

Beating COVID-19: Strategies for Food Waste Management in Restaurants

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Key summary

- During the spread of COVID-19, SMEs across various industries are facing liquidity crunch. This is especially true among restaurant businesses with limited cash reserve. When income is not flowing as usual, all cost saving initiatives must be carefully considered. The cost of raw materials for a restaurant is one of the largest operating expenses that owners or managers in the business face everyday. Without proper planning and efficient management, a great amount of raw materials, has become food waste and eat into the restaurant's bottom line.
- Restaurant managers should follow three steps to control food waste before it reaches the consumers: 1) Inventory management 2) Raw material procurement and 3) Operating management. Additionally, setting up an acceptable level of food waste per restaurant is also recommended. The specific level could be varied, based on restaurant types. The indicator could help to identify where mistakes were made and also could work as an encouragement for operation staff.
- Not only that the reduction of food waste is a great way to avoid excess costs and to improve cash flow for restaurant, but it is also a way to attract new generation of consumers who are becoming more ethically-conscious in their consumption and lifestyle decisions.

The coronavirus (COVID-19) pandemic has become one of the largest challenges that the world ever encountered. Business across several industries can feel the impact from this ongoing virus outbreak in different ways and different levels of magnitude. Small businesses with limited cash reserves are particularly vulnerable. According to a research conducted by JPMorgan in 2016, the average cash buffer days in reserve for small restaurants in the United States is only 16 days as compared to 27 days for the median of all small businesses. The small cash balance for restaurant businesses means that they have less buffer to absorb unexpected shortfalls in revenues or increases in expenses. As a result, cost reduction initiatives are not only a very significant strategy but also a matter of urgency.

The cost of all raw materials used in preparing a dish makes up a large part of restaurant expenses, or considered of around 35% of the total expenses. According to the study from the Green Restaurant Association, an average restaurant in the United States produces approximately 10,000 – 35,000 kilograms of food waste per year. This figure is accounted for 3-9% of raw materials that were purchased. This information corresponds to the data reported by Thailand's Pollution Control Department which indicated that 45% of total garbage in Bangkok is food waste.

Despite the fact that the cost of raw material is accounted for one-third the total restaurant expenses, food waste level remains high. Poor and ineffective management is the main reason behind the diminishing profit of restaurants. The statistics provided by the Waste and Resources Action Programme shows that more than 45% of food waste occurred during food preparation process, 34% are leftover food and about 21% are rotten food waste. It is evident that a large portion of the food waste occurs before reaching consumers. These avoidable mistakes happened during key procedures namely; inventory management, raw material procurement and operating management. EIC would like to suggest these essential food waste management tips for managers and operators of restaurants business:

1. **Inventory management:** a systematic inventory management allows restaurant manager to control the consumption of raw materials and cost. Better planning and forecasting the right amount of raw material to order is essential. Excess inventory of raw material often leads to limited storage space and limited shelf-life period, which could eventually turn to a pile of food waste. Therefore, restaurant manager should measure and record the quantities of food waste. It is also important that restaurant tries to utilize the storage space optimally. For instance, using first in, first out (FIFO) method of inventory valuation is a very effective way for material flow assumption. This method assumes that inventory purchased first is sold first and newer inventory remains unsold. Moreover, purchasing of raw material could also be planned ahead based on the forecasting sales of both popular and non-popular menu items expected to be sold in the near future. This can help restaurant manager to estimate the demand of raw material that needs to be stocked in a different period of time.

IKEA restaurant, a food chain of the world-famous Swedish furniture IKEA brand, set a prime example for inventory management. Its employees have been using digital scales to record the type, quantity and the reason why their food were being sent to the bin. Over time, the data has helped the company to understand the causes that drive restaurant's food waste and able to make big changes. After using this method with all 420 branches throughout the world for over 2 years, 25% of IKEA restaurant's total food waste has been reduced. Nevertheless, this technique could also be applied with smaller restaurant operators. Meanwhile at The Regional, a restaurant in Denver in the United States, a low-tech detailed inventory record has been used to track daily food waste; allowing the company to maximize yield and minimize unnecessary losses. EIC suggests that restaurant should try to keep the raw materials at optimized quantities. Keeping inventory as low as possible is an essential way to minimize food waste. However, this must be done in accordance with accurate sales forecasting in order to avoid facing inadequate supply of raw materials.

2. **Raw material procurement:** In order to cook good food, raw materials need to be as fresh as possible. Many types of raw materials are highly perishable. As a result, it is suggested that fresh food should be ordered on a regular basis in an amount being carefully calculated based on sales forecast. This could help restaurant manager avoid raw-material perishability. Nevertheless, the raw materials purchased from suppliers often need to meet its minimum order quantity (MOQ) requirements in order to manage the cost. Logistic distance, types of vehicle, transportation routes and cargo space need to be considered to ensure delivery optimization. For example, if restaurant in the inner city areas needs to order raw materials from rural areas, cargo spaces ought to be fully utilized at all times. Small scale restaurants usually have lower bargaining power over suppliers and often be forced to over-order raw materials, leading to excessive food waste at the end.

Thus, selection of raw material suppliers must incorporate on several criterias. The suppliers close to the restaurant together with bargaining power for an acceptable MOQ are very crucial for food waste reduction. With the right method of raw material procurement, restaurant managers could spare their inventory cost, logistic cost and including food waste cost.

3. **Operating management:** Mismanagement in restaurant could occur at different operational stages such as human errors in taking customer's orders or poor management in food preparation. Nevertheless, once the mistake happens, it often leads to food waste. Hence, restaurant staff training should be held regularly along with an efficient management system. These would help preventing avoidable mistakes. In addition, restaurant manager should focus on reducing staff turnover as it has been proven to clearly help minimize the occurrence of operational mistakes. Human errors among newly hire is significantly above errors from those well-trained and experienced staffs.

However, the uses of new technologies, which are adopted in several restaurants, have been demonstrated useful for reducing staff error rates. For example, we have already seen a lot of restaurants starting to use the tablet e-Menu which allows customers to directly communicate with the chef, lessening chances of order mistakes.

Apart from these 3 key strategies mentioned above, each restaurant should determine food waste benchmark and reduction target. This can be done by a calculation based on sales projections of the best seller menu items first. And then try to minimize the food waste of raw materials used in the preparation process of this menu. These obtained figures can then act as a benchmark for food waste for other menus in the restaurant. Nevertheless, an appropriate benchmark for food waste can differ depending on the types of restaurant (fine dining/ buffet/ shabu/ sushi/ a la carte restaurants). Not only that this standard point of reference will indicate if the restaurant's operations management need to be improved, but it also will motivate restaurant operator and staffs to focus on the very important topic like food waste reduction.

Additionally, restaurant could make a good use from its inedible food waste such as used oil, fruit peel and including rotten vegetable waste. With simple methods, food waste can also be used to generate organic fertilizer, fruit vinegar and effective microorganisms. Some studies have also shown that remaining space of restaurant at times being used to be a housing system for biogas production, derived from the reaction of organic decomposition such as animal dung, fruit waste and vegetable waste.

Many large scale restaurant chains have demonstrated a creative way to deal with their large amount of food waste, collected from all of their branches. For examples, McDonald's converts used cooking oil to biodiesel and A&W produces electricity from onion waste. In Thailand, we have already seen some case studies from small businesses in their innovative generation from food waste. Pakasai resort in Krabi province has set up biogas production system to generate energy for its kitchen. According to the hotel, this system could save its consumption of cooking gas by up to 19 kilograms per month.

Not only that food waste reduction could serve as a significant cost saving initiative and an additional cash flow for restaurant, it also provides a good storytelling to draw attentions from the millenials, who are more ethically and socially conscious than any other generations. According to Deloitte, over 90% of millenials are ethically-conscious. As a result, reduction of food waste can be seen as one of essential elements for restaurant's value creations. Restaurant operator can use this appealing topic as part of the Zero Food Waste campaign, targeting consumers with high awareness of environmental protection. We have seen a specialty restaurant which mainly cooks from raw materials that are rescued from being thrown away or a restaurant that only uses a few selection of raw materials as a way to limit its inventory size. These restaurants have been

working their brains and imaginations to create a special menu from leftover raw materials, placing their priority on food waste management before anything else. Instock restaurant in The Netherlands is one of its kinds in a creative restaurant concept as they only serve dishes produced from food waste. According to the restaurant's website, the goal is to surprise people with what they can do with food that would otherwise be thrown away. Meanwhile, Equinox, an upscale restaurant in downtown DC in the United States, made national headline from their zero-waste dinner. Their innovative menus include fish-bone tacos, strawberry hull pesto and carrot-peel fries.

Meanwhile, the zero-waste trend has already been spotted in some restaurants in the city. Baan Tapa Culinary Space stated that its mission is to create zero food waste, as food scraps are turned in to compost for Tapa Garden where they will be growing herbs and vegetables for their kitchen. Another one is Bo lan, which has been inspiring people with their sustainable food practices.

During this ongoing crisis, it is an eventual opportunity for restaurant to pay greater attention on food waste reduction in order to control its expenses and gain additional cash flow. Attempting to reduce food waste and other environmental impact is also a great way to express social responsibility to the community, creating greater value to attract ethically - conscious consumers of today's generation.

More information... <https://www.scbeic.com/en/detail/product/6784>

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