

Household Food Waste Analysis

Subjects: Food Science & Technology

Contributor: Vittoria Aureli

FAO, following a study commissioned by the Swedish Institute for Food and Biotechnology (SIK), has divided the generic concept of food waste into "food losses", the waste that occurs in the early stages of the food supply chain (FSC) (agricultural production, harvesting, and processing) and properly "food waste" that takes place in the final stages (distribution, sale, and consumption).

Keywords: food waste ; household ; consumer ; monetary value ; quantity

1. Panoramic

In comparison to the 1.3 billion tons of food wasted every year all over the FSC ^[1], with an economic loss of 800 billion € ^[2], the decrease of such waste has become a central topic of international action. United Nations Member Countries have pledged to halve per capita global food waste at the retail and consumer level by 2030 and to reducing food losses along production and supply chains, including post-loss gathering ^[3]. The geographical area and level of development of countries have a differential influence on where food is wasted along with the FSC. Households and catering sectors are the most impactful (53%) in high-income regions ^[4], so consumer's food choices and behaviors have a clear impact on domestic waste production ^[5].

2. Household food waste

Consumers' daily choices are responsible for food that is wasted at the domestic level. Many factors influence these choices, such as socio-demographic determinants (age of children in families ^[6], gender, education ^[7], income ^[8], composition, and the number of family members), as well as culinary and eating habits ^[9], the ability to read nutrition labels and to know how to store food correctly. On the other hand, it is extremely complicated to analyze quantitatively and qualitatively the household FW and compare the few results that are available internationally, as they are produced with non-comparable methodologies.

Philippidis et al. ^[10] showed that a 50% reduction in household FW would lead to a per capita saving of €93 for EU families. In another report of the Waste and Resources Action Programme (WRAP), the amount of avoidable FW generated each year by an average British family is approximately 210 kg, corresponding to €565.7 ^[11]. Average families of different nationalities have been analyzed in the last few years reporting different results of domestic FW: €70/person/year according to Katajajuuri et al., ^[12] €15.31/family/week for Canadian families ^[13], €5.10/month for domestic FW in Tunisian ^[14] and €2.90/family/day in South Korea ^[15]. According to Notarfonso et al. ^[16], the economic value of FW and loss along with the whole FSC in Italy is about €13 billion a year, with an average of 149 kg of FW per person.

Otherwise, in Italy, as reported in Scaldedi & Rossi ^[17] for each family the average quantity of FW was 370 g/week. From our study emerged that Italian families wasted 399 kg of food/week (4.4% of the weight of food purchased), which correspond to a monetary value of €1.052 (3.8% of the overall food expenditure). Another important aspect was the role of price in the production of FW, as the lower the unit cost, the greater the amount of waste ^[18].

3. Conclusion

The general consequences of domestic food waste are a multitude and complicated to analyze, in the absence of internationally comparable data. Limiting ourselves to the economic impact of this waste we can say that Italians are inclined to save and for this reason foods with high unit costs are not easily wasted. As we have been able to observe even during the 2020 COVID-19 lockdown, an increase in purchases does not necessarily lead to an increase in domestic

FW ^{[19][20][21]} The attitude of Italians is to eat all the foods that are bought and cooked, in particular, high price items. Italian consumers are very sensitive to the economic impact of waste and this should be considered as a key message in sensitization campaigns.

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