

## *How Can We Control Food Waste? Insight from Campus Foodservice Managers*

### Summary of the Case

This study focuses on edible food thrown away due to food preparation inefficiencies and diners not consuming all of their food. The campus foodservice managers have faced some changes and challenges after the food waste policies and the tracking system were implemented at the facilities. A buffet-style system is typical of on-campus dining but it generates more food waste than a-la-carte-style serving. Thus, the managers not only need to comply with the foodservice company's sustainable management guidelines, but also need to consider the school's policies and procedures to meet students' wants and needs. The discussions from this case study can provide an in-depth understanding of sustainable management in a foodservice operation, communication strategies for employees and customers, and food waste and recovery issues in the foodservice industry.

### Target Audience

This case study could be used by undergraduate students enrolled in foodservice operation related courses. The instructors could present this case after lecturing the basic concepts of foodservice operation systems. This case study could also be introduced while discussing sustainability practices in the foodservice industry. Examples of topics include:

- The quality and quantity control in the process of food production,
- Menu planning and the design of food product flow, particularly in the case of food waste reduction,
- Communication and employee training in a foodservice operation,
- Leadership and organizational change in adapting new policies and technology usage,
- Customer satisfaction and feedback for improving food quality and services,
- Corporate social responsibility and sustainability practices in foodservice operations.

### Teaching objectives and learning outcomes

This case study will expose students to understand food waste and recovery issues in the foodservice industry, which are not often addressed in food and beverage related courses. From food procurement, receiving, production, recovery, and recycling, the entire process in a foodservice operation can be evaluated and designed in an effort to reduce food waste at the facility. In addition, students can identify managerial issues, challenges, and benefits of implementing sustainability initiatives in an organization. After learning this case study, students should be able to:

- Understand the negative environmental and social impacts caused by food waste,
- Explain how food waste reduction and food recovery can be implemented in the foodservice industry,
- Analyze practical and relevant solutions aligned to sustainability practices at foodservice operations,
- Articulate challenges associated with employee training and consumer education in reducing food waste in the onsite foodservice segment and restaurants.

### Theoretical Underpinning

Several theories related to the pro-environmental behavior of consumers can be introduced while using this case study. First, the Value-Belief-Norm (VBN) theory explains how human behavior is related to environmental protection and self-interest (Stern, 2000). Social responsible consumption in corporations and consumers could be discussed and connected to the concept of corporate social responsibility (Webb, Mohr, & Harris, 2008). Finally, regarding the employees' behavior in adopting workplace technological changes, the instructor could introduce the Technology Acceptance Model (TAM) and its application in organizational behavior (Davis, 1993).

### Suggested Teaching Plan

The instructor could ask students to read the case study and review the internal and external control of a foodservice system. Prior to discussing the case study, students should have background knowledge of general responsibility of foodservice managers, menu planning in on-site versus commercial foodservice operations, costs associated with overproduction, and/or forecasting methods. The instructor could start by asking students to share their experiences about on-campus dining. How often do they dine on-campus? Did they enjoy the food and service at a buffet-style cafeteria? Have they noticed food waste situations on campus? These questions could be a good method of initiating class discussions.

The instructor could also consider incorporating several possible assignments associated with this case study. Examples include:

- Observation and evaluation of foodservice operations: students can complete an evaluation of the foodservice facility. The instructor could arrange a site visit to an on-campus dining facility and allow students to observe the food production flow, kitchen design, and the area of waste management. Alternatively, students can visit local restaurants and talk with restaurant managers or employees regarding food production, portion control, food recovery, and waste management poli-

cies. Students should be able to discuss in class regarding their observations and suggestions that could be used to improve waste reduction in a foodservice operation.

- Research studies in food sustainability and corporate social responsibility: students are encouraged to conduct a research project regarding food waste reduction, environmental sustainability, and corporate social responsibility in the foodservice industry. Students can also research non-profit organizations and govern agencies that have developed initiatives and social movements of food waste reduction, such as reports and whitepapers from the Food Waste Reduction Alliance, the United States Department of Agriculture (USDA), and the United States Environmental Protection Agency (EPA). The ReFED Foodservice Food Waste Action Guide (see additional readings) is a good resource to discuss the financial and environmental impacts of food waste in a foodservice business operation.
- Reducing food waste campaigns on campus: students can design and develop food waste campaign messages to promote consumers' sustainable behavior. The instructor can introduce the concept of sustainable consumer behavior and the impacts of sustainable marketing on consumers' decision making. Students may develop different ideas of campaign messages, such as addressing environmental benefits of reducing food waste, reducing portion size (e.g., take only what you can eat at the buffet), or focusing on hunger issues in the society. The instructor can further ask students to discuss how consumers' attitudes and behavior would change and how to educate consumers regarding food waste issues. An example of campaign messages is shown in Figure 3.

### Discussion topics and questions

The instructor could assign students this case study before class, and lead the discussions or ask students to present their assignments during class (about 40-50 minutes). The possible discussion topics include:

- Discuss how food waste issues in the hospitality industry are related to the triple bottom line of sustainability (environmental, societal, and economic impacts).
- Check out the EPA (Environmental Protection Agency)'s sustainable management of food website (<https://www.epa.gov/sustainable-management-food>). Explain what a "food recovery hierarchy" is and what foodservice operations can do to reduce food waste by following the food recovery hierarchy guideline.
- How does the menu planning influence the food system? How do foodservice managers utilize menu planning to control food production and food quality?
- What can restaurant or foodservice managers do to control plate portion size but not jeopardize customer satisfaction?

**Figure 3**

### An example of campaign messages



- What can foodservice companies do to reduce food waste in a catering sector?
- While implementing new sustainable practices or policies in an organization, how can managers get the employees involved in the changing phase?
- Choose a restaurant or foodservice company and research the company's sustainable management. What practices or policies are currently implemented by the company? How would you suggest the company improve their sustainable management?

### Additional Readings

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