

B R U
G G E

FOOD
WINNERS



HOW TO PREVENT FOOD LOSS

Encouraging
positive consumer behaviour

MANUEL



DEPARTEMENT
OMGEVING

Table of contents

Preface	4
Introduction	6
The problem	6
The opportunity	7
The importance of prevention	8
Results	9
Getting started	11
How to reach as many people as possible	12
Raising awareness: to measure is to know!	15
Challenge me!	19
What Food Winners Bruges taught us	20
Appendix	22
Want to know more?	23

Colophon

This document presents an overview of the lessons learned from Food Winners Brugge and a plan of action for consumer food loss. Food Winners Brugge is a pilot project of the City of Bruges organised in the framework of 'Bruggesmaakt', in collaboration with Brugs Food Lab. The City of Bruges appointed FoodWIN to assist the ambassadors and reach 5,000 citizens! The project was also granted a climate subsidy by the Department of the Environment.

Preface

Bruges is a top destination for food lovers and a city that is eager to keep its long-standing tradition of fine dining alive. The many top restaurants and tasty eateries, chefs - with or without stars -, renowned hotel schools such as Spermalie and Ter Groene Poorte and culinary events like the Brugs Beer Festival and Kookeet make Bruges a hotspot for all those who love good food and drink. But according to experts, the food sector accounts for as much as a quarter of the worldwide greenhouse gas emissions. By replacing animal proteins with vegetable alternatives, consuming more locally and seasonally, and preventing food waste, we as consumers can help shape the food of the future.

Urban food systems have to respond to population growth, the effects of climate change and complex socio-economic problems. That is why the City of Bruges - in collaboration with the Bruges Food Lab - developed a sustainable food strategy entitled 'Bruggesmaakt' (in the framework of the European Food Smart Cities for Development). Together, they organize initiatives around the themes of urban agriculture, short chain, Fair Trade, food loss and education. With a diverse range of members, the Bruges Food Lab has grown into an umbrella platform and a booster for initiatives and cooperation around sustainable food. It also works as a link between policy makers, civil society and the public.

In Flanders, around 2 million tonnes of food and side streams go to waste every year. The amount of discarded food alone is worrying in itself. On average, Flemish households discard 1.7 kilograms of solid food and drink per week, or 88 kilograms per year. This means that per person, 37 kilograms of food is discarded every year. For Bruges, this adds up to 4,366 tonnes of food waste per year, or the equivalent of 7 to 14 ktonnes of CO₂ per year.

That is why avoiding food loss is one of the themes in Bruges' climate plan 'BrugesTowards Tomorrow'. In 2018, a pilot project successfully reduced food loss in health care institutions in Bruges. Now, the City of Bruges also targeted the Bruges households and aims to share the lessons learned with other cities and municipalities.

Fighting food waste is something we can all do at home. We can all do our bit for a better world. After all, a third of all food produced goes to waste. Why waste food when so many people are hungry today? It is an economic, ecological and social problem. With Food Winners Bruges, we want to show that food waste can be avoided at home and that it is worthwhile paying attention to this problem.

Food Winners Brugge proves that even the little things make a difference, such as storing ingredients properly, taking a shopping list with you to the shop or knowing what to do with leftovers. This is particularly good news: it brings our city one step closer to our goal of being climate-neutral by 2050. This guide lists tips and tricks for other cities or municipalities to encourage citizens to reduce their food loss at home.

Is your city or municipality prepared to make a difference and do something about food waste?

Minou Esquetet

Alderpersoon voor klimaat, energie en milieubeheer

Info

www.brugge.be/wonen-en-omgeving/klimaat/brugge-smaakt
(only available in Dutch)

Manual for the healthcare sector

<https://bruggesmaakt.brugge.be/brochurea5voedselverlieszorgeng-2>



FoodWIN

FoodWIN is an organisation that has set out the ambition to eradicate food waste from the world. Our team of experts works together with other motivated organisations such as commercial kitchens and food companies ... everyone can be a food waste champion! We also support local governments with innovative solutions, as we believe that they can play an important role in our food system.

info@foodwin.org
www.foodwin.org

Introduction

Planning, comparing, buying, peeling, baking, cooking, tasting, sharing ... food keeps us busy every day. It is an important part of our life, and yet in Flanders, each household throws away 88 kilograms of food at home per year.

While more than 700 million people suffer from hunger every day, one third of all food produced does not end up in our stomachs.

And that is also bad for our wallets: in 2017, every Flemish family wasted an average of 369 euros worth in food.

Moreover, the food waste that results from growing, processing, transporting, preparing and discarding food products accounts for 8% of all CO₂ emissions produced by humans.

Plenty of reasons to put more effort into preventing food waste in consumers' homes!

The Food Winners Bruges pilot project shows that a strong campaign can help cities reduce food waste among their citizens by up to 55%. This manual will show you how.

The problem

Consumers account for 23% of all food waste in Belgium (Criel P. and Fleurbaey F., 2019. Food loss and consumer behaviour among Flemish households. Department of Environment).

"An extensive study, for which Flemish households kept a diary for a week (GfK, 2018a) shows that most food and beverages are thrown away because they are not used before the expiration date (57% of total food loss) or because too much is prepared, scooped or served (30% of total food loss)." (Department of Environment, 2019)

The food loss by food category in Flanders is as follows:



Source: Voedselverlies en consumentengedrag bij Vlaamse huishoudens, GfK Belgium voor Departement Omgeving

“Products like coffee and tea, rice and pasta and potato (products) are mainly thrown away because they are prepared, served or poured in too large amounts. Bread and pastries, dairy products, vegetables and fruits, on the other hand, are mainly thrown away because they were not eaten in time. There are several reasons for this: bought too much, too large quantity in the package, forgotten that it was bought, schedule has changed ...” (Food loss and consumer behaviour among Flemish households, 2019).

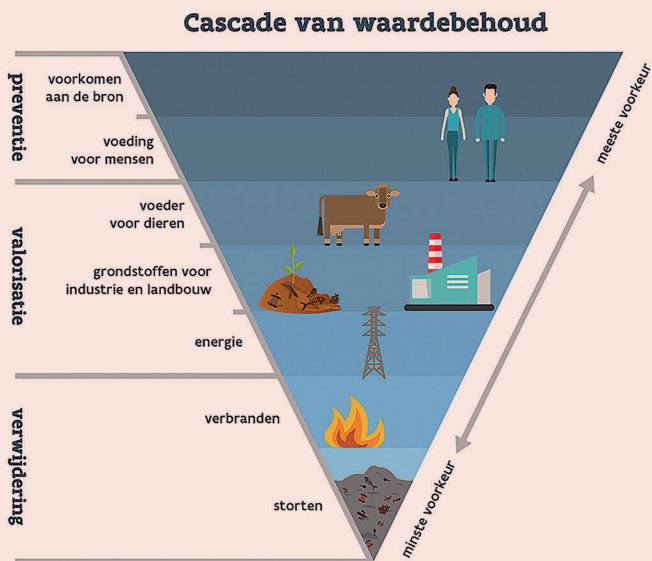
The underlying cause of food waste among consumers is a lack of knowledge. This guide explains how a city or municipality can provide its citizens with the necessary knowledge to waste less food.

The opportunity

Increasing (food) prices and the need for a sustainable food system mean that food waste is receiving more and more attention. More people are becoming aware of their own ability and decisiveness in the food system and in addressing climate change. Municipalities can capitalise on this momentum to reduce food waste on their territory and limit CO₂ emissions. At the same time, they can engage citizens to take care of tomorrow together!

The importance of prevention

The issue of food waste can be tackled in several ways. The cascade of value retention shows what the options are, and which are the most interesting. The higher up the ladder, the better. Avoiding waste as much as possible is a priority, also when rolling out a campaign against food waste at home.



Source: www.voedsalverties.be/wat-is-voedsalverties

Results

The City of Bruges appointed FoodWIN to organise a pilot project entitled 'Food Winners Bruges'. The aim of this campaign was to achieve a 30% reduction in food waste among 5,000 residents, thereby also reducing CO₂ emissions.

On average, Flemings waste 37 kilograms of food per person per year. This corresponds to a CO₂ emission of 118.4 kilograms (Figures proved by EU Fusion). In this way, the participants in Food Winners Bruges together could save up to 177,600 kilograms of CO₂ emissions annually.

To achieve this, 50 ambassadors attended workshops to become true experts against food waste. Through nine challenges, they learned to plan, shop, store and cook efficiently. They shared their experiences through a mailing campaign. In the first year, 500 people were reached, and the goal was set out to reach 5,000 people in the second year.

The result was quite impressive: the ambassadors achieved an average of 65% reduction in food waste. A substantial financial gain and another step closer to a greener future!

In **2021**, 512 Bruges households managed to reduce their food waste by no less than 67% on average. If we calculate this on an annual basis, this means that they wasted 19,662 kilograms less food, emitted a total of 62,918 kilograms less CO₂ and saved 82,383 euros.

By **2022**, the City of Bruges wanted to reach as many as 5,000 Bruges residents to achieve a 30% reduction. We are proud to say that 1,886 families participated, accounting for **4,809 participants!** The Food Winners managed to save 55%, or **44,400 kilos of food** per year, 186,036 euros and **142,080 kilograms of CO₂**.

year	participants	savings	food [kg]	CO ₂ [in kg]
2020	50	65%	2,024	6,476
2021	512	67%	19,662	62,918
2022	4,809	55%	44,400	142,080

**4,809 FOOD WINNERS
ANNUALLY SAVE**

44,400 KG OF FOOD

**FROM BEING
THROWN AWAY**

55% less food loss

THEY ANNUALLY SAVE:

186,036 EUROS

142,080 KG OF CO₂

30 CAR TRIPS AROUND THE WORLD

Getting started!

Food loss among consumers is a complex issue. There are many reasons why food does not end up in our stomachs ... But where do you start?

Bruges wanted to tackle this problem together with its inhabitants. Easy challenges provided the people of Bruges with the necessary tools. A masterly plan by the city, with the best results for its citizens!

How did it work?

Watch this video to find out!



How to reach as many people as possible?

FIND MOTIVATED AMBASSADORS

Ambassadors lend their faces to the campaign. They are intensively trained to combat food waste. They also bring in other participants. It is a good idea to make well-known people from the municipality ambassadors, and it is also important to recruit ambassadors people can easily identify with. Motivation is of course key to success, because enthusiasm is contagious.

You can also run a campaign without ambassadors. Although it does require a bit more communication efforts from the municipality to recruit participants, this releases you from having to train the ambassadors. But Bruges proved particularly keen: there were 150 candidates!

From these 150, we selected 50 ambassadors who followed an intensive training. For the selection, a questionnaire was used, in order to obtain as diverse a group as possible, reflecting the entire population. The ambassadors were selected on the basis of their municipality of residence, age, gender, nationality, occupation and household size.

For 5 months, the ambassadors attended workshops and took up challenges. The content of the workshops was converted into useful tips & tricks sent out via email to reach as many people as possible. Afterwards, these people can also remain involved in the volunteer group of compost masters.

FAMOUS FACES

Ideally, you should recruit famous Flemish people as ambassadors of the campaign. However, if this level of commitment is too high for them, you can still ask them to show their support with a video or a quote. Both strategies will significantly increase the number of participants.

MEDIA ATTENTION

Media attention from local channels by means of press releases and radio and TV interviews contributes greatly to raising awareness about the campaign.

CITY CALLING TO ACTION

The city or municipality itself also plays a major role in actively disseminating the call to action to engage as many participants as possible. Moreover, if you have the necessary contacts across different channels, this is the most cost-efficient method.

When scaling up, be sure to approach residents who are already actively involved in food initiatives: e.g. fridge sharing initiatives, soup cafes, allotment gardens, cooking clubs, training institutions, social welfare organisations, budget counselling services, community centres and neighbourhood committees, schools ...

The 'energy cutters' were also actively involved, they used the refrigerator layout flyer (see appendix) to spread the message.



“My grandmother had a woodburning cookstove. Whenever she had leftover boiled potatoes, she would cut them in half and bake them on a bed of coarse salt on her scorching hot stove. The salt caramelized, forming a delicious crust.”

Dominique Persoone

“With three teenagers in the house, you cannot afford not to have enough food. It is not easy, however, to estimate how much bread you will need in a given day. On Saturdays, we make a bread pudding with our leftover bread, and by Sunday, it is all gone!”

Wim Lybaert



TIPS FROM FOOD WINNERS BRUGES



Most effective actions

Using famous people to spread the call to action through social media has proven to be very efficient. Throughout the different phases, it was found that recruiting participants by using one big prize has more impact than giving away several small prizes.

From 50 to 500 and finally to 5,000. Creating **togetherness** is important for upscaling. And it adds fun to the process! For Food Winners Brugge, ambassadors were used.

Due to COVID-19, there were hardly any physical meetings, but a group was created on the Slack platform to keep in touch with the ambassadors. Later, a Facebook group was added. This way, participants can exchange information about what they are working on and what the results are.

Slogans like 'You can be a Food Winner too' and 'Join the battle with 5,000 Bruges citizens', invoked people's fear of missing out.

Less effective actions

Distributing posters yielded few additional participations. During the corona crisis, there were fewer fairs and local events at which we could address citizens directly. Moreover, this proved to be time-consuming and not very efficient.

To recruit even more people, we spoke to companies, schools and associations.

We also created personalised communication material. The impact of this was minor, but COVID-19 probably was a factor here as well. The time invested in this could have been better used by involving well-known people, for instance. In hindsight, this proved more efficient.

Raising awareness: to measure is to know!

WHY MEASURE?

The first step towards reducing food waste, is to assess its extent. Before you can give tips on how to tackle food waste at home, it is important that people realise how much they waste.

With rubbish bags and/or compost being collected weekly, people have a wrong idea of how much they throw away annually. Once you realise how much you actually waste, you are more inclined to tackle the problem!

You should bear in mind that measuring requires a special effort from the participants. It is important to make it as easy as possible for them and to provide a reward for completing the measurement.



“When we weighed our surpluses for a week, we noticed that we were unconsciously throwing away a lot more than we thought after all.”

Ambassador Jeroen



“Measuring made me discover that I was wasting far more than I thought I did.”

Ambassador Doris

THE 3 COMMANDMENTS OF MEASURING

1

Be clear

Describe well what you consider food waste and what not. Do potato peels count? Or cauliflower leaves? Some will eat them while others won't, which is why you need to agree on what to count. FoodWIN's measurement method in Food Winners Brugge followed the standard of other Flemish government research studies.

2

Use tools

Provide participants with the necessary information for measuring.

This should include at least the following:

- a reminder that can be attached to the dirt bin
- a table to keep track of the measurement data
- a detailed description of the method

3

Reward people's efforts

During Food Winners Brugge measurement weeks, participants received a daily email to remind them to send in their measurements. In addition, at the end of the measurement week, they received a personal report about the impact of their food waste. This way, after applying the tips and tricks, they could easily measure their evolution.

vb

Be clear

WEL METEN

- Overschotten groenten & fruit (vers, conserven, ingevroren,...)
- Preigroen
- Broccolistengel
- Brood- en gebakresten
- Yoghurt, kaas, pudding
- Aardappelen, rijst, pasta
- Eieren, kaas
- Koekjes, snoep, chocolade
- Restjes op het bord
- Restjes soep
- Koffie- en thee-resten
- Alcoholische en niet-alcoholische dranken
- Melk

MEETWEEK FOOD WINNERS



NIET METEN

- Batten en graten
- Eierschalen
- Kaaskorstjes
- Schillen van groenten & fruit
- Klokhuus van appel
- Pit van avocado
- Wortelloof
- Bloemkoolbladeren
- Artisjokbladeren
- Stukjes vet
- Preiwortel
- Koffiegruis
- Water en waterresten van het koken

Use tools (a)



NIET WEGGOOEN!



VERZAMEL AL JE VOEDSELRESTEN & -AFVAL

HOU HET BIJ EN WEEG HET VANAVOND



HERINNERING

FOOD WINNERS BRUGGE

CO₂ -REDUCTION

At the start of the project, it was assumed that CO₂ emissions are approximately 3.2 kilogram CO₂ equivalents per kilogram of consumed food (Scherhauser et al (2015) and EU FUSIONS)..

In previous years, there were more studies (VITO) and we now use the same range as Vlaco in its new Plan-eet app about food loss:

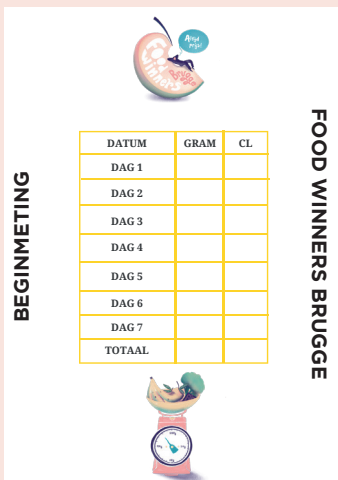
The lower limit is determined by VITO's study commissioned by MIRA and the upper limit by Fusions.

Conclusion: 1 kilogram of food waste equals 1.97 to 2.68 kilograms of CO₂

Whatever you do to convince them, for some people, daily measurement will be too much of an effort. To prevent participants from unsubscribing, you should give them the option upon registration to indicate whether they want to measure or not.

If they do not want to measure, they will only receive emails with tips on how to reduce food waste. This of course, also has an impact, but it is more difficult for the municipality to measure. Moreover, there is no shock effect from measuring .

Use tools (b)



BEGINMETING

DATUM	GRAM	CL
DAG 1		
DAG 2		
DAG 3		
DAG 4		
DAG 5		
DAG 6		
DAG 7		
TOTAAL		

FOOD WINNERS BRUGGE

Reward people's efforts



FOOD WINNERS BRUGGE

EEN GEMIDDELD BELGISCH GEZIN VERSPILT 88 KG VOEDSEL PER JAAR. ZIE HIER WAT JOUW IMPACT IS DANKZIJ FOOD WINNERS BRUGGE.

	BEGINMETING	EINDMETING
KILOGRAM VOEDSEL	103	20
EURO	431	83
KILOGRAM CO₂	329	64
KILOMETER MET DE AUTO*	824	160

* gebaseerd op je CO₂-uitstoot

JE VERSPILDE 80% MINDER!

*indien dit getal negatief is heb je meer verspild

THE RESULTS?

Are they good? Are they bad? Everything of course has to be put in context.

Findings from Food Winners Bruges

Savings of more than 30% were achieved in each of the past 3 years. However, the volumes of waste measured in the initial measurement decreased as the project progressed. Some possible explanations:

- 1 **Awareness** > The campaign created awareness, and awareness automatically leads to less waste. For example, the test group of 25 people who did not receive the newsletter with tips, but actively participated in both measurement procedures, also reduced their food waste. Getting people to measure already causes impact!
- 2 **Participant profile** > Participants wasted less than the Flemish average, even at the initial measurement. Individuals participating in this kind of campaign are conceivably already aware of their relationship with food, which also explains why they are interested and why they participate. However, since participants start with less food waste on average, the final improvement was also smaller. But even so, the fact that there was an improvement is of course still a good thing!
- 3 **Food prices** > Food prices have increased since the start of the project, which may have led to an increased focus on food waste and a reduction in food waste at the initial measurement of year 3 compared to year 2.

What is most important is that measuring makes the participants think about how much food they waste.

“It is a good thing that the City does this to make citizens aware that there is food waste and also immediately offers solutions.”

Ambassador Céline

What Food Winners Bruges taught us

Number of emails

Limit the number of emails you send. Especially if you work with measurement weeks, the mails with challenges should be concise. Ideally, you should send out between 5 and 7 challenges.

Duration of the campaign

Provide a break of at least 3 days between challenges so that people have time to carry them out.

Tip

Include other facts related to CO₂ in your emails, e.g. how to save energy in your fridge, where to buy local seasonal food in your community?



“Time and again, I find myself amazed at how participants can achieve so much with such minor changes. I am delighted with the commitment of the participants, because they have proven once again that fighting food waste can be very easy and above all, that it can have an enormous impact. We are convinced that this provides local governments with the necessary tools to successfully deal with this topic.”

*Loick,
FoodWIN team member*

Appendix

Videos



Oproep Dominique Persoone

https://www.youtube.com/watch?v=VWwDng_e1EY



Teaser Food Winners Brugge

<https://www.youtube.com/watch?v=VCODNqD3FUU>



Uitdaging Gangbare portiegroottes

<https://www.youtube.com/watch?v=aGJ1cPW6iCg>



Uitdaging Improviseren met restjes

<https://www.youtube.com/watch?v=yLS8wrUnilg>



Uitdaging Koken van top tot teen

<https://www.youtube.com/watch?v=uRI4W6Hf6p4>



How to fight food waste at home

<https://www.youtube.com/watch?v=LpiGqtq1qr4>



Interview ambassadeurs

<https://www.youtube.com/watch?v=jzCgEd-uOFY>

Want to know more? (links only available in Dutch)



Duurzame voedselstrategie Brugge

<https://bruggesmaakt.brugge.be>



Klimaatplan Brugge - Pijler 5 voeding

www.brugge.be/wonen-en-omgeving/klimaat/brugge-smaakt



Klimaatplan Stad Brugge

www.brugge.be/wonen-en-omgeving/klimaat/klimaatplan-en-brugse-acties

Acties en onderzoek naar voedselverlies in bij consumenten in het buitenland



> Samen Tegen Voedselverspilling (NL) 'Verspillingsvrije week'-campagne

<https://samentegenvoedselverspilling.nl/verspillingsvrijeweek/>



> WRAP (UK) 'Love Food Hate Waste'-campagne

<https://wrap.org.uk/taking-action/citizen-behaviour-change/love-food-hate-waste>

Voedselverlies in Vlaanderen



> Het Departement Welzijn Volksgezondheid en Gezin (WVG)

www.departementwvg.be/voedselverlies

> Ketenroadmap voedselverlies

- https://lv.vlaanderen.be/sites/default/files/attachments/ketenroadmap_ondertekend_keten_en_ministers_kleur.pdf

- <https://lv.vlaanderen.be/nl/beleid/vlaamse-kost/voedselverlies>

> Resultaten evaluatiemeting voedselverlies in de restaurants van de Vlaamse overheid

- https://www.voedselverlies.be/sites/default/files/2022-08/20130630_rapport_AFM_voedselverlies.pdf

- <https://overheid.vlaanderen.be/facilitair-management/catering/voedselverlies-daalt-met-een-kwart#:~:text=Eind%202019%20is%20er%20opnieuw,daling%20met%20maar%20liefst%2026%25>





