

Research on Problems and Countermeasures of Food Waste

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Abstract: It is estimated that between 17 and 18 million tons of food are squandered in China each year. There are as many downsides to food waste as there are greenhouse gas emissions from food waste. Why is so much food wasted every year? First, restaurants waste a lot of food every year, such as kitchen waste, guests not finishing their meals, etc. The second point is one that many people overlook, and that is household waste, like that at the dinner table. There are also many impacts of food waste, such as the fact that many people in Africa go without food every year. It also causes a lot of environmental damage. This article explores how to reduce food waste, how to deal with these problems, how to effectively prevent them, etc. in several ways.

Keywords: Food waste, restaurants, homes, impact, environment

1. Introduction

Food squander is food that is expected for human utilization that is squandered and lost and alludes not exclusively to food that shoppers don't complete at eateries and are tossed out at home, but additionally natural substances and produce that are lost in the cultivating stage, collecting processes, during transportation, and capacity. All around the world, almost 33% of the food created for human utilization is lost or squandered, comparable to 1.3 percent of the aggregate. One billion tons of food each year [1]. Since food creation is asset serious, food squander has numerous results discharges that happen in the cycles of food creation, capacity, transportation, and waste administration [2]. If people could diminish food squandering, these impacts could be changed amazingly. Of all food squandering, family squandering has forever been the greatest waste point. family squandering represents the biggest measure of food squandering. Given the enormous measure of food squandering that happens at the family level, forestalling food squandering in the last phases of the production network is basic to assist with forestalling further environmental change, "he said. The Assembled Countries Climate Modified (UNEP) and its accomplice association WRAP have now distributed the Food Squander File Report, which presumes that in 2019, the most recent year for which information is accessible, around 931 million tons of food was squandered. Of those, 61% came from homegrown residing, 26% from food administrations, and 13 percent from retail. All in all, people are capable, particularly purchasers. Inger Andersen, head of UN Climate, said in a proclamation: " Decreasing food waste will diminish ozone-depleting substance outflows, slow the annihilation of nature via land transformation and contamination, and increment food accessibility, in this manner lessening craving and setting aside cash. Organizations, state-run administrations, and residents all over the planet should do their part. " The investigation discovered that how much food squander per family per

individual was comparable across pay bunches in various nations, proposing that the issue exists in high-, upper-center- and lower-center pay nations too. It is assessed that the normal measure of food disposed of by families overall is 74 kg for each individual each year. So, in the current climate, even most people are starting to cut back on their food waste. The world can still waste far too many resources, and because resources are limited and desires are unlimited, the problem of food waste is difficult to fully address. Because of these problems, the government is paying more attention to them.

2. Review of research on food waste

Food squandering is a perplexing issue that influences the entire world, so for family food squandering, all the more as of late, Evans, 2011, Evans, 2012 directed a humanistic investigation of eating rehearses in 19 families in the UK. The top-to-bottom meetings uncovered a couple of possibly significant subjects connected with how and why family food is discarded. The reports are organized around issues, for example, raising a family; a "legitimate" diet; the confound between the genuineness of "fitting" food varieties (a short period of usability and bundling), and how they connect with the social time requests of regular daily existence; Uneasiness about food handling and stockpiling. Evans presumes that family food squandering isn't the consequence of individual indiscretion but of the social and material circumstances under which food is given; Intercessions and arrangements ought to focus on these circumstances instead of people if family food squandering is to be diminished, he recommended.

2.1. The reason why reduce food waste

Reducing food waste will have positive environmental and socio-economic impacts. While there are many good ways to deal with food waste, they are mostly ignored.

Encouragingly, the report's ten recommended interventions for scaling-up impact are picking up speed. The worldwide objective of splitting food misfortune and waste is a long way from being met. That is why I am calling on governments, businesses, civil society, financial institutions, and citizens to act quickly, starting with what they can do. There was little time or food left to waste. There is no time to delay in curbing food waste [3].

2.2. Solutions to Resolve Food Waste

In this paper, the author examines how eatery proprietors in Berkeley, California, US, view food squandering under current financial motivating forces and strategies. The study viewed that 65% of cafés are estimating how much food is squandered, with more than 3/4 (84%) utilizing fertilizer receptacles to discard unpalatable food squandered. review likewise showed that the most well-known technique for managing food squandering (72%) was to convey palatable extras to café staff. In any case, 3/4 of eateries try not to give food on account of unwarranted feelings of dread of legitimate responsibility. At long last, 14% of the eateries reviewed unloaded their food squandered in landfills. The study prescribes that further exploration investigate ways of focusing on unambiguous perspectives and social changes, while additionally evaluating the impacts of these changes [4].

2.3. The amount of wasted foods

All around the world, how much food squandered is assessed at around 100 million metric tons each year (FAO, 3 years). The natural effect of food squandering is huge. In 2013, the Food and Horticulture Association of the Assembled Countries discovered that how much ozone-depleting substances are discharged every year from food squander in landfills is practically comparable to the all-out emanations of Cuba (around 2,013 billion tons of CO₂ same/year), and food squander

represents around 3 kilometers of worldwide water misfortune each year, identical to multiple times the volume of Lake Geneva in Switzerland. In industrialized nations, food squander makes up a huge piece of the waste stream, causing biological harm and supplement misfortune. Directed by an efficient methodology, the review evaluated food squandering in one U.S. Region in 1998-1999. Publications and individual meetings were utilized to evaluate squandering in food creation, handling, dissemination, and utilization. This people-group food framework creates around 10,205 tons of food each year. Of all food squandered, 20% is delivered, 1% is handled, 19 percent is conveyed, and 60 percent of food squandered is created by buyers. Under a third (28%) of food squander is reused through fertilizing the soil (25%) and food gifts (3%), with more than 7,000 tons (72%) going to landfill. More than 800 million kcal of food was squandered, enough to take care of the area's occupants for 8.1 months. This contextual investigation gives an illustration of a cycle for measuring and looking at food squander across a local area's food framework [5].

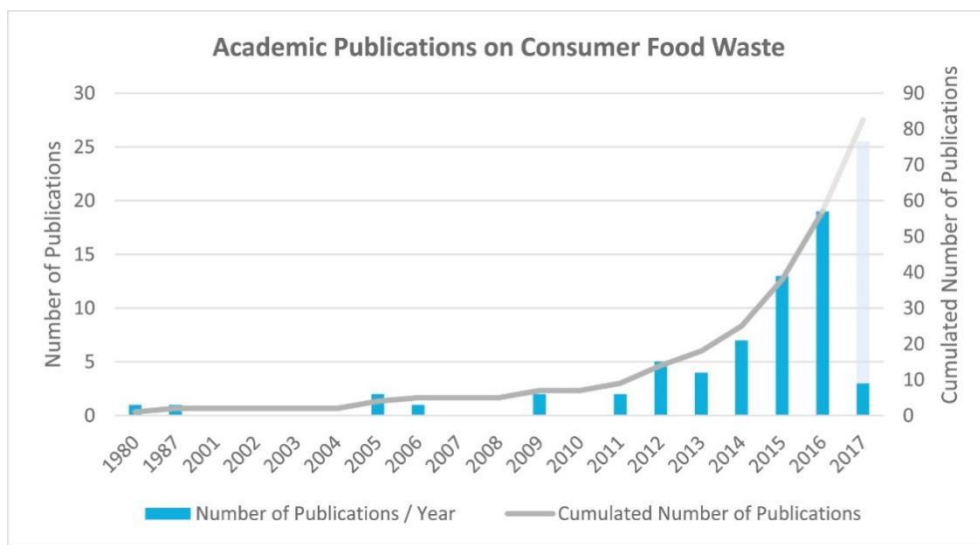


Figure 1: Academic Publication on Consumer Food Waste [6].

3. The effective measurements to stop food waste

3.1. Lessen food squander

It is feasible to lessen food squandering by controlling the expense of shopping at the store or vegetable market. All things considered, one of the simplest ways of trying not to squander food is to purchase less.

Know that while a cooler loaded with food might appear to be engaging, it can prompt food squandering on the off chance that the family can't eat every last bit of it.

So attempt to shop more regularly and diminish how much cash you spend on each buy to try not to purchase an excess of food.

Many greens might turn out to be somewhat delicate or shriveled with age, yet they can in any case be utilized as a fixing in soups, squeezes, or side dishes. Try not to be deceived by the "best previously" date, assuming produce looks new and usable, it's generally alright to eat.

3.2. Monitoring the sorts of food

Monitoring the sorts of food that are turning sour in your home can assist us with recognizing which food varieties should be bought less. While it is at times less expensive to purchase an entire box or

a greater amount of food, you are not setting aside cash on the off chance that a part of it will be tossed away [7].

Purchasing food that you as of now have at home can turn out to be one more reason for food squandering. Considering the food in your home and making a shopping list before shopping for food can assist us with trying not to purchase superfluous food and decrease likely waste.

4. Discussion

As per the report, the world's yearly creation of uneaten food polishes off threefold the amount of water as the yearly progression of the Volga Stream, and the development of this food produces 3.3 billion tons of ozone-depleting substances. Notwithstanding the above natural effects, food squandering, barring fish and fish, costs the economy up to \$750 billion every year [8]. Effectively dividing food misfortune and waste would lessen the hole between worldwide food interest in 2050 and food supply in 2010 by more than 20% and decrease the utilization of arable land (a region the size of Argentina); simultaneously, ozone-depleting substance outflows will be diminished by 1.5 billion tons each year by 2050, which is more than Japan's ongoing complete energy and industry-related emissions [9]. The commitment to decreasing food misfortune and waste to lessening ozone-depleting substance emanations is frequently ignored. By decreasing food misfortune and waste, the general population and confidential areas can save costs, diminish yearning, and battle environmental change. Decreasing food misfortune and waste likewise saves water. With around 70% of the world's freshwater assets utilized for farming, squandering food adds up to a colossal misuse of water, which will compound the developing test of water shortage. Populace development and developing interest for horticultural and animal land are additionally coming down ashore assets. Diminishing food waste would likewise ease tension on interest in land. Thus, from these viewpoints, the significance of food waste is shown [9].

5. Conclusion

For China, food and beverage waste practices and the current tight balance of food supplies are extremely incompatible with the traditional Chinese national virtue of thrift and must be resolutely stopped in the new era of green and low-carbon lifestyle. In recent years, China's grain production has increased year after year, ensuring the country's people's consumption of grain. However, a large population and relatively insufficient land resources are the basic national conditions in the country, and the supply and demand for grain have been in tight balance for a long time. Excluding food waste from household diets, China's annual urban food waste is roughly 34 billion to 36 billion yuan, according to a report released by a special research group of the National People's Congress Standing Committee. To improve, the author thinks people can start with small measures, like the ones I listed in 3. My examination is basically about the ongoing circumstance and a few minor viewpoints to make sense of the ongoing circumstance of food squandering. Food squandering has turned into a worldwide plague with disturbing social, monetary, and natural outcomes. Consistently, 33% of the food delivered for human utilization (around 1.3 billion tons) is squandered, which is identical to \$680 billion in industrialized nations and \$310 billion in agricultural nations. The 6, 7 Stop Food Squander Day, hung on April 29, expects to cause to notice the issue of food waste and bring issues to light answers for tackle it by impacting how food is created, purchased, put away, and devoured. The insights on food squandering are horrifying. Assuming 25% of the food now lost or squandered could be saved, taking care of 870 million hungry people would be sufficient. World food utilization is supposed to ascend by 70% by 2050. With these extra individuals to take care of, the supportability of the worldwide food inventory network becomes basic to guarantee that all individuals approach a solid eating routine and sufficient nourishment. Food waste can likewise have a serious ecological

effect. Truth be told, on the off chance that food squander were a country, it would be the third biggest maker of ozone-harming substance emanations on the planet. DSM is effectively dedicated to decreasing the ecological effect of its exercises and has effectively diminished ozone-depleting substance emanations from its activities. In the creation of tocopherol and ascorbic corrosive specifically, DSM has accomplished huge decreases in its carbon impression, giving clients an answer that is both reliable with science-based manageability objectives and has the most minimal carbon impression available. Decreasing food misfortune and waste likewise saves water. Around 70% of the world's freshwater assets are utilized for horticulture and squandering food adds up to a gigantic misuse of water assets, which will fuel the developing test of water shortage. Populace development and developing interest for horticultural and animal land are additionally coming down ashore assets. Diminishing food waste would likewise ease tension ashore demand [10].

References

- [1] XIAO Huasong. *Exploring the protection and utilization of water resources from the perspective of ecological civilization* [J]. *Clean the World*,2023,39(08):
- [2] Qi L L. *The problems and countermeasures in the development and utilization of water resources in Wushan County* [J]. *New Agriculture*,2023,(11):
- [3] XU L. *Analysis on effective utilization of water resources in agricultural irrigation in Jingdian Irrigation District* [J]. *Science and Technology Innovation*,2023,(08).
- [4] Yang Z L. *Operation management of hydraulic engineering and sustainable utilization of water resources* [J]. *Agricultural Disaster Research*,2023,13(03): Mary Griffin, Jeffery Sobal, *An analysis of a community food waste stream*, Springer link, 2009, 67-81
- [5] Yang Z L. *Operation management of hydraulic engineering and sustainable utilization of water resources* [J]. *Agricultural Disaster Research*,2023,13(03).
- [6] Liu Kai, Zhao Yanlong. *Discussion on Water Resources Management and Protection Measures* [C]// Hohai University, Nanyang City People's Government, Nanyang Normal University, Middle Line Company of South-to-North Water Transfer Group. *Shandong Hydrology and Water Resources Bureau; Yellow River Conservancy Committee*;2022.
- [7] LI Y M. *Analysis on engineering measures of water resources protection* [J]. *Agricultural Science and Information*,2022,(16).
- [8] GAO F M. *Existing problems and suggestions on water resources development, utilization, and management in the new era* [J]. *Agricultural Science and Information*,2022,(12):
- [9] Li J. *Study on Agricultural Water resources utilization efficiency and influencing factors in Henan Province* [D]. *Henan University of Economics and Law*,2022.
- [10] YAN S J. *Research on ecological environment protection in water resources development and utilization* [J]. *Technology & Market*,2022,29(02).