

FOOD WASTE AND CONSUMER BEHAVIOUR IN FLEMISH HOUSEHOLDS

A summary of the research report 'GfK (2018b). *Voedselverlies en consumentengedrag bij Vlaamse huishoudens*, studie in opdracht van het Departement Omgeving, 130 p.'

1. CONTEXT OF THE STUDY

In 2015, the Flemish government, together with the various chain partners, signed the Food Waste Chain Roadmap 2015-2020. Nine action programmes aim to reduce food waste by 15% by 2020. This action plan highlights consumers as an important target group (<http://www.voedselverlies.be/actieplan-2020>). The Flemish Monitor "Food waste and food losses: prevention and valorisation" (2017) showed that households in Flanders are among the three largest sources of food waste (in tonnage) throughout the chain.

This research was commissioned by the Flemish Department of Environment and carried out by GfK Belgium in 2016-2018. The purpose was to get an idea of how much food is thrown away by Flemish households on the one hand, and to gain insight into factors that determine food waste in households, on the other.

The study supports the policy in two ways. It provides the Flemish government and its partners with a more accurate picture of the food losses generated by Flemish households. This is important for monitoring the problem at the last link in the agri-food chain. Also, the study offers a better insight into the key drivers underlying household losses, which is indispensable for setting up well-considered future actions towards this target group.

2. QUANTITATIVE ANALYSIS OF FOOD WASTE IN FLEMISH HOUSEHOLDS

- Methodology

By means of a diary study, as described in the Food Waste Quantification Manual (FUSIONS), a representative sample of 1,031 Flemish households was asked about the quantity, composition and final destination of the discarded food during each of the four seasons in one year. In addition, the study inquired about the reasons for throwing away the food. Each season, at least 250 respondents completed the diary in a standardised manner during one whole week. The four-step approach avoided potential seasonal effects and effects related to end-of-year and holiday periods.

- Results

On average, 1.7 kg of food and drink are thrown away each week per household. For Flanders this amounts to an average of 37 kg of food per year and per inhabitant. The top three categories of food and drink that are thrown away are coffee and tea, bread and pastries and fruit. What is striking is the relatively high degree of valorisation of the discarded food: about 45% of the food is either given to animals or composted (GFT container for vegetable, fruit and garden waste or compost heap). Socio-economic characteristics such as age, degree of urbanisation, gender and social group turned out not to have any significant effect on the quantity of food waste. However, a significant effect was observed in terms of household size. The larger the household, the higher the average food loss. When asked why food is thrown away, incorrect portioning (30%) and product spoilage (29%) were cited as the main reasons.

Respondents were also asked to record any information regarding dates mentioned on the packaging. The best before or use-by date was exceeded in 6% and 4% of the cases in which food was discarded. A best before date had expired on average 128 days, compared to 27 days for a use-by date. Further analysis of the best before date for perished products shows that dairy products, potato products and 'meat, fish, poultry and preparations' are discarded on average after 20 days, compared to drinks and pasta which are thrown away on average after a much longer period (133 days for drinks, 540 days for pasta).

3. CAUSES OF FOOD WASTE IN FLEMISH HOUSEHOLDS

- Methodology

An online survey, as described in Causes and Determinants of Consumer Food Waste (REFRESH), was set up. Rather than the result of planned behaviour, food loss is due to unintended accumulated household actions from the purchase up to the preparation of food. The Consumer Food Waste Model (Van Geffen, van Herpen and van Trijp, 2016) integrates these new insights and served as a guideline for the present study. Building on this model, we examined how socio-demographic factors, household practices, motivation, skills, knowledge and environmental factors influence food waste figures within households. Given that it is difficult for respondents to estimate their purchasing behaviour, the food and drink purchasing figures in real terms were used.

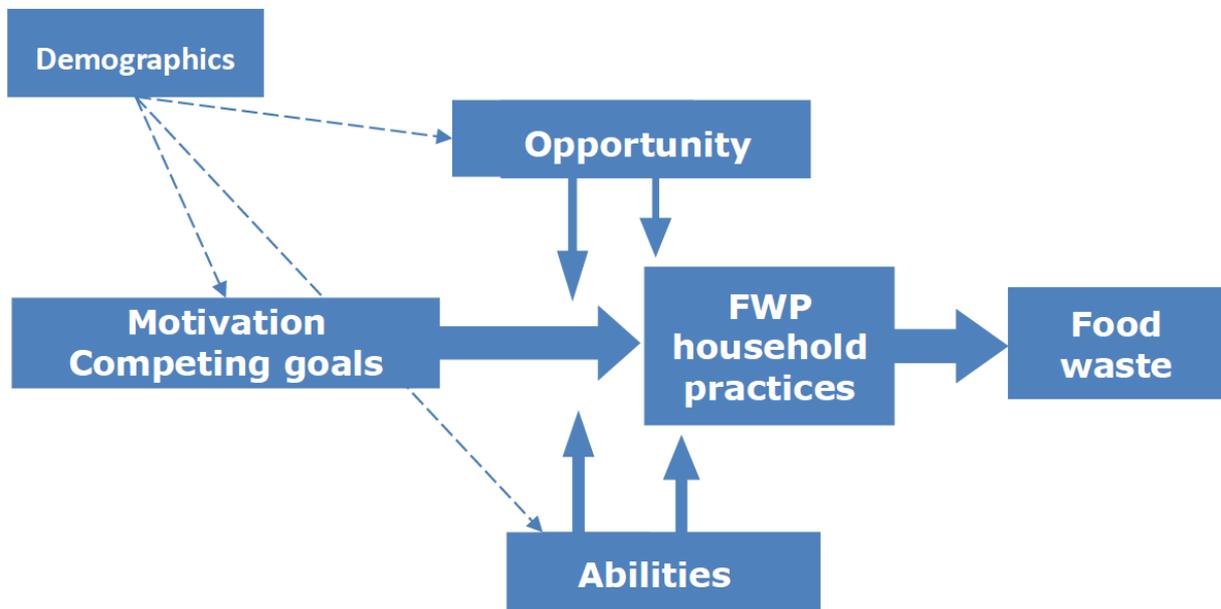


Fig. 1: Consumer Food Waste Model (Van Geffen, van Herpen and Van Trijp, 2017).

- Results

Concerning **household practices**, it was expected that planning would be negatively correlated with food loss rates, which was effectively confirmed. Better purchasing and meal planning leads to less food waste. It also seemed important to test several purchasing and preservation practices, as well as the handling of leftovers. However, this produced a more diffuse picture. Some purchasing habits, such as the frequency with which households purchase food and the extent to which they make impulse purchases, are positively correlated with food waste figures. Somewhat surprising is the finding that buying smaller packs and portions has no effect on food waste figures. When inquiring about how households deal with the expiry date, the study showed a positive correlation between checking the expiry date and the amount of food waste. Households which check the date to verify the shelf life are likely to generate more food loss. Using the senses to assess a product's shelf life appeared not to be connected to this. Households which claim to keep and reuse leftovers (both cut and cooked) effectively waste less food than households which do not.

The effect of **motivation** was mapped by formulating hypotheses about attitude, awareness and the social norm. As expected, households which disapprove of throwing away edible food appear to waste less food. The extent to which people regard certain actions as wasting food offers a more diverse picture. It is interesting, for example, that households which consider not selling fruit and vegetables which are cosmetically imperfect in terms of shape, colour or measurements to be food loss, generate less

food loss . The extent to which households regard giving leftovers to domestic animals as food waste, on the other hand, is not correlated with food waste figures. It is worth mentioning that the social norm (the extent to which parents deliberately do not discard food, media reports about the food losses issue, the extent to which the environment expects food not to be thrown away, the extent to which food waste is regarded as a current social theme ...) bears no significant relation to the degree of food waste.

The right **skills and knowledge** play an important role in breaking habitual behaviour. A wide range of personal and domestic actions are involved in avoiding or generating food loss. The study established a positive correlation with cooking skills, the ability to properly portion food and the ability to properly estimate the shelf life of the food. Households which perform well in this respect, generate less food waste.

For the **environmental factors**, the organisation of time and regularity, combined with the infrastructure available in the house, were highlighted as important elements. The time which households spent preparing meals did not appear to have any significant effect on food waste, contrary to the regularity of meals in the household. The more irregular the eating habits within the household, the greater the loss of food. The possession of a cool storage room and a freezer leads to more food loss.

4. BIBLIOGRAPHY

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