Anastasia Leu Ballard High School Huxley, IA, USA United Kingdom, Spoilage and Waste

Food Crisis in the United Kingdom

One-third of food purposefully grown for human consumption is never actually consumed, and it is wasted causing major economic and environmental consequences (Young et al.). Recently studies have shown that larger amounts of food waste can cause global food prices to rise making food less obtainable (Young et al.). Less obtainable food is bad because the world already has a large number of people in poverty or just above the poverty line, so raising food prices could increase the number of hungry people in the world. Young et al. also explains that food waste has been a problem for years, but in the late 1990s to early 2000s it has been largely ignored. Now the support to reduce food waste is becoming more popular, likely due to people being more environmentally friendly. Furthermore, food waste is a major problem that has numerous causes, some from retailers and some from households. Solutions can come from those places as well and can be helped by other organizations.

Young et al. states "Avoidable' household food waste is defined as 'food and drink thrown away because it is no longer wanted or has been allowed to go past its best." There are multiple factors that lead to food waste in households such as food storage, food preparation conditions, socioeconomic characteristics, psychological, and behavioral factors (Weis et al.). The world is already filled with so much waste. In individual homes, there is the ability to control the amount of food needed and not buy extra. When there is extra food, it can be properly stored or disposed of in a way that will not be harmful to the environment. Proper disposal is important because the disposal of food and drink into landfills adds avoidable release of gases like methane and Co2 emissions (Young et al.). Many people don't intentionally create excessive amounts of food waste. Most people actually waste food because of a physiological effect called "specific food behaviors" that have to do with how and why people plan, store, prepare, and consume their food (Young et al.). Along with that, people often don't realize the impact of behaviors that they repeat on a regular basis. For example, throwing away the ends of the loaf of bread increases the demand for bread globally (James). The action of throwing away the ends of bread doesn't seem that bad, if it is just one person throwing away the ends, but the reality is it is not just one person. The lesson is that before throwing away "small" amounts of food in the trash, stop and think, could this food item be used for something else or is there a better way to dispose of it?

Just like in households, retailers have a lot of food waste as stated by Weis et al. The food system is extremely inefficient causing one-half of food produced to be lost. This loss can happen at any point throughout the production and selling process. For example, in producing countries 20% to 40% of food can go to waste if it is surplus. Sometimes even 100% can go to waste if its appearance has been ruined by the weather. The fact is that 30% to 50% of the world's food is wasted every year; half of the loss is due to inadequate storage postharvest. The rest of the food is wasted in developed nations because retailers treat food as surplus goods and will waste it due to minor imperfections (James).

Stores can also make consumers nervous causing them to create food waste, because of the fear of no availability, variety, and freshness (Young et al.). Stores create this fear in consumers' minds by not displaying all available items creating the fear that the consumers may not be able to purchase the item later.

Stores and governments have also known for a while that food Date Labels can be confusing. Weis et al. observes "When consumers misuse or misunderstand date label messages regarding food product quality/ freshness or food product safety, they may discard products which are past their posted date but are still

wholesome and safe to consumers." Another way to reduce food waste is for retailers and governments to stop shifting responsibility away from themselves (Young et al.), and start taking responsibility for the amount of food waste they produce themselves.

In the United Kingdom, it is important to note that "British families are normally small. The average family consists of a pair of spouses with one or two children" ("United Kingdom: Family"). This statement shows that these families will ultimately produce less waste than larger families. Even though these smaller families will produce less waste, they should still make an effort to reduce their waste within the meals they eat and the lifestyle they live. Previously, a typical family in the United Kingdom would eat a heavier breakfast, but now will eat a lighter breakfast of fruit, toast, or cereal. They will follow this light breakfast with a larger dinner/lunch.

Most people have very busy lives and can struggle to find the time to change habits and learn to focus on reducing food waste. Even simple solutions can seem to take up a lot of time but can be worth the effort financially and environmentally. There is a growing number of proactive and reactive solutions for effective food waste management in households, so understanding different types of food waste is key to coming up with the best solutions (Garcia et al.). Not every solution to reduce food waste will be as effective as the next, but every attempt will positively reflect on the ongoing effort.

A fun solution for families to do together is to join a city garden project that teaches the importance of growing one's own food, which helps understand food's true value. Along these lines, city garden projects allow the harvest of food when it is freshest, so foods like fruits and vegetables are not wasted because of spoilage (Garcia et al.).

Another great way to reduce food waste is for people who do not have access to a garden project and live in the city is to use a Bokashi bin. James comments "[You can turn] ... food waste into fertile soil by making Bokashi bins (easier to use than composters) and outdoor wormeries." There are less intensive solutions than composting and gardening that are arguably as effective. As a household, they can try shopping smarter, storing products better, and planning meals with time-sensitive products (Garcia et al.).

Retailers can use social media to influence their customers about the reduction of food waste. Studies have shown that major retailers have a higher potential of influencing consumers over governments (Young et al.). This fact can be due to people having a mistrust of their government or people not wanting to be controlled by their government. Young et al. claims retailers may have conflicting opinions about asking their customers to reduce waste because they may be asking their customers to consume less or at least consume differently. On the other hand, research has shown that European consumers that have been asked by retailers for their help reducing their environmental impact have developed stronger brand loyalty and greener attitudes.

Campaigns to reduce waste in supermarkets focus on using social media because it can mimic face-to-face interactions because research shows "Following social influence theory, face-to-face interactions can be seen as a crucial element of effective behaviour interventions. Given that face-to-face interactions are extremely cost-, time- and resource-intensive, it is difficult to scale up these types of interventions to the level of a national supermarket" (Young et al.).

Supermarkets can also use the psychological effect in social media like block leaders and social networks. It has been shown that people are more likely to trust people in their social circle making a public commitment to making and modeling ways to reduce waste. People need to publicly see someone else doing something before they will be consistent in their own behavior (Young et al.). Although it is important for retailers to use their influence to change what others do, it is more important that they take steps to reduce the amount of food they produce. A good way for retailers to start is by using

redistribution to their advantage. Instead of throwing expired but still safe or imperfect food away, they can put the foods on a clearance section so that the food can still be eaten, and the stores can make money (James). If stores still decide that they don't want to sell the food, they can also donate it to a local food bank, so places like Oxford Food Bank don't have to go dumpster diving for perfectly good food that is considered "waste" because it is not perfect (James). Many people have expressed concern about how confusing food date labels are even in the United Kingdom where food date labels are regulated at a national level. They use a quality based "best before" date and a safety based "use by " date. So, research is being done to make food date labeling even more simple using intelligent packaging technology or a date color-coded system to indicate freshness (Young et al.).

James also talks about ways restaurants can reduce their food waste because British restaurants waste thousands of tonnes of food each year. James states that by adding financial incentives and penalties, consumers would be less likely to waste their food. This method is already in use at some restaurants in Saudi Arabia. These restaurants fine customers for leaving food on their plates. Any of the money collected from these fines will be donated to charity.

Restaurants in the United Kingdom can also try a food tracking system in the kitchen because cooks often don't realize how much food they are wasting. This problem was the case for a restaurant in the United States where the chef became so tired of others being careless with how they used and disposed of food they were handling. He made a food tracking system that quantifies the amount of food thrown out because of spoilage, expiration dates, or overproduction. He created this system to make the staff realize how much food was being wasted. The system works with a camera documenting each portion of food as it is thrown away. Later the system shows the workers the financial and environmental waste created. The final step created a competition by charting the individual worker's food waste scores (James). This tactic worked so well because people often don't realize the impact they are making on the world around them if it is not right in front of them. The chef was smart in making his system into a competition because people inherently want to win, so they will try even harder to reduce waste. If all preservation efforts fail and retailers still need to dispose of food waste, the companies should think about alternative disposal with methods like aerobic digestion and incineration to reduce the effect their waste has on the environment (Tonini et al.).

Within the United Kingdom there are many amazing organizations that want to put an end to the food waste crisis. One of the bigger organizations is WRAP. They lead national food waste management efforts and work with organizations like Defra, FSA, and FWRA to advocate for national standards applying to food product date labeling (Weis et al.). Food date labeling is an important focus because people will throw away less food if they better understand when their food goes bad, so they don't worry about getting sick from it. The solutions are complicated which is why so many organizations are working together to create better solutions.

WRAP also runs campaigns like their "Love Food Hate Waste" campaign with Asda, one of Britain's leading retailers. They use social media to influence consumers to waste less (Young et al.). It is a big step for such a big company to want to use their influence to better the environment. Many retailers don't give help solving environmental problems another thought because it is unlikely to make them more money.

Defra, WRAP, and the United Kingdom government all use the waste hierarchy pyramid to show when and where to dispose of waste (Garcia et al.). The pyramid consists of six levels all with small subcategories that measure how helpful each technique can be. The waste hierarchy pyramid needs to be better advertised so that more people know the best way to decrease food waste.

James writes "Groundswell International works in countries such as Burkina Faso and Ecuador, training farmers in techniques to improve food security and reduce waste." Educating farmers is such an important

task especially when they do not always have access to proper education. Educating farmers is important because then they are able to make decisions based on science. Better farming practices allow the farmers to make more of a profit off their produce and have a better quality of life. Another group that is trying to reduce food waste is the Pig Idea Campaign. The group is currently trying to overturn the ban on feeding pigs surplus food (James). Feeding pigs surplus food waste is a great way to reduce the amount of food wasted. Also, feeding pigs food waste can address the ethical and environmental impact of feeding 97% of the world's soy to livestock rather than people (James).

Food waste is a major problem that has numerous causes, some from retailers and some from households, but solutions can come from those places as well and can be helped by other organizations. Six hundred thousand tonnes of food is wasted every year just from British restaurants (James). This large amount isn't taking into account stores, homes, and other businesses as well as the rest of the world. Worldwide a billion people are starving, and the world's population is steadily increasing. As all of this change is happening, the world is filling up with improperly disposed of food which causes making bad choices in food waste disposal an even more urgent problem (James). If more people start taking reducing food waste seriously, the world can be changed for the better, environmentally and physically.

Works Cited

- Garcia-Garcia, Guillermo, et al. "A Methodology for Sustainable Management of Food Waste." *Waste and Biomass Valorization*, vol. 8, no. 6, 2016, pp. 2209–2227., https://doi.org/10. 1007/s12649-016-9720-0. Accessed 19 Dec. 2021.
- James, Lydia. "From Bins to Bellies." *New Internationalist Magazine Digital Edition*, 22 May 2014, https://search.ebscohost.com/login.aspx?direct=true&db=pwh&AN=96019074 &site=ehost-live. Accessed 6 Jan. 2022.
- Tonini, Davide, et al. "Environmental Impacts of Food Waste: Learnings and Challenges from a Case Study on UK." *Waste Management*, Volume 76, 2018, pp. 744–766. https://doi.org/https://doi.org/10.1016/j.wasman.2018.03.032. Accessed 19 Dec. 2021.
- "United Kingdom: Family." *CultureGrams Online Edition*, ProQuest, 2022, online.culturegrams.com/world/world_country_sections.php?cid=228&cn=United_Kingdom&sname=Family&snid=11. Accessed 06 September 2022.
- Weis, Carter, et al. "Effects of Date Labels and Freshness Indicators on Food Waste Patterns in the United States and the United Kingdom." *Sustainability*, vol. 13, no. 14, 2021, p. 7897., https://doi.org/10.3390/su13147897. Accessed 19 Dec. 2021.
- Young, William, et al. "Can Social Media Be a Tool for Reducing Consumers' Food Waste? A Behaviour Change Experiment by a UK Retailer." *Resources, Conservation and Recycling*, vol. 117, Feb. 2017, pp. 195–203., https://doi.org/10.1016/j.resconrec.2016.10.016. Accessed 3 Jan. 2022.