

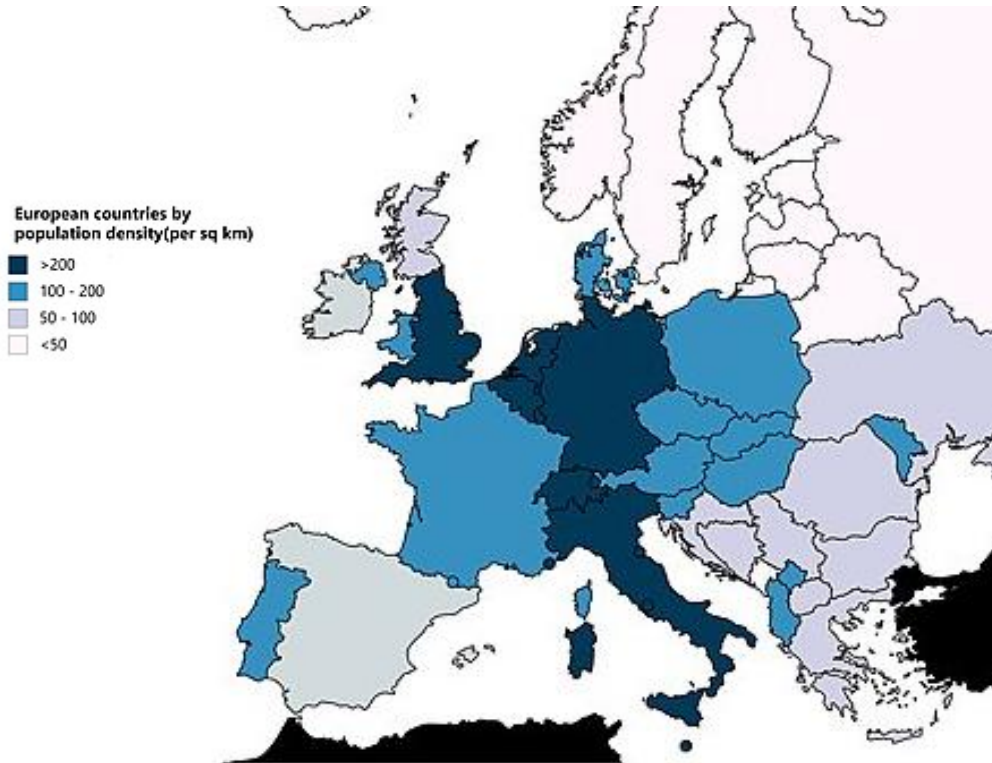
# Monitoring of food loss & waste in The Netherlands and it's reduction

ReFoWas 'International Workshop on Food Waste Accounting and Monitoring'

June 14<sup>th</sup> 2019, Martijntje Vollebregt



# The Dutch context



England: 424 p/km<sup>2</sup>

NL: 416 p/km<sup>2</sup>

BE: 374 p/km<sup>2</sup>

DE: 232 p/km<sup>2</sup>

# The Dutch context

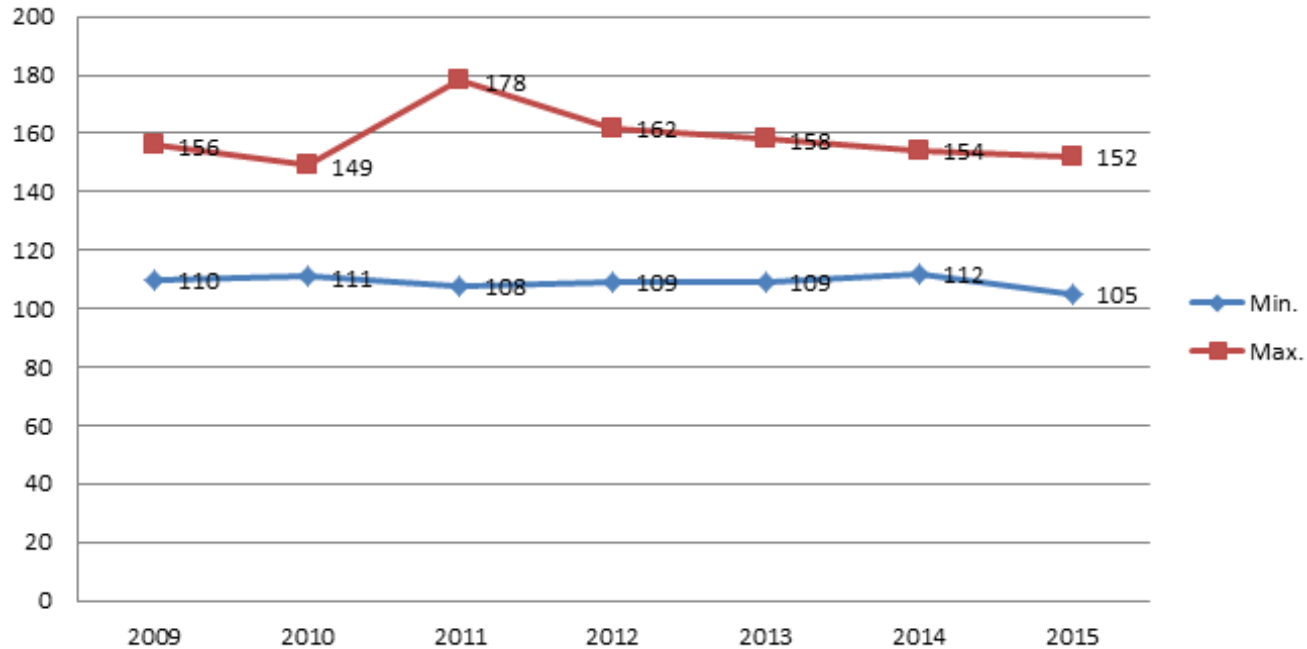


Agri & food sector comprises 22% of total exports

# Dutch Monitor Voedselverspilling (FLW)

- Yearly updates, publicly available statistics of waste and animal feed

**Food loss and waste, entire chain (kg/pp.py)**



# United Against Food Waste

## WHY JOIN FORCES TO COMBAT FOOD WASTE?



1/3

A third of the world's food is lost or wasted every year.<sup>1</sup>



Food waste in Europe causes **6%** of all greenhouse gases emitted through human activity.<sup>2</sup>



**Wasting less food = helping to achieve climate goals and ensuring there is enough valuable food for the growing global population.**

That is equal to **105-152 KG** per capita annually in the Netherlands.<sup>3</sup>

### The focus of the Taskforce

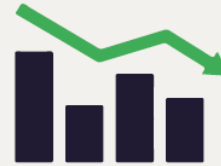
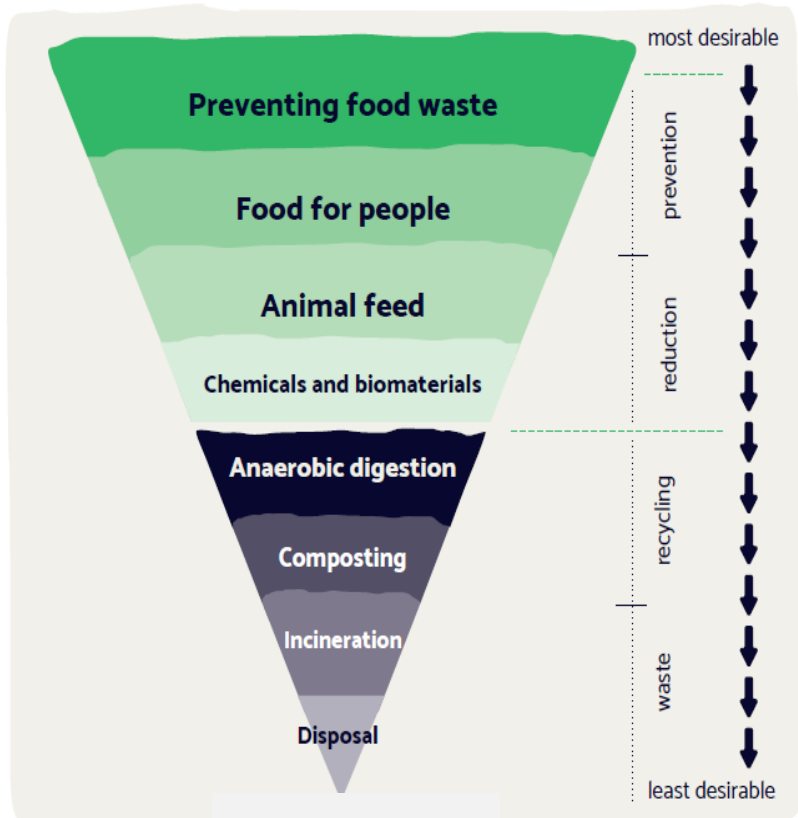
The Taskforce focuses on reducing food waste throughout the entire food chain. We will accomplish this by preventing and reducing as much food waste as possible and creating value from side flows according to the "Moerman Food Use Hierarchy"

**2015 - 2030  
50%  
reduction**

## OUR OBJECTIVES

**In a joint effort, we aim to make the Netherlands one of the first countries to cut food waste in half. We will make the Netherlands a leader and a global role model in terms of realizing Sustainable Development Goal 12.3.**

# United Against Food Waste



**1. Monitoring progress and impact:** United Against Food Waste measures the effects of its individual and joint approach.



**2. Joining forces to combat food waste across the food supply chain:** Stakeholders and leaders combine their strengths, networks and knowledge to develop innovative solutions.



**3. Joining forces to combat food waste by consumers:** United Against Food Waste aims to achieve sustainable changes in behaviour through campaigns, interventions and living labs.



**4. Changing the rules:** United Against Food Waste promotes the legislation and instruments needed to create a circular economy.

# United Against Food Waste - stakeholders



# United Against Food Waste



vanRijsingen**green**  
the vegetable circle





# United Against Food Waste – consumer

**HOE**  
**#VERSPILLINGSVRIJ**  
**BEN JIJ?**



**Check je voorraad**

**SAMEN TEGEN**  
**VOEDSELVERSPILLING**

Kijk wat je nog meer kunt doen op [samentegenvoedselverspilling.nl](http://samentegenvoedselverspilling.nl)

**HOE**  
**#VERSPILLINGSVRIJ**  
**BEN JIJ?**



- 5 appels
- 0,5l olijfolie
- pompoen
- ananas
- 2 pakken melk
- 10 eieren
- noedels
- speltmeel
- 1kg aardappels
- 1 pak yoghurt
- cruesli
- 2 uien

**Gebruik boodschappenlijstjes en maak een weekplanning**

**SAMEN TEGEN**  
**VOEDSELVERSPILLING**

Kijk wat je nog meer kunt doen op [samentegenvoedselverspilling.nl](http://samentegenvoedselverspilling.nl)

**HOE**  
**#VERSPILLINGSVRIJ**  
**BEN JIJ?**



**Gebruik je zintuigen bij producten die over de THT-datum zijn**

**SAMEN TEGEN**  
**VOEDSELVERSPILLING**

Kijk wat je nog meer kunt doen op [samentegenvoedselverspilling.nl](http://samentegenvoedselverspilling.nl)

# FLW quantification, from start 2018 to ... envisioned data in Dutch food supply and consumption chain

- Dutch Monitor FLW: split in destinations, no split in chain links
- Consumer FW: sorting analysis
- Other chain links: not possible from publicly available data
  - Not enough detail in animal feed data
  - Not enough information on food part of waste in national waste statistics

# FLW quantification, from start 2018 to ... envisioned data in Dutch food supply and consumption chain

Chain link	FLW registrations	Envisioned data
Primary production	No registrations; destinations known	% by farmers (FADN); upscaling production areas and volumes; conversion to (un)avoidable/(in)edible; validation with measurements
Manufacturing	Side and waste stream registration (kg); destinations known	(Sub)sector specific conversions of waste streams to (un)avoidable/(in)edible; upscaling on (sub)sector size
Retail and distribution	Distribution: see manufacturing Supermarkets: registrations of losses (€), destinations known Specialty shops: no registrations, destinations less known	Distribution: see Manufacturing Supermarkets: conversion to kg; upscaling on market size Specialty shops: measurements based on sampling methods; upscaling on market sizes

# FLW quantification, from start 2018 to ... envisioned data in Dutch food supply and consumption chain

Chain link	FLW registrations	Envisioned data
Out-of-home	Many types ..., often no registration; partial registrations in €; destinations often not known	Cover major OOH sectors; conversions to kg; upscaling on market sizes
Consumer	Waste sorting analysis, sufficient data	

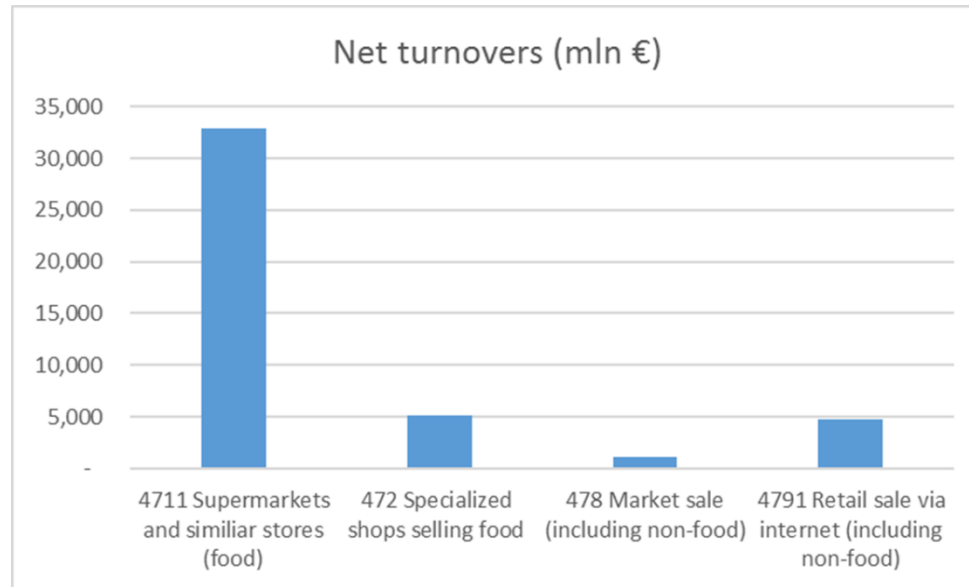
# Retail in The Netherlands

- CBS SBI 2018 codes (Food retail related):

**CBS food retail related SBI codes:**

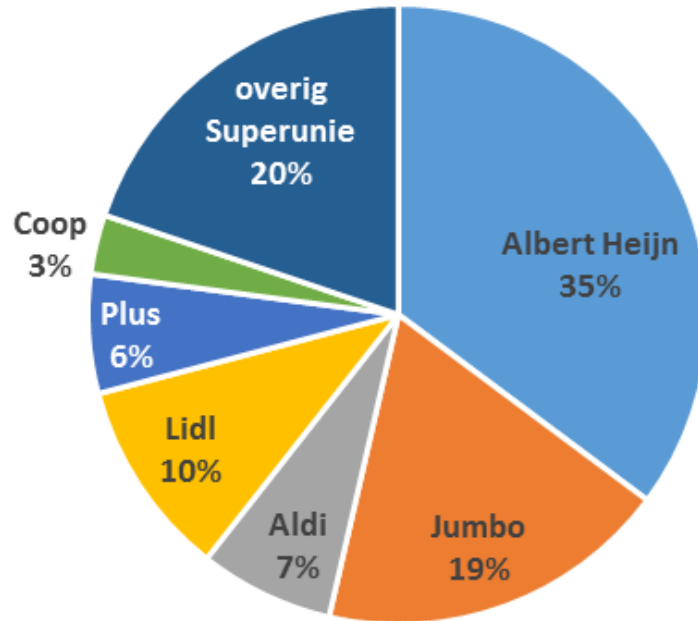
471 Retail sale in non-specialised stores
4711 Supermarkets, department stores and similar non-specialised stores
472 Specialised shops selling food and beverages
4721 Shops selling potatoes, fruit and vegetables
4722 Shops selling meat and meat products, game and poultry
47221 Shops selling meat and meat products
47222 Shops selling game and poultry
4723 Shops selling fish
4724 Shops selling bread, pastry, chocolate and sugar confectionery
47241 Shops selling bread and pastry
47242 Shops selling chocolate and sugar confectionery
4725 Shops selling beverages
4729 Other specialised shops selling food
47291 Shops selling cheese
47292 Shops selling natural and health food
47293 Shops selling foreign food
47299 Specialised shops selling other food n.e.c.*
478 Market sale
4781 Retail sale of food and beverages via markets
47811 Retail sale of potatoes, vegetables and fruit via markets
47819 Retail sale of other food via markets
479 Retail sale not via stores and markets
4791 Retail sale via mail order and internet
47911 Retail sale via internet of food and medical goods

- Net turnovers of food retail-related sectors in 2013



# Supermarkets in The Netherlands

% market share, 2016



- 2018: together with Dutch Association of supermarkets (CBL) call for pilot companies
- Current participants: ~80% of market

# Way of working and data

- Data confidentiality:
  - Data transfer agreement between company and WFBR
  - Data and analysis result exchanged: secured website
  - Work @WFBR: secured network location
  
- Minimal data requirements: amount (kg) of FW split into (un)avoidable and destinations
  
- Preferred data: FW and sold amounts (kg) per product group; destinations

# Acquired data and analyses



## ■ Data:

- FW and sold amount (kg) per product group (25-40) in kg
- Destinations

## ■ Analyses:

- Total amount of FW? As part of total amount sold?
- Contribution of product groups? Which contribute to certain %?
- How does FW compare to sales? Which products are inefficient?
- Conversion to NL/EU Monitor matrix
- Quality of data



# General observations FW from NL supermarkets

- Amount of FW and product group contribution:
  - FW < 2% of sold amount (\*)
  - Potatoes, fruits and vegetables + bread / bake-off = 50-75% of FW
  - 5-10 product groups > 80-90% FW
  - ~90% if meat, dairy, sandwich meat are added
  
- Previous study on FW in €: 3.6% (Verwaarding van voedselreststromen uit supermarkten, A.

Schripsema, *et al.*, report 1549, 2015, Wageningen Food & Biobased Research)

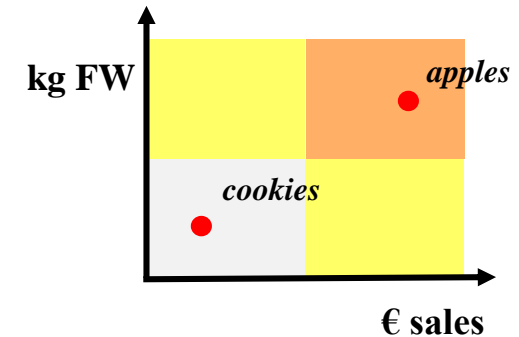
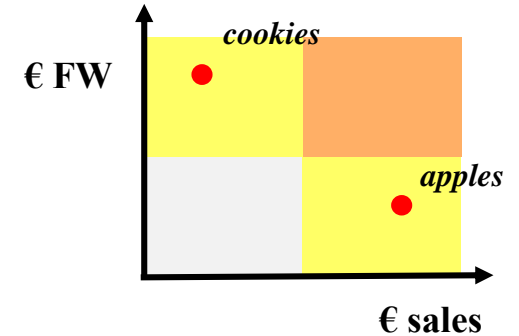
# General observations FW from NL supermarkets

- Efficiency within product groups (FW/sold)
  - High inefficiency (15-30%) in irregular products
  - Bread / bake-off: 5-10%
  - Potatoes, fruits and vegetables: 2-3%
- Destinations: biogas, animal feed, composting
- Data quality: good, but remove pet zoo, theft, donations

# Towards reduction of FW @ NL supermarkets

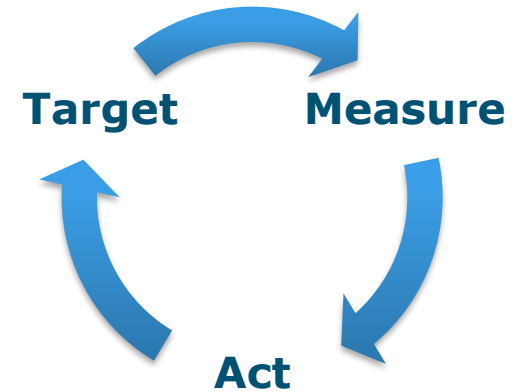
- Study on percentage of FW in supermarkets
- Total amount (€) of perishables FW = 3.6% of sales

Product group	% (sales, €)
Fresh meat	9.31
Potatoes, fruits and vegetables	5.61
Sandwich meat and cheese	4.69
Bakery	5.80
Dairy	2.11
Dry products	0.23



# Next activities towards NL supermarkets

- Discuss results in CBL meeting with sustainability managers
- Incl. results from (scientific) reduction studies
- Discuss on (common) reduction strategies



# Thank you for your attention!

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