over time. Of the NGOs contacted, only one was asked this question, and this organization did not collect UPC data during its measurement efforts.

One of the NGOs said that it plans to conduct a similar study to the study we are undertaking but on a quicker timeline. The organization said, "*Retailers will tell you that they don't have this data. The truth is, they do have it, they just don't realize it, or it is not in the format you need it in.*"

Confidentiality

More than half of all retailers we talked with expressed concerns about the confidentiality of the data being collected. Retailers described their UPC-level shipment and sales data as highly confidential. A couple of regional chains doubted that any stores would be willing to share such data, while other large national chains seemed to understand the importance of having accurate data to estimate retail loss factors and supported the study. It is important to note that the individuals we talked with were in corporate sustainability, and the individuals who would make the final decision on whether to share the data would be executive leadership and individuals from the legal department. One retailer asked if it would be possible to blind the identity of the selected stores. Both trade associations believed that retailers would be receptive to sharing data for the purposes of estimating food loss. One trade association mentioned retailers' frustration with the government's handling of SNAP transactions-level data. After litigation, these data were made publicly available under a Freedom of Information Act (FOIA) request; thus, this experience may make retailers reluctant to share the data unless certain safeguards are in place.[3] The other trade association mentioned retailers would worry corporate leadership would want to intervene and that having these data disseminated could cause competition between retailers. Specifically, this trade association stated, "*That comparison between companies is worrisome and competitors can use that to move into another store's territory … It opens the opportunity for a competitor to come to that region. It's going to be company by company.*"

We asked the individuals that we talked with what would alleviate their concerns about participating in the study and sharing their data. Respondents of all types (i.e., retailers, trade associations, NGOs) mentioned precautions to be taken to ensure confidentiality and data security and the need to have the data request approved by different departments such as information technology, human resources, and legal and/or signing nondisclosure agreements. We asked a few of the people if having RTI work with certain organizations, such as FMI, would alleviate their concerns. Of those asked, nearly all agreed it might help retailers to feel more comfortable providing this data. One retailer suggested, and others agreed, that it would be useful if the U.S. Department of Agriculture (USDA) conducted a webinar or provided some other type of communication that would address how USDA plans to use the data and how

---

[2]   Available at https://foodwastealliance.org/about-our-work/assessment/

[3] See https://www.fns.usda.gov/snap/fr-080414 for additional information.

retailers might benefit from sharing their data. Only one regional retailer was not amenable to any of the suggestions made to alleviate concerns about sharing their data.

Both trade associations were receptive to working with RTI to help promote the study among its members and encourage response (e.g., NGA offered that USDA/RTI could talk about the study at one of its weekly webinars).

Suggested Nonmonetary Incentives

We asked what nonmonetary incentives could be used to encourage retailers to participate in the data collection. Of those asked, most agreed a benchmark report could serve as a sufficient nonmonetary incentive to retailers. They suggested that such a report would be most useful if the participating retailer was compared with similar stores (e.g., large, national chains, regional/local chains, vs. independents). Only one trade association thought this kind of report could cause competition among retailers, and one retailer said something similar, although stated the report would be useful for this reason, "… *because you create that competition, so you can have bragging rights if you were the most efficient. Or if you were at the other end of the scale and your loss factors were higher, you can try to reduce that.*" A few of the people we talked with were asked if recognitions such as a "Food Waste Champion" would serve as a motivating incentive. The two trade associations agreed it might motivate some retailers, but one retailer felt like it would not be meaningful.

Conclusions

Based on what we learned in our informal discussions with representatives from retailers, trade associations, and NGOs, we came to several conclusions for the design of the instrumentation and protocols:

- Retailers do not track food loss at the level needed for calculating retail food loss factors; therefore, RTI will need to request shipment and sales data at the UPC level for a 12-month period from retailers. RTI will need to provide specific instructions to retailers to ensure we receive the data needed for calculations in a suitable format.

- Only one retailer provided detailed information on how food products prepared in the store are tracked; therefore, we are emailing follow-up questions to the other retailers we have talked with to learn more about this topic. So far, we have learned that data on loss for these products are complicated because prepared products are multi-ingredient. Furthermore, the data on loss of ingredients may not be kept or may not be in a format that can be used to calculate retail loss factors.

- Only one retailer provided detailed information on how meats processed in the store are tracked; therefore, we are emailing follow-up questions to the other retailers we have talked with to learn more about this topic. In-store processing will not affect all retailers surveyed because some do not process and package meat in-house. Additionally, retailers that do in-house processing seem to track the amount of product packaged in the store, which could be used in calculating loss estimates instead of using shipments data for meat and poultry.

- While all retailers we spoke with track donated products at some level, measurement of donated products is not uniform across the industry, and the quality of the data can be

questionable depending on how the retailer tracks. RTI will likely need to develop assumptions about the amount of donated product based on other data sources, especially among small retailers.

• Large retailers seemed more open to participating in a national data collection effort, although it will involve talking with multiple individuals at the company and convincing senior management of the importance of the study. Small/medium retailers seemed much more hesitant to participate: one retailer gave us a strong *no* when we asked about the possibility. However, having participation from the larger retailers may incentivize the small/medium retailers.

• Endorsement of the study from trade associations will be useful for getting retailers to participate. Additionally, RTI will continue communicating with ReFED because the organization plans to conduct a similar study to determine what we can learn from their efforts.

• Emphasizing the legitimacy of the study will be important. One retailer suggested that a webinar or some other type of communication from USDA would be useful, and others we talked with agreed. Having a spokesperson from USDA speak to how retailer data will be protected, how the data will be used, and the importance of the data is crucial.

• Most retailers agreed that a benchmarking report would be a useful nonmonetary incentive for participation. Other ideas were recognition for participating on USDA's website along with showing buy-in from the larger retailers.