Oregon Wasted Food Study: Institutional and Commercial Sector Case Studies

Case 11
Quality standards and tracking loss: A mixed impact on wasted food in grocery retail

This report was prepared for
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Introduction

This is a report on the methods and results of one of 15 food service business case studies, as part of the institutional and commercial (IC) sector portion of the Oregon Wasted Food Study. This study is funded by the Oregon Department of Environmental Quality and conducted by Community Environmental Services (CES) at Portland State University.

The research objectives for the IC portion of this study are to:

- Understand components of wasted food in IC sector
- Highlight causes of commercial wasted food and key opportunities for waste prevention
- Test wasted food reduction best practices and quantify their effectiveness
- Promote wasted food reduction best practices for application at commercial food service institutions

Focus of study

This study examines processes related to wasted food and source reduction in the produce departments of large supermarkets. This study investigates (1) how quality standards are understood across levels of management and produce associates, (2) how inconsistent quality standards promote wasted food, and (3) how shrink (loss of food inventory due to operational issues, quality and safety standards, or theft) data collection is used, and not used, to avoid food loss.

Participating business

This case study is of a chain of supermarket grocery stores, operating stores across the Pacific Northwest. They are a subsidiary of a national retailing chain. This case study focused on stores in the Portland, OR metropolitan region.

Methods

Study design

The study was conducted over a six month period from January to June 2018. It included employee interviews, policy and procedure review, and shrink data (food loss) analysis.

Interviews

Qualitative data, such as the interviews conducted here, give us **insights on how quality standards, training practices, stocking and culling practices interact to contribute to the generation of wasted food**.

A total of 16 employees were interviewed for this study, including a regional produce manager, two store-level managers, five produce managers and eight produce associates. Staff worked at four different stores in the Portland, OR metropolitan area. The interviews were conducted at various times over the study period.

Employees voluntarily participated in one-on-one interviews, on-site but in a private location. Interviews with produce associates, however, were conducted on the floor as the employee did their work, as these employees were unable to take time away from their responsibilities. Interviews were recorded and took between 10 - 15 minutes each. The interviews were semi-structured: standard interview questions were asked of each employee with additional questions asked that either responded to employee answers or pertained to their specific role.

Policy and procedural review

Researchers obtained the newest version of the company's graphic manual for produce managers and associates that details policies and procedures related to produce stocking, culling, markdowns and quality standards. This guide was used as a reference point to discuss the results of the interviews in the context of the policies and procedures laid out in this guide. In addition, quality standards as they relate to culling and markdown processes were illustrated on a large poster hung at stores.

Shrink data

A sales and shrink report for one store in the Portland, OR metropolitan region, distributed to store department managers weekly, was analyzed. Shrink, here, refers to the recorded food loss, not stolen or unrecorded food loss. This report included weekly summaries for the previous four weeks, broken down by department, e.g., meat, seafood, frozen grocery, floral, fresh produce, packaged produce. The **departments' top sales by product were identified, as well as the products with the highest loss (or shrink)**. The report was reviewed to understand how the company uses data to inform store-level actions that reduce shrink by reducing the amount of wasted, surplus food that would have otherwise been donated, composted, used for energy recovery, or landfilled.

Study Limitations

The magnitude of shrink in bulk produce could not be fully accounted for due to the issues with tracking losses described below. Additionally, confidentiality agreements required by the case study subject limit the loss information that can be shared in this report.

Results

Quality standards

Grocery retailers use quality standards to ensure consistent product availability, however the **implementation of those standards is left to interpretation by produce associates**. A majority of produce associates interviewed thought quality standards differed across associates. Many thought **new employees**, in particular, had different standards. Some were said to have **too high standards, throwing too much away because they didn't want to get in trouble**. Others had **too low standards and kept too much on the shelf, afraid to throw food away**. Some employees thought the **company could do a better job at setting and enforcing consistent quality standards**. One particular employee expressed frustration because his coworkers' low standards meant more work for him as he often re-culled sections.

Almost every produce associate interviewed provided the same subjective guideline for the company's expectation for quality standards: **"if you wouldn't buy it, don't stock it."** Many employees were skeptical

of the effectiveness of this instruction, indicating that **they would buy products of lower quality than the standards they believe the store to have**. Standards are set explicitly in a poster posted in the back of the store, used to inform culling and markdown practices, and procedures are detailed in the graphic guide. However, managers said **employees were not given time to read these materials during training and employees were expected to review them during breaks**. The poster visually showed products that needed to be culled but were acceptable for markdown, and instructed associates which products could and could not be marked down, along with instructions on how to handle products (e.g., three apples per bag). **The graphic guide instructed employees to cull items that were misshapen, distressed, undersized or blemished but interpretation of these terms was left to employees**.

Feedback

Produce associates perceived that feedback, particularly relating to their application of quality standards, was limited or not well-communicated. **Managers and associates alike mentioned negative customer feedback as a driving pressure to maintain high quality standards**. Associates indicated that they received feedback from their managers regarding stocking, culling, and markdown processes. A few associates, however, indicated that feedback from managers was more often than not unhelpful and that managers were fishing for things to critique associates on. One associate said that some managers would record feedback given to associates in forms but not tell the associate directly, so this associate would only learn about the feedback upon reading the records.

Training

Managers generally said that current systems of training were inadequate. A few, all of whom had been with the chain for many years, said that the **reduction of shadowing practices** as part of a new-employee training resulted in more poorly trained staff. The use of **printed and electronic materials** was perceived as **not an adequate substitute for in-person training with a veteran produce associate**. Managers also suggested that **routine trainings for existing staff members did not happen, occurring only when a new policy or tool is introduced.** Another problem managers identified was that **veteran associates (those who had worked for the company for many years) did not acclimate easily to new practices, policies or tools**, instead preferring to continue the work as they had done it previously.

Produce associates echoed the concerns of their managers. One said "95% to 98% of staff are under-trained." They talked about how the reduction in shadowing time for new employees has meant poorer quality work from new employees, which put more stress on long-time employees to pick up the slack.

Shrink data collection

The process for recording shrink data **varies by store location and by employee**. Some locations have a few dedicated staff who use the radio-frequency (RF) scanner to record shrink data. At other locations, everyone records shrink. At one location, the produce manager indicated that not everyone wants the responsibility of using the RF scanner and decline the responsibility. This same manager also said not every employee at his particular location was set up to use the RF scanner, and many were not trained on how to use it. Another problem was that **most stores only have one RF scanner per department**, meaning associates have to take turns using it.

Recording rates for shrink have an impact on waste prevention because **only recorded shrink gets reported to managers and other employees in the weekly shrink reports**. Artificially low reported shrink numbers suggest an artificially minimized waste problem, and obscure the actual waste by product which could inform

targeted waste prevention action. Furthermore, shrink also includes items that are stolen or improperly sold at the register. While **shrink is theoretically the difference between purchased product and sold product**, inventory is dynamic rather than static, so the **lag between purchase and sale complicates this simple measurement**.

Across the board it appeared that **recording shrink data for bulk produce (i.e., produce not packaged with a bar code attached) was a time consuming and infrequently undertaken process**. A manager said he observed a new employee meticulously scanning out bulk items as instructed by corporate policy. It took the employee an hour and a half when it would have taken him only 30-45 minutes if he had not been scanning out bulk items. This manager said that, accordingly, this employee was not meeting the needs of the store, allowing displays to get low and run out of product. This does not suggest that shrink measurement should not be prioritized, rather, that additional labor may be necessary to accurately measure while supporting other critical responsibilities.

Before a move towards exclusive use of the RF scanner, paper tracking records for bulk produce were placed in the back of the store for associates to mark estimated weights of bulk produce culled each shift. While it appears some stores are still using these paper records, the corporate office has been pushing to phase them out entirely, instead relying solely on the RF scanner, according to a manager. This **shift towards the use of the RF scanner is likely a response to chronic under-reporting of bulk produce data**. In the shrink data made available, which was only a high-level summary, bulk produce was not included in the top ten known loss products. It is not clear whether bulk products were not included because their loss is underreported and loss reasons are not tracked or whether there are low loss levels. The challenges with the scanner based system of shrink data reporting suggests that underreporting is occurring. **Reducing bulk produce shrink through improved training and increased markdowns is hard to achieve when there is minimal feedback to encourage such efforts.**

Shrink data use

Researchers were **not provided access to a breadth of historic shrink data**, instead they received a weekly summary shrink and sales report. While this narrows the scope of our review, the weekly shrink report is the same document provided to store and department managers on a weekly basis. Accordingly, this review considers how this information is and is not helpful to inform these employees in their ordering and waste prevention practices. **The weekly shrink report clearly stated how each department was doing on sales and markdown goals.** This transparency is important, as we heard from managers that they used these numbers to emphasize to their employees to improve or maintain markdown practices. These goals were communicated for the most recent week, and for the quarter to date. However, **reporting time frames were less helpful for product-level shrink information**, which was reported only weekly and included only the top ten products by loss (in retail value). This limited staff ability to identify longer-term trends in shrink generation. **Quarterly trends in shrink data by item could help identify products that are chronically wasted, and inspire practice changes, re-trainings and enhanced communications related to these particular items.**

The lack of shrink data on bulk produce items meant that it was difficult for staff to 1) assess levels of loss in this area and 2) find ways to change practices to reduce loss. Finally, the report is sent only to managers, while information included may be more relevant for produce associates who assist with ordering, and are entirely responsible for many of the practices that promote or prevent wasted food (e.g. stocking, culling, and markdowns). **It was not clear that managers routinely communicated about the contents of these reports, even during conversations around systems of feedback and shrink reduction**.

Markdowns

The company uses a system of markdowns to sell slightly damaged or soon-to-spoil fresh and packaged produce. Bulk produce is marked down to $1 per bag, with the amount of product per bag varying by product. Departments have a markdown effectiveness goal of 80%, meaning they sell at least 80% of total markdown and non-markdown loss products (those that are discarded). Put another way, **the retailer's goal is to sell 80% of mark-down eligible products (those that are either actually marked down or discarded as a loss, but could have been marked down)**, not however 80% of all products (items sold at full retail value are not considered towards this goal).

Company policy recommends bulk produce items that are acceptable for markdown be packaged for markdown on the floor, as the product is being culled from displays. Interviews suggest this practice does not always occur. At some locations, it appears employees are more frequently marking product down en masse after staff finish their stocking and culling and temporarily store product to be marked down in the coolers in the back of the store. Staff did say they have a lot of discretion as to what they do and do not put into markdown bags. A few indicated frustration with the limits placed on markdown, specifically that some products were not eligible for mark down (due to company policy). Two produce associates marked down select products in these categories anyway as they knew they would be purchased and did not want the product going to waste.

Considering the markdown program more generally, **managers indicated mixed levels of acceptance of the program**. One indicated that it could not be a priority, especially on busy days, as they did not have the staff capacity to both keep shelves full of only the freshest product and fill markdown bags. One manager said that he could not prioritize filling markdown bags, which sell at only $1 a piece, when he was selling tens of thousands of dollars of produce a weekend. While no other managers expressed such explicit prioritization of stocking fresh product, a few produce associates did indicate that markdowns were not the highest priority. Staff did say resoundingly, however, that **markdown products sell quickly and there is never enough product to fill demand**.

Stocking practices

A few managers suggested **ideal stocking practices were not always utilized** and that some associates, especially new ones, would often top-fill bulk produce (placing new product on top of old product). A few associates also expressed concern that their co-workers were top-filling, with one associate saying they had to step in to redo their coworker's shelves on a regular basis. Two associates suggested a lack of knowledge and training were the primary causes of inappropriate behaviors, while another suggested they were intentional and resulted from laziness.

Lack of time

Staff at multiple levels **suggested time was the most limiting constraint on culling and recording shrink data more effectively**. Management also expressed frustration with the lack of time allocated for training. Both a manager and a few associates also suggested time constraints made them less able to mark down all qualifying produce.

Ordering practices

Managers and produce associates alike mentioned **one common cause of waste was excess product pushed from distribution centers that the store was unable to sell**. This excess delivered product is

outside of the control of an individual store and is commonplace. However, **employees said they can manage the excess product through proactive and aggressive sales and markdowns** on these products to ensure they sell before spoiling. This does not, however, always happen, they said.

Conclusion and Future Directions

Inadequate training contributes to inconsistent quality standard application and culling practices

Employees at all levels believed that training for new produce associates was inadequate. Generally, they believed that the **reduction of time allocated for training, as well as the shift away from shadowing towards more computer-based and reading materials-based training, was particularly problematic**. Produce associates and managers alike suggested that inadequate training was a primary cause of inconsistently applied quality standards, inefficient and improper stocking and culling practices, such as top filling. While some systems for routine feedback did exist, like manager walkthroughs, these venues did not always provide helpful and actionable feedback for produce associates. **If the time needed for repeated training is not available, alternative strategies, such as a checklist system at the beginning of a shift, could be considered.**

More time needed to achieve success

Many of the produce associates interviewed **suggested time constraints were the most challenging part of their job**, limiting their ability to successfully manage the multiple priorities including stocking displays to high visual and sanitary standards, culling only appropriately distressed product, marking down appropriate product on the produce floor, maintaining highly accurate shrink records and assisting customers.

Data is imperfect, but can it be improved?

Shrink data for bulk produce items is inconsistently collected, giving an imperfect picture for both higher-level decision makers and store-level actors alike. This study did uncover some reasons for the gaps in shrink data collection. First, using the RF scanner to record bulk produce shrink was time consuming, slowing down some employees to the point where they could not perform their most essential duties. Second, long-standing systems to make data recording more efficient and accessible, namely the use of paper spreadsheets to track bulk produce, were being phased out by the company. This may actually lead to less accurate data as produce associates fail to record bulk shrink data at all. Together, these factors suggest significant barriers to improving data accuracy. **In the absence of accurate bulk produce data using the RF scanners, shrink data could also be inferred for these products by determining the difference between the amount of product received and the amount sold.** While this would obscure the exact cause of shrink (be it from theft, damage, spoilage or cashier error), it might better highlight the relative shrink amount by product and allow for more focused efforts for reduction.