



# **TURKISH FOOD SAFETY ASSOCIATION FOOD LOSS AND WASTE STUDIES**

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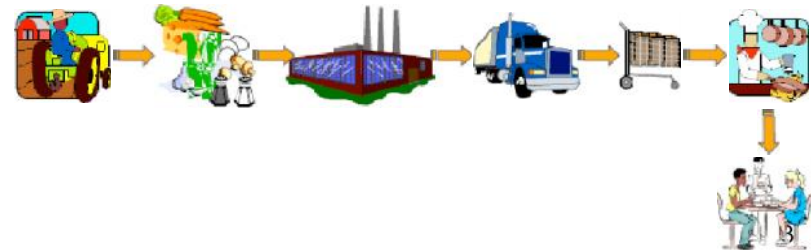
V. Conclusion and Suggestions



# Food Safety Science



1. ensures the secure food to reach to Consumers «From Farm To Fork
2. ensures to reduce «Food Waste and Loss» at each stage
  - accurate temperature and duration
  - accurate hygienic applications,
  - accurate production method,
  - accurate packing,
  - accurate best before date
  - accurate purchase, cooking and storage
  - .....



## I. FOOD LOSS AND WASTE COMMITTEE OF THE TFSA

The FLW Committee works to determine the situation, the needs and what to do, and then to develop projects before consumers, producers and government agencies for the waste of produced foods as a result of food loss and waste.

### OUR COMMITTEE

Members of the Committee			
Ne e enöz, <b>Carrefoursa</b>	Hülya Günay, Serpil Ürek, U ur Avcı - <b>Migros</b>	Birol Deliba , Özlem Yalçın-Pınar <b>Süt</b>	Elif Belbez, Nilay Çolak - Tat <b>Gıda</b>
Olçay Silahlı , Ula Kayır - <b>Fazla Gıda</b>	Hilal Yalçın, Zekai Onur Avcı - <b>Nestlé Türkiye</b>	İ ilay Reis, Deniz Gezici - <b>Reis Gıda</b>	Görkem Köse, Zeynep Ayrar, <b>Testo</b>
Samim Saner, Sabahnur Demirci - <b>Mérieux</b> <b>Nutrisciences</b>	Zehra Yılmaz, <b>Perfetti</b> <b>van Melle</b>	Metin Acar, <b>Rentokil</b>	Necdet Buzba , <b>Tügis</b>
Tülay Özel, Yasemin Ertürk, Hande Türker – <b>Metro Gros Market</b>	Yüksel Soyubelli, <b>Pınar</b> <b>Et</b>	Filis Gergerli, Sultan Kihri- <b>Sardunya</b>	Ezgi Tokman, Ebru Erim, Özlem Ergün - <u>Unilever</u>
			Özlem Güçlü Üstünda – <b>Yeditepe Üniversitesi</b>

## FOOD LOSS AND WASTE COMMITTEE OF THE TFSA

### TARGET STUDIES

#### Consumers

- Assessment - Perception research
- Consumer information guide

#### Producers

- Shelf life determination training
- Shelf life and labelling rules guide

#### Collective Consumption Points

- Food waste management

#### Official Institutions

- Partnerships with official institutions and suggestions for legislative amendments
- Informative public service and Best Before Date (BBD) and Expire Date (ED)

# PERCEPTION RESEARCH FOR FOOD LOSS AND LABEL READING REPORT

## II. ABOUT RESEARCH



## PURPOSE AND SCOPE

### RESEARCH PURPOSE



To determine the extent to which product labels on the packaged foods are examined by the Turkish consumer and to what extent they are **understandable**



To understand the impact of label reading habits on **purchasing** decision, **consumption** decision and **food loss**



To determine how much **food loss** can be reduced



# III. METHODOLOGY AND SAMPLE STRUCTURE





# METHODOLOGY AND SAMPLE STRUCTURE

A total of 1545 face-to-face interviews were conducted within the scope of FOOD LOSS AND LABEL READING RESEARCH 2018.

## WITH WHOM?



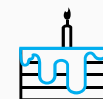
**SIMPLE SIZE**  
n=1545 people



People **RESPONSIBLE FOR MARKET SHOPPING** of the House



**GENDER**  
Woman & Men

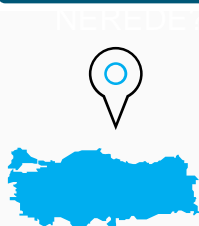


**AGE**  
18-65 Years



**SOUND**  
ABC1C2DE

## WHERE?

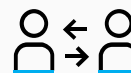


Representing the urban population of Turkey within the scope of NUTS

Level 2 in **26 cities**

Istanbul, Ankara, İzmir, Tekirdağ, Balıkesir, Bursa, Kocaeli, Konya, Kırıkkale, Kayseri, Aydın, Manisa, Antalya, Adana, Hatay, Zonguldak, Kastamonu, Samsun, Trabzon, Erzurum, Adana, Malatya, Van, Gaziantep, Diyarbakır, Mardin

## HOW?



**METHOD**  
CAPI (Computer Aided **Face-to-Face Interview**) method has been used

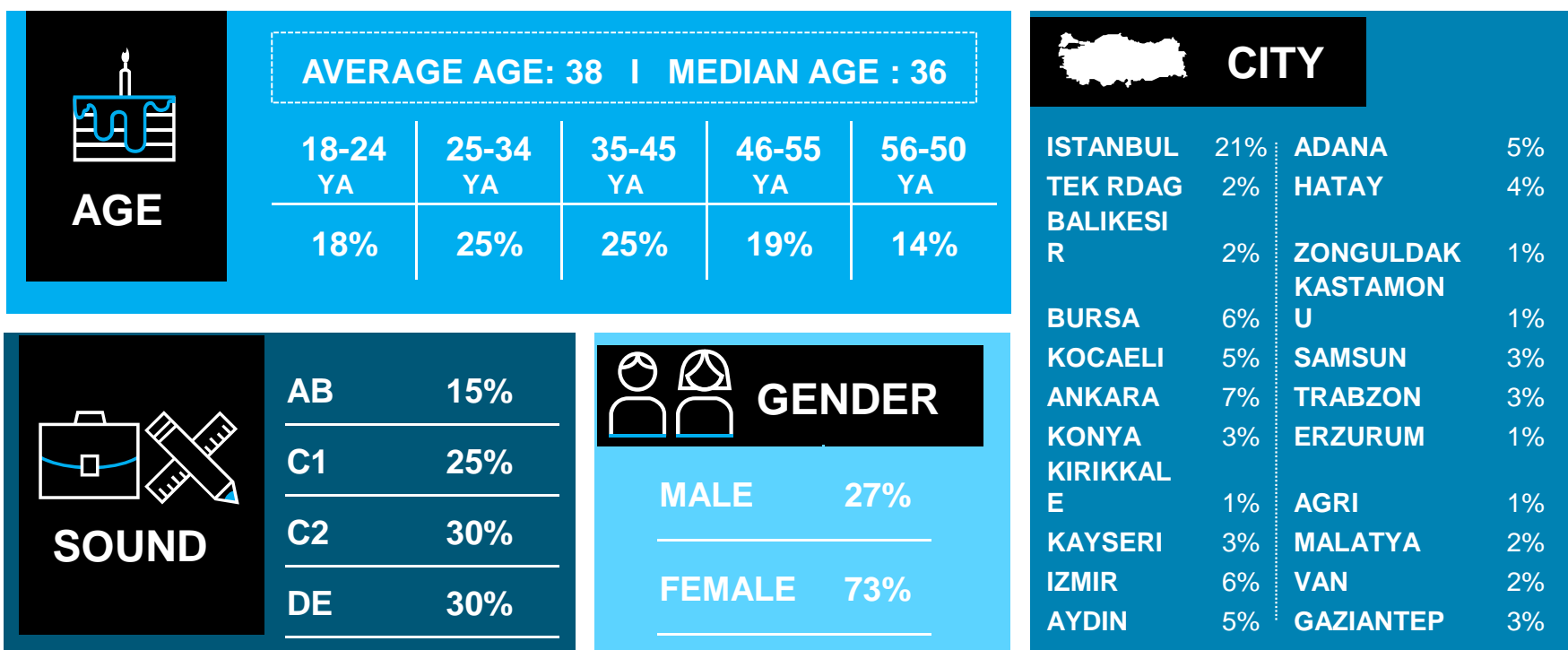
## WHEN?



**FIELD STUDY**  
was conducted between 20.09.2018 - 23.10.2018 dates.

## SAMPLE STRUCTURE - CONTD

The demographic profile of the interviewees is given below.

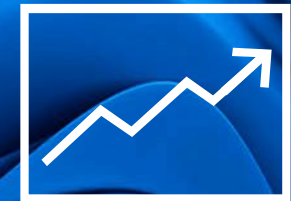


# SAMPLE STRUCTURE - CONTD

The regions and the cities they cover are given below.

METROPOLITAN	MARMARA	ANATOLIA	AEGEAN	MEDITERRANEAN	BLACK SEA	EASTERN	SOUTHERN
35%	15%	7%	8%	12%	8%	6%	9%
Istanbul	Tekirdag	Konya	Aydin	Antalya	Zonguldak	Erzurum	Gaziantep
Ankara	Balıkesir	Kirikkale	Manisa	Adana	Kastamonu	Agri	Sanliurfa
Izmir	Bursa	Kayseri		Hatay	Samsun	Malatya	Mardin
	Kocaeli				Trabzon	Van	

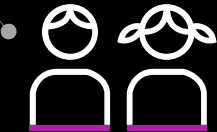
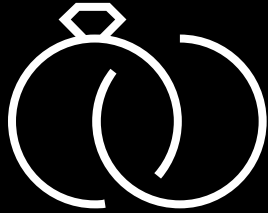
## IV. RESEARCH FINDINGS



## Interviewees - Summary Findings



**%60**  
Married



**%58**  
Have  
children



Average  
family size is

**3.4**  
persons



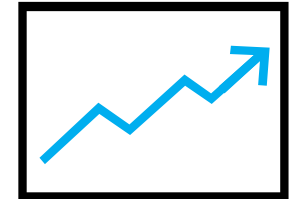
Monthly Income's

**34%**  
spent for food  
expenses



**2.4** TIMES  
Food shopping per  
week

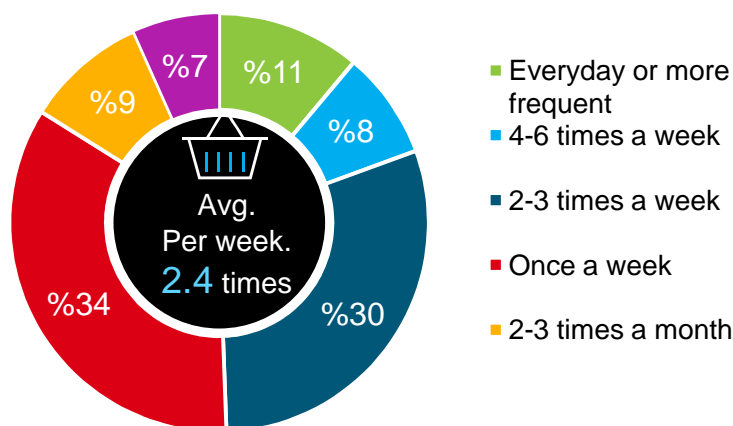
## **IV. i. FOOD SHOPPING AND LABEL READING HABITS**



## FOOD SHOPPING OF THE HOUSEHOLDS IS FREQUENT AND RELATIVELY UNPLANNED/SPONTANEOUS

Although **%59** of individuals make a shopping list in advance, it is only **%37** of those who do not go outside the list.

### FOOD SHOPPING FREQUENCY OF THE HOUSES (%)



Half of the households (49%) do food shopping **twice a week or more**. An average household does food shopping **2.4 times** a week)

### DOING SHOPPING LIST (%)

	%
I do a <b>list</b> before going to shopping and I shop accordingly	37
I do a list before going to shopping but I certainly buy <b>additional products</b>	22
I don't do a list, I buy what comes <b>to my mind</b>	41



▲ Men, Metropolitan, Aegean, Mediterranean

Q8. How often do you do food shopping in your house? Base: All samples, 1545 people

Q9. Market Do you make a shopping list before the market shopping? Base: All samples, 1545 people

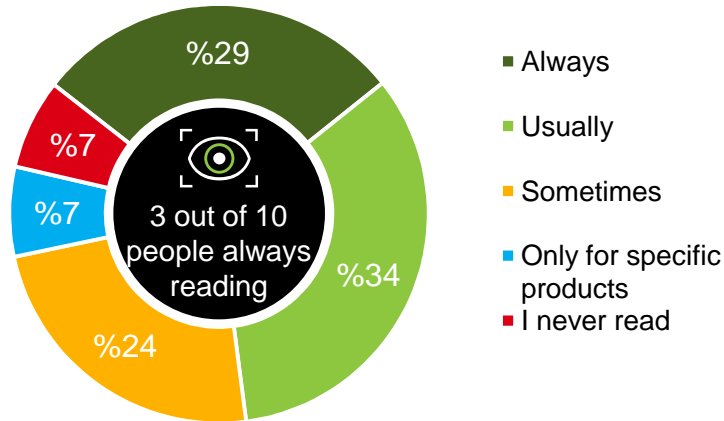


## 6 OF THE 10 CONSUMERS ALWAYS OR GENERALLY READ THE INFORMATION ON THE FOOD PACKAGES PRIORITY IS GIVEN TO ED



**93%** of the consumers **read the information on the food packages. «Expiry date» is** the most read type of information **(88%)**. This is followed by the **«Ingredients» section (41%)** (Examining the ingredients section is peak in AB SOUND, households without children, one-person households, Metropolitan and Aegean regions).

### READING INFORMATION ON THE FOOD PACKAGES FREQUENCY (%)



The ratio of those who read the package information (Always + In General) on food products **63%**

### INFORMATION TYPES READ ON THE FOOD PACKAGES (%) - Unassisted / Without Reminder, Voluntarily

Information Type	%
Expire Date	88
Ingredients	41
Production date	25
Production location	17
Weight	9
Manufacturer/brand/if it is domestic	9
Nutritional value	5
Calories*	5

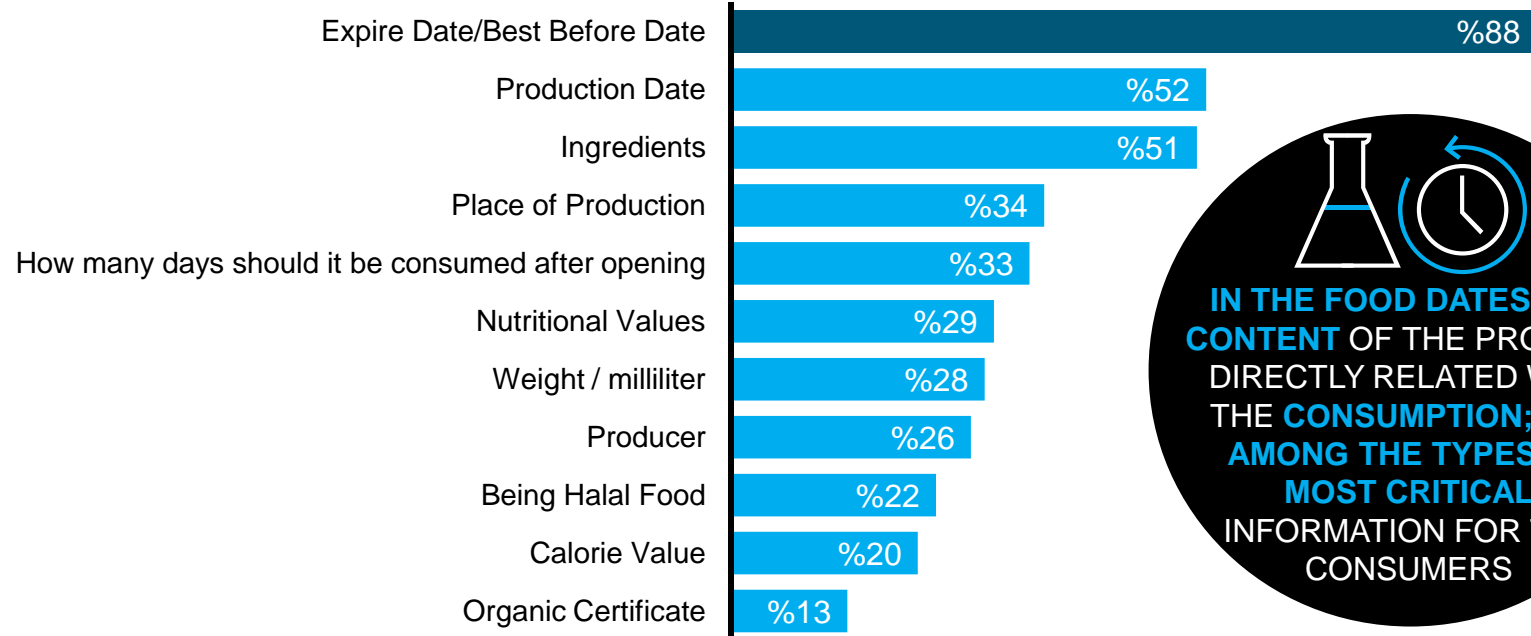
\* It is peak in 18-34 years, AB, Childless, One-person households, Marmara, Black Sea.

Q10. How often do you read the package information on packaged food products? Base: All samples, 1545 people

Q12. (WITHOUT REMINDER) What information do you read on the food packages? Base: People reading the package writings, 1437 people

**WHEN THE TYPES OF INFORMATION ON THE PACKAGE ARE REMINDED ONE BY ONE, THE FIRST RANK DOES NOT CHANGE:  
9 OUT OF 10 CONSUMERS EXAMINING THE PACKAGE  
CERTAINLY EXAMINES THE EXPIRE DATE/BEST BEFORE DATE**

**TYPES OF INFORMATION CERTAINLY EXAMINED (%) - Assisted/With Reminder**

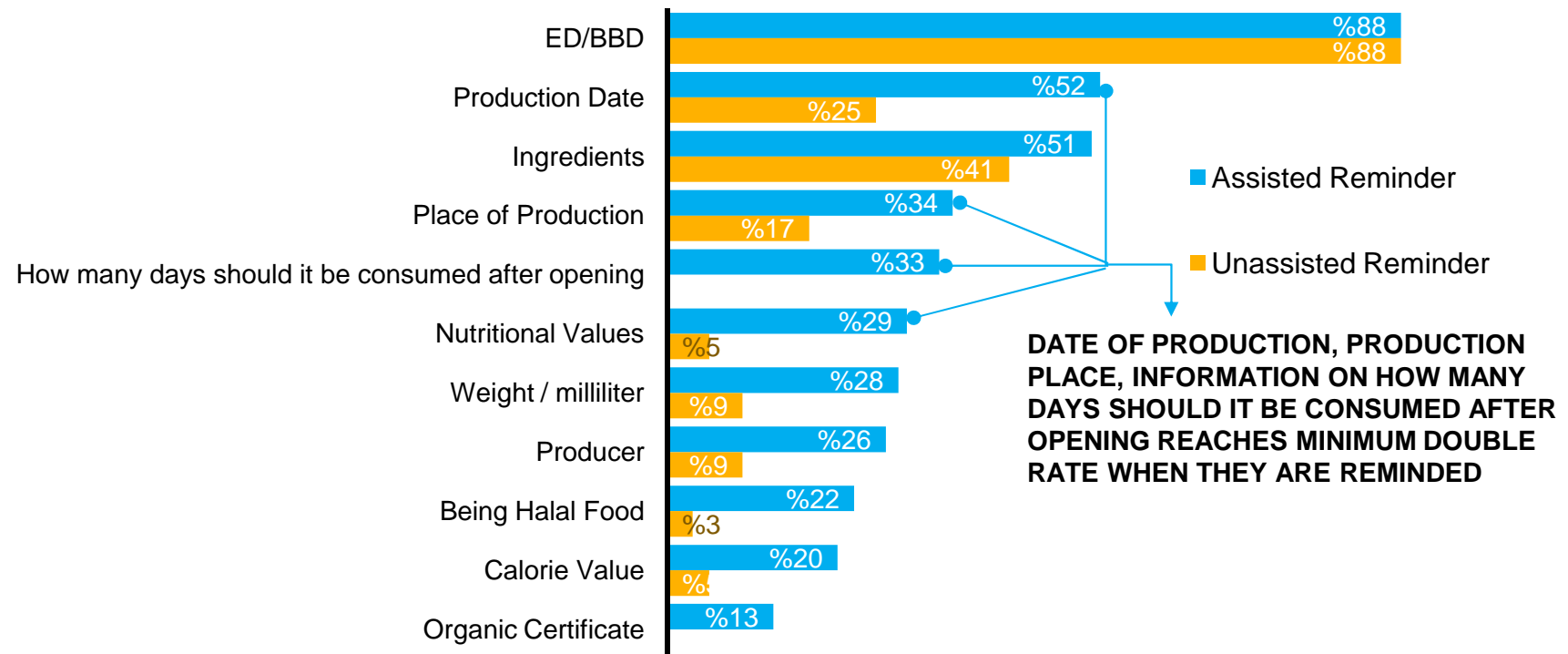


# DATE OF PRODUCTION, PRODUCTION PLACE, INFORMATION ON HOW MANY DAYS SHOULD IT BE CONSUMED AFTER OPENING REACH THE HIGHER LEVEL OF «I CERTAINLY EXAMINE» RATES WHEN THEY ARE REMINDED



## INFORMATION TYPES READ / CERTAINLY EXAMINED ON THE FOOD PACKAGES (%)

UNASSISTED vs. ASSISTED COMPARISON



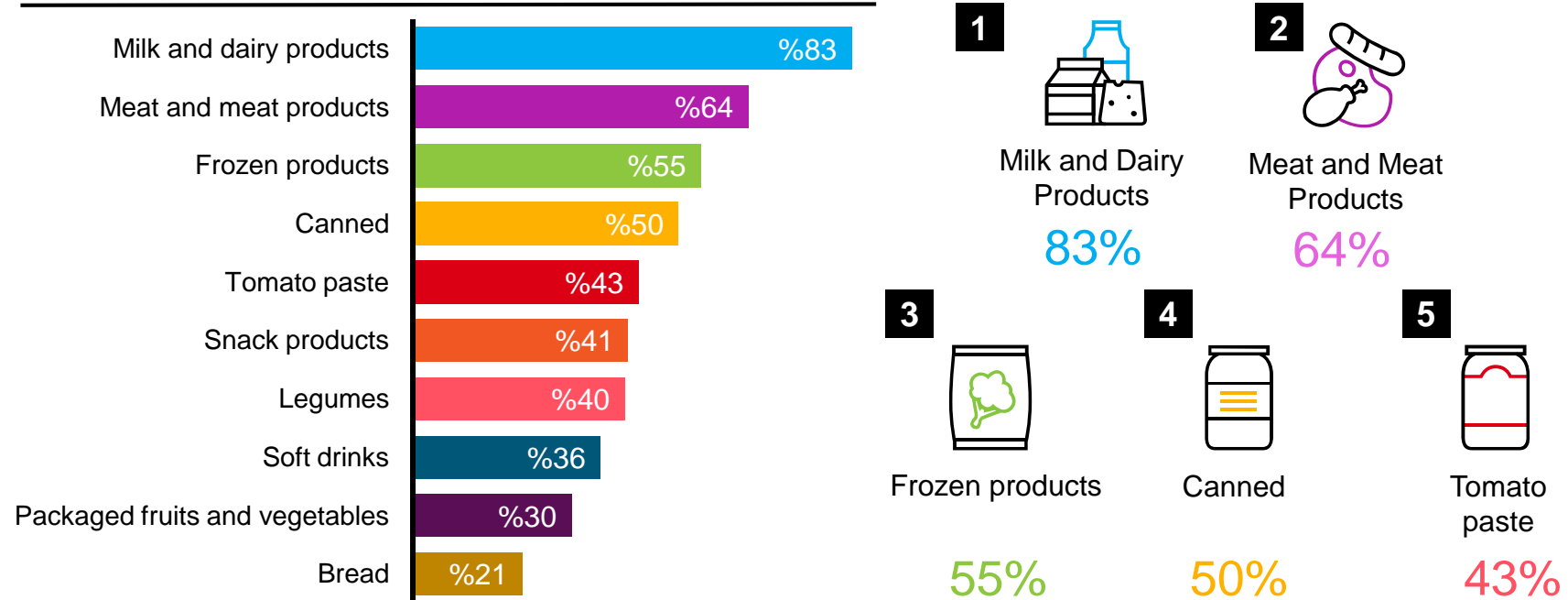
Q12.(WITHOUT REMINDER) What information do you read on the food packages? Base: People reading the package writings, 1437 people

Q13.(WITH REMINDER) What information do you certainly review? Base: People reading the package writings, 1437 people

# MEAT AND DAIRY PRODUCTS, FROZEN PRODUCTS, CANNED FOOD AND SAUCES ARE THE FOOD PRODUCTS WHICH THE CONSUMERS **MOSTLY READ** THE INFORMATION ON THE PACKAGE

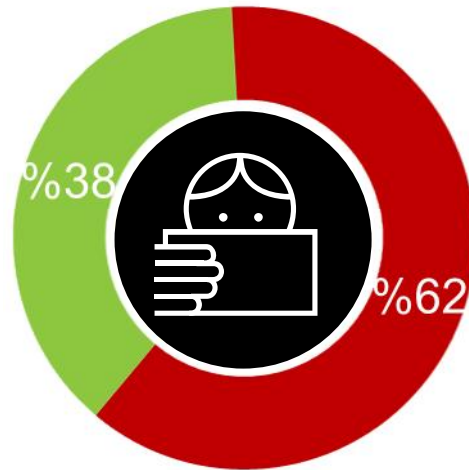


PRODUCTS OF WHICH INFORMATION READ ON THE PACKAGE (%)



Q11. What products do you read the information on the package? Base: 1437 people reading the writings on the package. [ MOST ANSWERS ASSISTED]

## 6 OF THE 10 CONSUMERS DON'T FIND THE DATE INFORMATION ON THE PACKAGE UNDERSTANDABLE

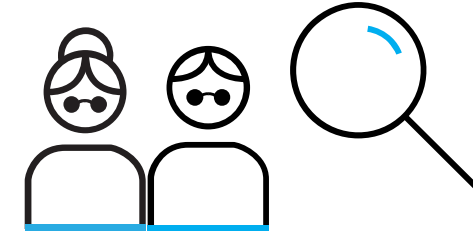


■ CLEAR / UNDERSTANDABLE

■ NOT CLEAR / UNDERSTANDABLE

**%62**

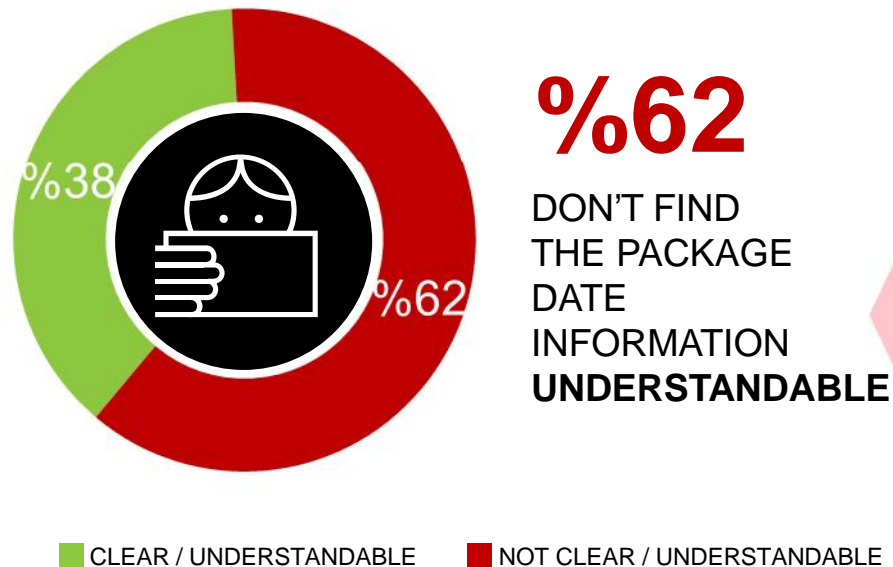
DON'T FIND  
THE PACKAGE  
DATE  
INFORMATION  
UNDERSTANDABLE



**MIDDLE HIGH AGES AND  
BLACK SEA REGION  
RESIDENTS ARE AMONG THE  
GROUPS HAVING THE GREAT  
DIFFICULTY**

## THE BIGGEST PROBLEM: THE FIGURES ARE NOT LEGIBLE, AND MIXED

**Illegible date information on the package and being mixed** are the biggest obstacle to understand the date information. The inability to find information easily, the worn view of numbers and the multiple dates are found as **confusing**.



### REASONS FOR NOT FINDING THE INFORMATION CLEAR/ UNDERSTANDABLE (%)

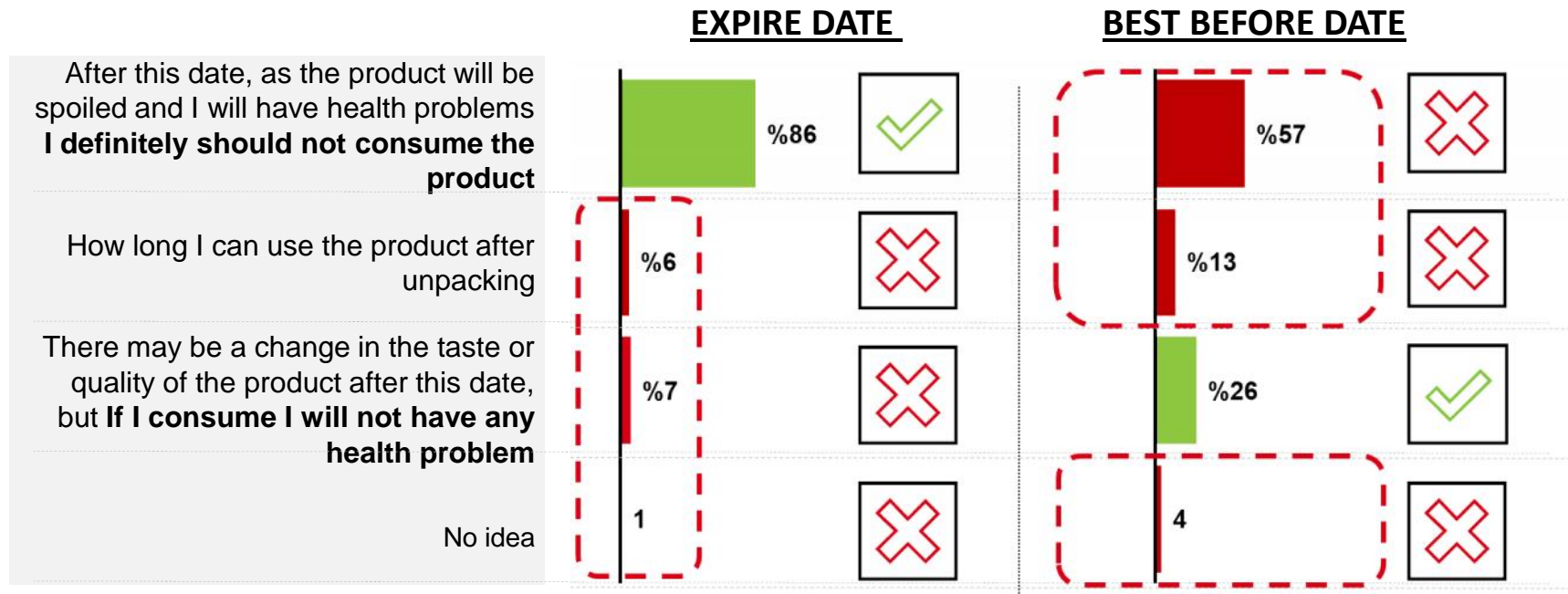
Writing legible being mixed	%55
Inability to find the information on the package easily	%42
Worning of the figures	%42
Having multiple dates on the package	%38

Q15. Do you find the date information on the packaging clear and understandable? Base: All Samples, 1545 people

Base: 965 people who have not found the information on the package clear/understandable

## ... WELL, ARE ED AND BBD KNOWN?

9 out of 10 consumers know the meaning of the Expire Date correctly. **The Best Before Date is mixed with «Expire Date».** 74% of consumers do not know that there is no harm in consuming the product of which best before date expired.

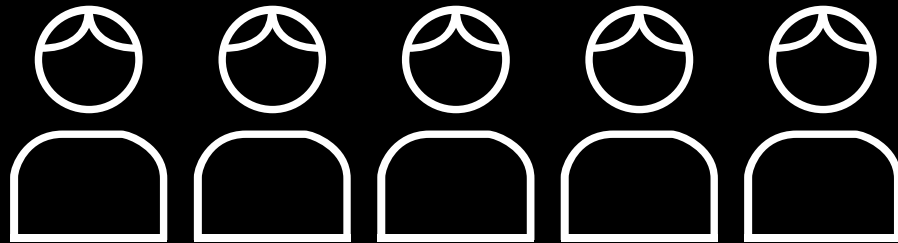


Q18.What does the Expire Date mean to you? Base: All Samples, 1536 people

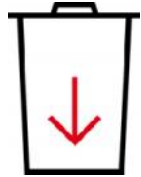
Q20.What does the Best Before Date mean to you? Base: All Samples, 1545 people



**3** OUT OF



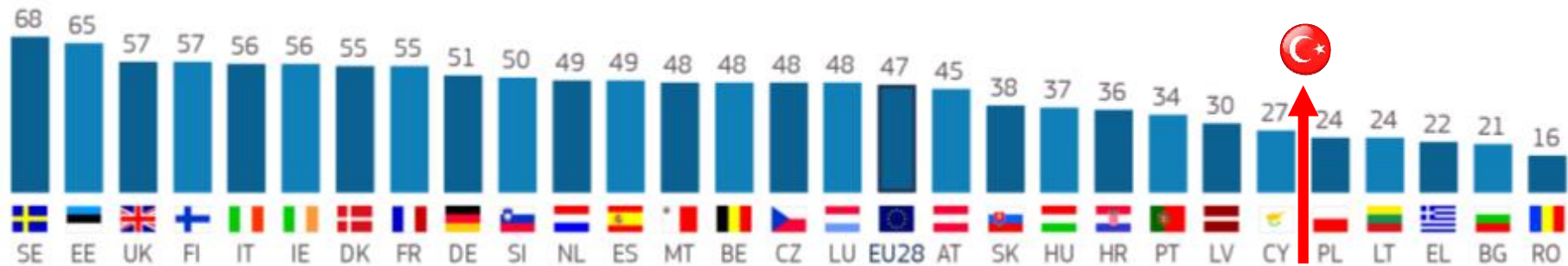
**10 CONSUMERS  
KNOW THE  
CORRECT  
MEANING OF THE  
BEST BEFORE DATE**



## TURKEY IS ALREADY RANKED AFTER MANY EUROPEAN COUNTRIES TO KNOW THE CORRECT MEANING OF «BBD» WITH 26% RATIO



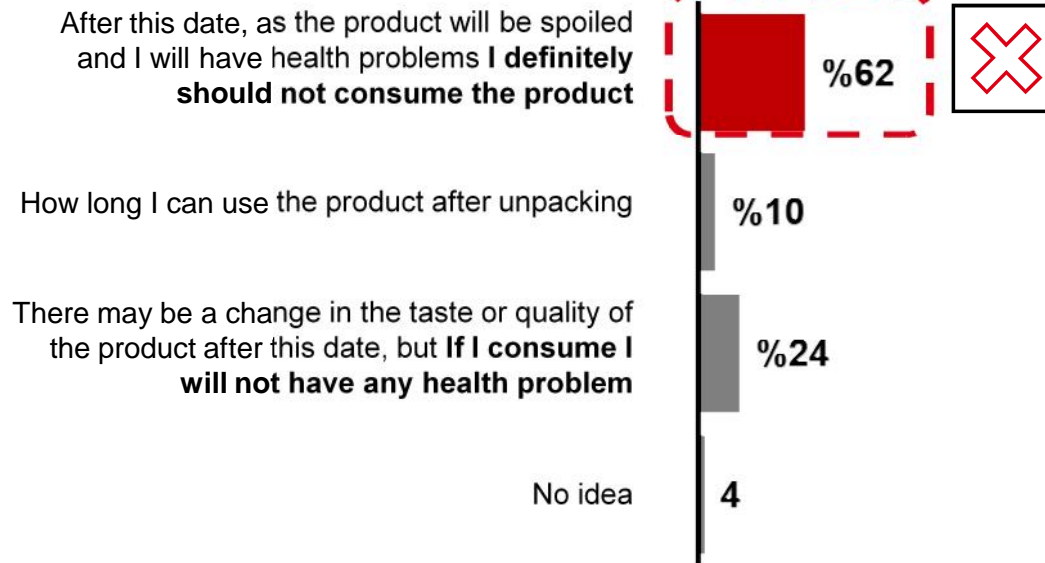
An average of **47%** of consumers in Europe know that there may be a change in the quality of the product after the best before date (**BBD**), but they will not have any **health problem if it is consumed**; while this rate is **highest in Sweden with 68%** and in Estonia with 65%, **Turkey** is at similar levels with Romania, Bulgaria, Lithuania and Poland with **26%**



Source: Flash Eurobarometer, «FOOD WASTE AND DATE MARKING», 2015; . Base: 26.598

## 6 OUT OF 10 CONSUMERS KNOWING THE MEANING OF EXPIRE DATE CORRECTLY DON'T KNOW THE DIFFERENCE BETWEEN BBD AND ED; THEY **CONFUSE** «ED» AND «BBD»

### DEFINITION OF THE BEST BEFORE DATE ACCORDING TO THOSE KNOWING ED (%)



Q20.. hat does the Best Before Date mean to you? Base: 1335 people who think that they should certainly not consume the product with expired date.

# CONSUMING THE FOODS OF WHICH BEST BEFORE DATES EXPIRED ALTHOUGH THESE PRODUCTS ARE NOT RISKFUL FOR HEALTH, THEY ARE MOSTLY **DISPOSED** BY CONSUMERS

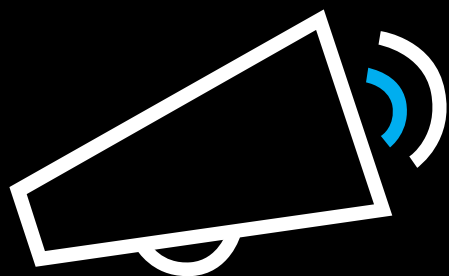


Due to the fact that the difference between BBD and ED is not known clearly, **7** out of **10** consumers states to dispose the product of which best before date expired.



Q19. What do you do If you see a product with expired date at your home? Base: All Samples, 1545 people

Q21. What do you do if you see food product of which Best Before Date expired? Base: All Samples, 1545 people

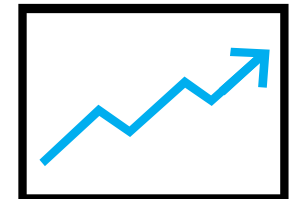


**1 OUT OF 2 CONSUMERS  
THE CONSUMERS STATES  
TAINLY NOT TO BUY THE  
PRODUCT UNLESS BBD  
IS NOT WRITTEN ON THE  
PACKAGE, EVEN ON THE  
NOT SPOILING  
PRODUCTS**

\* If the BBD is not written, I definitely don't buy + I may not buy if the date is not written (%)

## IV. ii. SIZE OF FOOD LOSS

MOSTLY DISPOSED PRODUCTS | STRATEGIES FOR FOOD LOSS REDUCTION





42% of food waste is made by households.

In the UK, 8.3 million tons of food is wasted every year, of which 7 million tons is made by households. 4.2 million tons of the wasted food consists of edible foods.

THIS SITUATION SHOWS THAT IN THE UK **6 PLATES OF FOOD ARE DISPOSED** EVERY WEEK IN THE HOUSEHOLDS.

\*\*Source: (Abeliotis, vd., 2014:238; Parfitt, vd., 2010:3073). Republic of Turkey, Ministry of Customs and Trade, Waste Report of Turkey, 2017



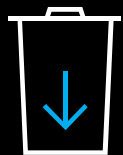
## CONSUMER FORECAST



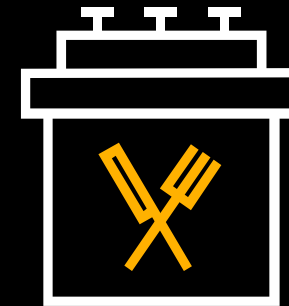
*What do you think in Turkey ..... how many of the cooked plates of 10 are disposed to garbage?*



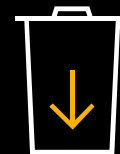
IN HOUSEHOLDS



EACH **10** PLATES  
MEALS' **3** PLATES



IN RESTAURANTS



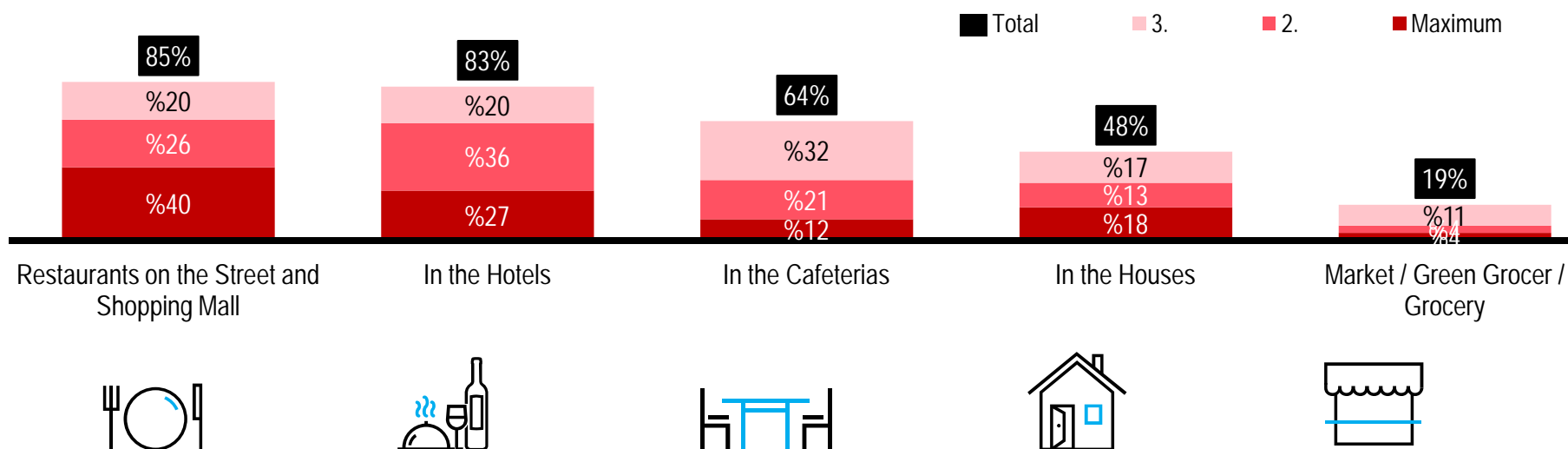
EACH **10** PLATES  
MEALS' **4.5** PLATES

Q29. What do you think how many of the cooked plates of 10 are disposed to garbage in the houses in Turkey? I Q30. So, how many of the cooked plates of 10 are disposed to garbage in the restaurants? Base: All sample, Total 1545 people30

# RESTAURANTS ARE PERCEIVED AS THE PLACE OF MOST FOOD LOSS . 1 OUT OF EACH 2 PEOPLE INCLUDES THE HOUSES IN THE FIRST 3 PLACES WHERE THE FOOD LOSS IS MAXIMUM



## PLACES WITH MOST FOOD LOSS (%)



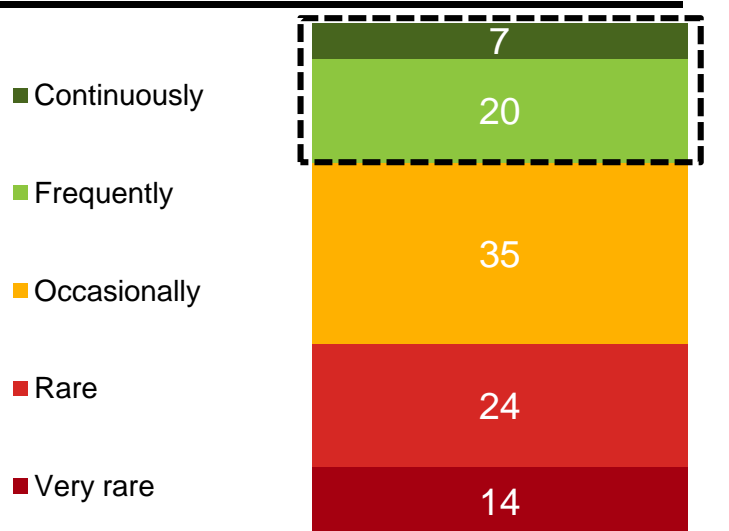
Q27. When you think about all the households, places selling foodstuffs and places to eat out, can you tell us the first 3 places where there is a lot of food waste?  
Base: All samples, 1545 people

### 3 OUT OF 10 HOUSEHOLDS ARE CONTINUOUSLY / FREQUENTLY PREPARING CANNED FOODS FOR STORING THE FOODS FOR LONGER TIME



Preparing canned products such as jam, tomato paste is more common in families with children.

FREQUENCY FOR PREPARING CANNED PRODUCTS (%)

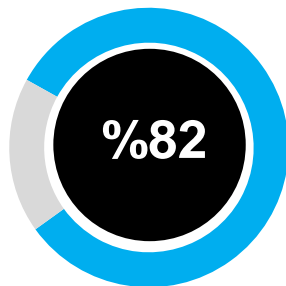


Families with children make more canned products to keep food longer than families without children

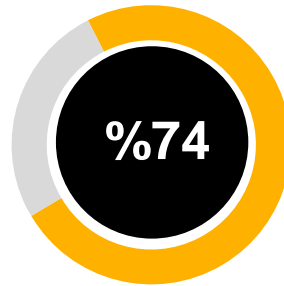
**MOULDING AND COLOR CHANGES IN FOOD PRODUCTS MEANS THE SPOIL OF THE PRODUCT FOR CONSUMERS; AND THIS FOOD IS DISPOSED WITHOUT WAITING FOR BBD / ED**



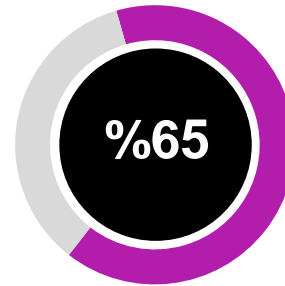
**WHEN ARE THE PRODUCTS WITH NOT EXPIRED BBD/ED DISPOSED (%)**



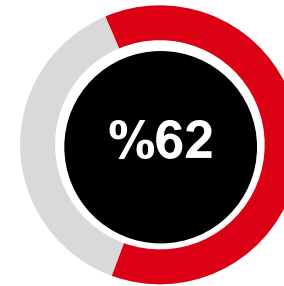
**IF IT IS  
MOULDED**



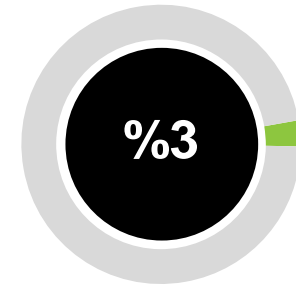
**IF ITS COLOR  
CHANGED**



**IF I DON'T LIKE  
ITS SMELL**



**IF I DON'T LIKE  
ITS TASTE**



**I DON'T  
DISPOSE**

Q25. When do you dispose a packaged food, despite the expire date / best before date has not expired? Base: All samples, Total 1545 people

# MOSTLY DISPOSED FOODS



42%

FRUIT  
AND VEGETABLE



41%

MILK AND DAIRY  
PRODUCTS

(süt, ayran, yo urt,  
kefir, peynir vb)



23%

BREAD



18%

FROZEN  
PRODUCTS



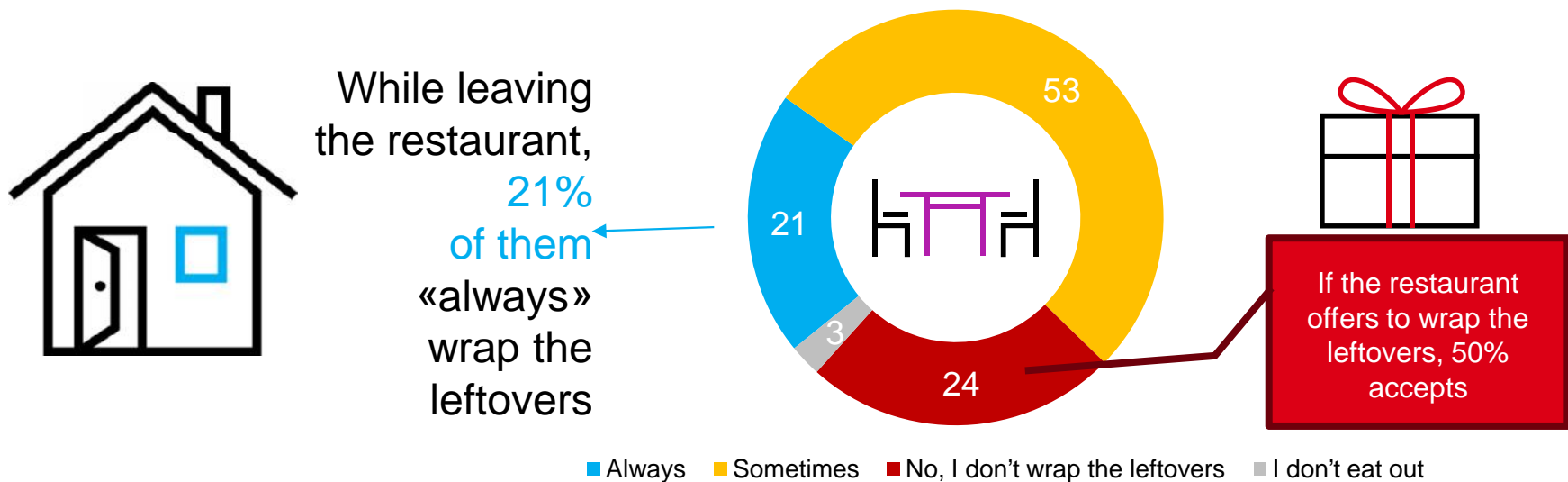
17%

SOFT  
DRINKS

Q26 Which foods do you dispose mostly? Base: All samples, Total 1545 people

# 1 OUT OF 5 PEOPLE «ALWAYS» WRAP THE LEFTOVERS IN THE RESTAURANTS, BUT IF IT IS OFFERED BY THE RESTAURANT, HALF OF THE REMAINING PEOPLE STATES TO CHANGE THEIR MIND

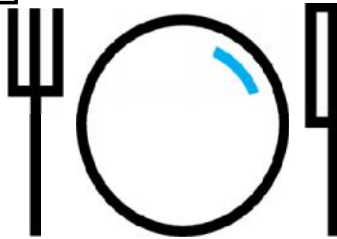
## PACKAGING TENDENCIES OF NOT EATEN FOODS %



Q31. When you leave the restaurant, do you wrap the leftovers that you don't eat? Base: All samples, Total 1545 people

Q32. Do you accept if the restaurant offers you to wrap the leftover food that you cannot eat? Base: Not wrapping the leftover: 377

ALTHOUGH HALF OF THE CONSUMERS THINK THAT THE GREAT PORTIONS ARE WASTE, 6 OUT OF THE 10 PEOPLE DOES NOT ACCEPT TO MINIMIZE THE PORTIONS AT THE **SAME PRICE** TO REDUCE THE FOOD LOSS

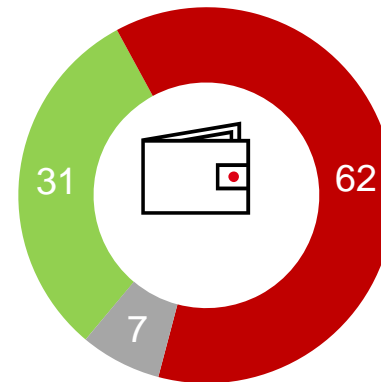


**%52**

Thinks large portions to be food waste



APPROACH TO MINIMIZE PORTIONS AT THE SAME PRICE TO REDUCE WASTE (%)



- The portions can be minimized without changing the price
- Portions should not be minimized without changing the prices
- No idea

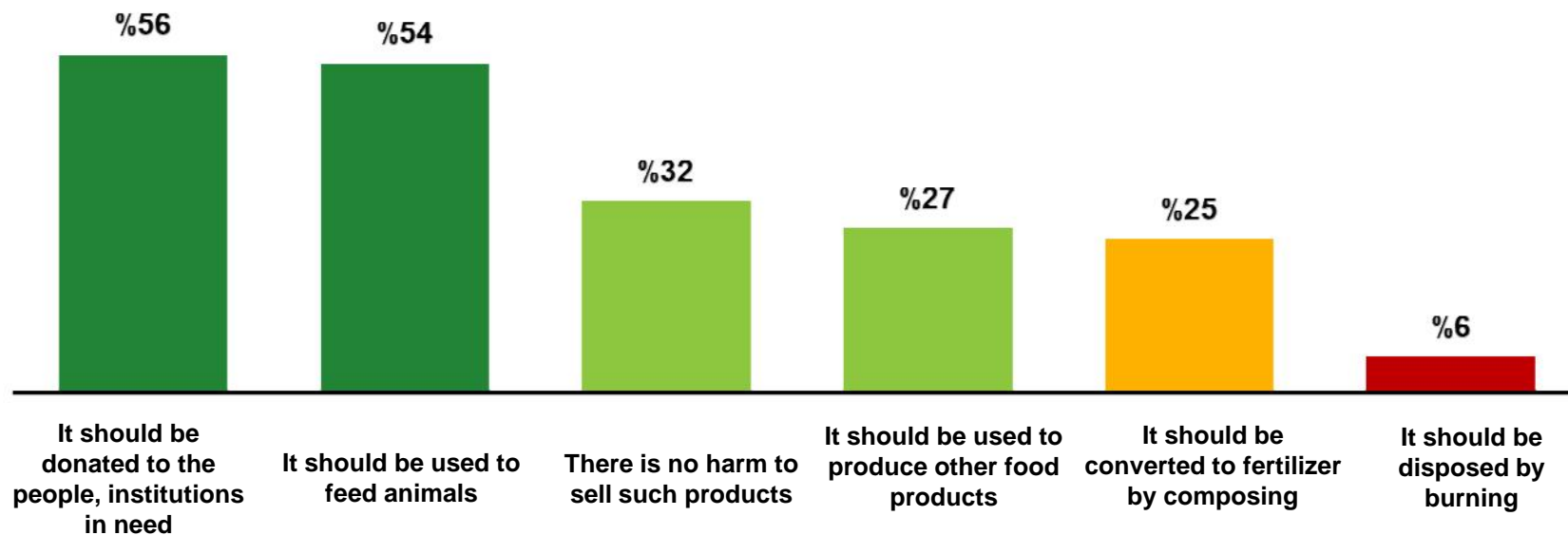
Q33.Do you think large portions are food waste? Base: All samples, Total 1545 people

Q34.What do you think if the restaurants minimize the portions to reduce food waste **without changing the price of food**?



## IT IS NOT FOUND INCONVENIENT TO UTILIZE THE FOODS THAT CANNOT BE SOLD BECAUSE OF VISUAL REASONS ALTHOUGH THEY ARE AT EDIBLE QUALITY

**WHAT SHOULD BE MADE WITH THE FOOD THAT CANNOT BE SOLD, BUT AT EDIBLE QUALITY? %**

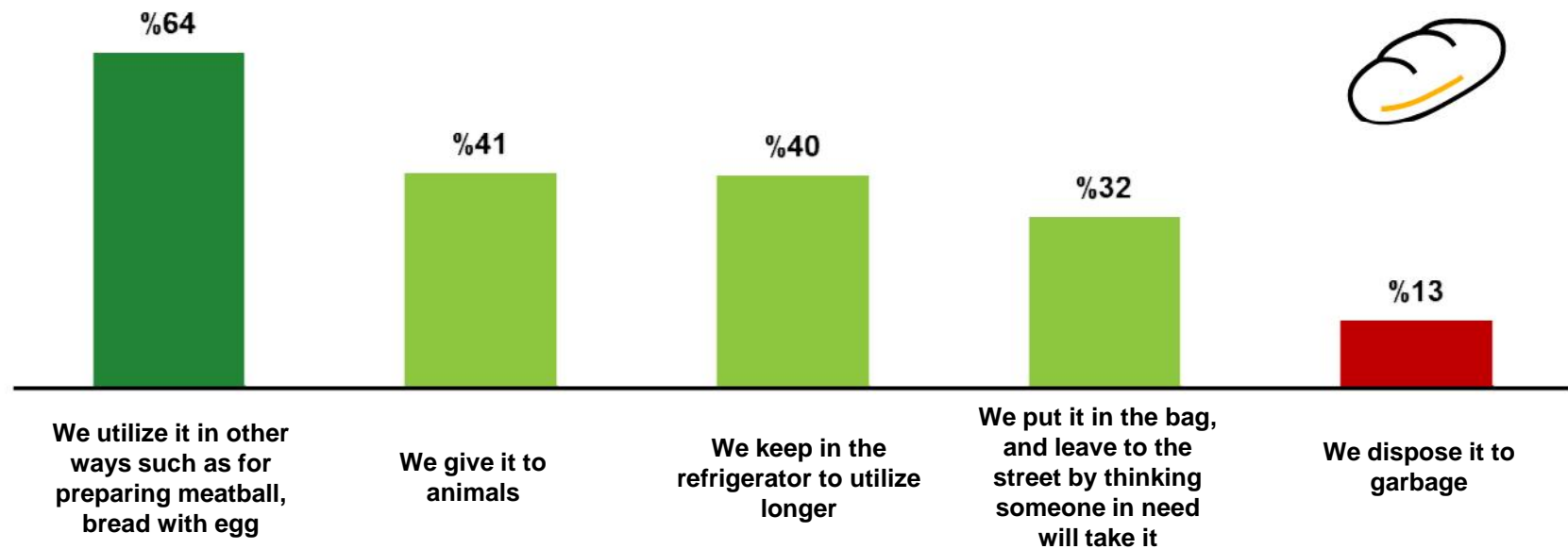


Q35. While some foods are at edible quality, they are not sold because of external appearance, excess production, packaging failure etc. reasons. What should be done with these products in your opinion? Base: All samples, 1545 people

## 6 OUT OF 10 PEOPLE UTILIZE THE STALE BREAD IN THE PRODUCTION OF OTHER FOODS

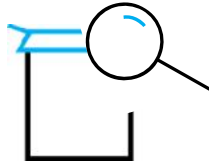
### UTILIZING THE STALE BREAD

%



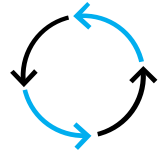
Q36. What do you do with stale bread in your house? Base: All samples, Total 1545 people

## WHILE PLASTIC PACKAGES ARE GENERALLY DISPOSED TO GARBAGE, GLASS AND SOIL BOWLS ARE UTILIZED IN THE HOUSE



	%					
	Cam Kavanozlar	Plastik i eler	Cam i eler	Toprak Kaseler	Plastik Yo ürt Kapları	Plastik Meyve ve Sebze Ambalajları
I dispose	16	54	26	33	53	65
I use at home / I utilize	75	25	62	58	29	19
I Dispose to Recyclable Trash Cans / I Give to Product Collecting Companies for Recycling	9	21	13	9	18	16

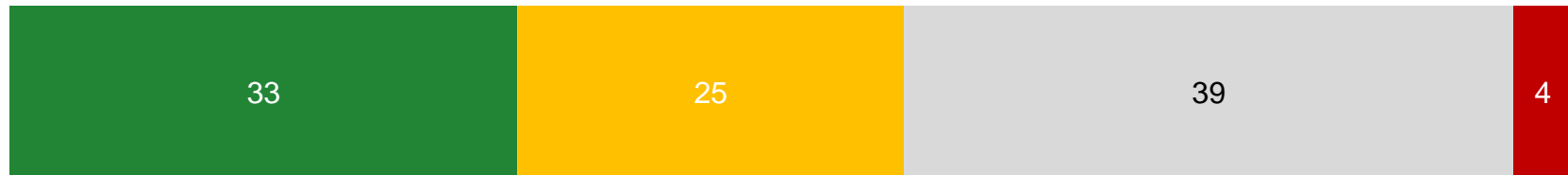
Q42.What do you do with the packages of food products? Base: All Samples, 1545 people



## ONLY 3 OUT OF 10 PEOPLE USE RECYCLING POINTS IN THEIR NEIGHBORHOOD

### USE OF RECYCLING POINTS

%



■ I use ■ There is a recycling point, but I didn't use it. ■ There is no recycling point ■ This is the first time I heard of the recycling point

THERE IS A MINORITY POURING THE FRYING OIL IN THE SINK,  
**IT IS COMMON TO USE AGAIN** ; HOWEVER **ONLY 1** OUT OF **10**  
PEOPLE IS AWARE OF THE INSTITUTIONS COLLECTING WASTE  
OILS, AND GIVES WASTE OILS TO THESE INSTITUTIONS



#### UTILIZING OF FRYING OILS

%

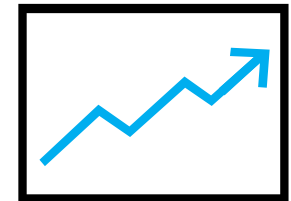


- I use it again
- I give it to various institutions collecting waste oil
- I dispose it to garbage by filling it in something like a bottle / plastic container
- I discard it to the sink



Q40. What do you do with the remaining oils after cooking/frying? Base: All samples, Total 1545 people

## **IV. iii. CONSUMERS' APPROACH TO THE IDEAS FOR REDUCING FOOD LOSS**



## CONSUMERS **LEAN TOWARDS** TO **CONSUME SLICED FRUIT** PROVIDED THAT THEY ARE SURE IT TO BE FRESH



**34%**

I BUY  
IF IT IS SLICED IN  
FRONT OF ME /  
IF THE SLICING  
TIME IS INDICATED

**20%**

I BUY  
IF IT LOOKS  
DELICIOUS

**14%**

I BUY  
IF ITS KG  
PRICE IS  
CHEAPER

**53%**

I CERTAINLY  
DON'T BUY

Q37. Do you buy sliced fruit (watermelon, melon, etc.)? Base: All samples, 1545 people

THEY ARE MINORITY WHO LEAN TOWARDS BUYING **READY ONE-MEAL MATERIALS**; PRICE, CLEANING AND QUALITY CONCERNS ARE THE BIGGEST OBSTACLE FOR SELLING THESE PRODUCTS



22%

I BUY AS THEY  
MAKE LIFE  
EASIER

20%

I BUY AS **THERE WILL  
NOT BE EXCESS  
MATERIAL**

34%

I DON'T BUY  
AS THEY ARE  
PREPARED  
WITH  
LOW QUALITY  
VEGETABLES

32%

I DON'T BUY  
AS BUYING  
SEPARATELY  
**IS CHEAPER**

42%

I DON'T BUY  
AS THEY ARE NOT  
**CLEANED /**  
SELECTED WELL

Q38. Imagine cooking at home, would you buy if all the ingredients to be used in the meal were selected, cleaned, and freshly prepared in that day and sold in 1-meal portion?

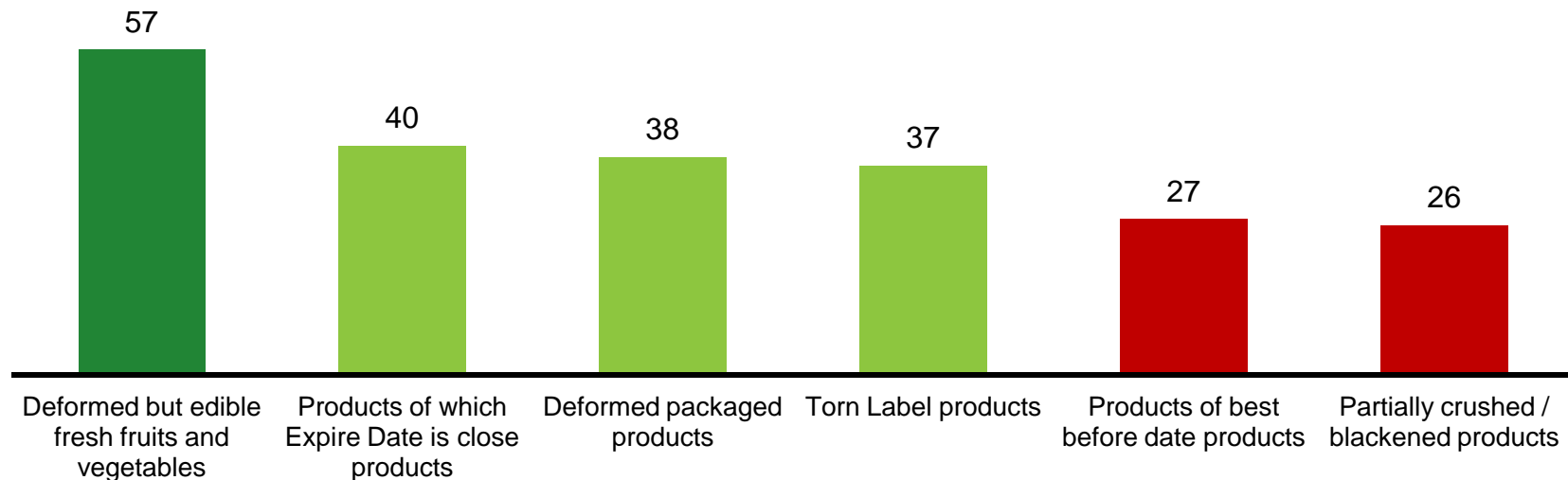
Base: All samples, 1545 people



## IF IT IS SOLD AT MORE AFFORDABLE PRICE...

**6 OUT OF 10 PEOPLE LEAN TOWARDS SELLING OF DEFORMED FRUITS / VEGETABLES IN A SEPARATE SECTION, BUT THEY DON'T PREFER BUYING THE PRODUCTS TO BE SPOILED IN A SHORT TIME AFTER BUYING EVEN IF THEY ARE CHEAPER**

**PRODUCTS PREFERRED TO BE SOLD IN A SEPARATE SECTION AT CHEAPER PROCES %**



Q28. Do you think that the products with deformed packages / expire date approached should be sold in a separate section at a more affordable price in order to reduce food waste in the markets? Base: All samples, Total 1545 people

## **V. CONCLUSION AND RECOMMENDATIONS**

# CONCLUSION AND RECOMMENDATIONS



## 1 LABEL READING AND BBD AWARENESS

Finding	Recommendation	Who?
For the food products that are rapidly spoiling, consumers are tend to read information on the package - especially the dates; however, 62% of consumers <b>on the package clear / understandable</b> . The fact that figures are confused / unreadable is among the reasons for the biggest complaint	Writing legible figures or developing different applications	Producers

## CONCLUSION AND RECOMMENDATIONS



### 2 LABEL READING AND BBD AWARENESS

Finding	Recommendation	Who?
While <b>ED-Expire Date</b> is known by most of the consumers, <b>BBD-Best Before Date is seen to be</b> seriously mixed with «ED». This results in the disposal of the edible products which is appropriate to consume for health by 72% consumers.	Doing awareness raising activities for the consumers about label reading and preparing guidelines	Turkish Food Safety Association and Relevant Stakeholders
	Explaining ED and BBD to students by collaborating with MEB	
	Preparing guidelines on ED and BBD for producers	
	Providing shelf life training for producers	

## CONCLUSION AND RECOMMENDATIONS



### 2 LABEL READING AND BBD AWARENESS

Finding	Recommendation	Who?
While <b>ED-Expire Date</b> is known by most of the consumers, <b>BBD-Best Before Date is seen to be</b> seriously mixed with «ED». This results in the disposal of the edible products which is appropriate to consume for health by 72% consumers	Creating public awareness on ED and BBD with public ads	Republic of Turkey Ministry of Agriculture and Forestry
	Clarification of BBD legislation and clarification of ED by legislation	
	Regulating the legislation for the donation and sale of products of which BBD expired	
	Information and awareness-raising activities by the producers on ED and BBD definitions on social media	Relevant stakeholders

## CONCLUSION AND RECOMMENDATIONS



### 3 § SIZE OF FOOD LOSS

Finding	Recommendation	Who?
<p>It is thought that 3 out of every 10 plates cooked in the house are disposed, and in the restaurants 4.5 plates food are disposed. Reducing portions to reduce food loss in the restaurants is accepted if it brings a price advantage.</p> <p><b>Young people are less likely to wrap the leftover food.</b></p> <p>Even if it is offered by the restaurant, young people are less likely to change this behavior.</p>	Placing of the storage conditions on the label after the products are opened	Republic of Turkey Ministry of Agriculture and Forestry
	Awareness raising activities for consumers	Turkish Food Safety Association

# CONCLUSION AND RECOMMENDATIONS



## 4 § SIZE OF FOOD LOSS

Finding	Recommendation	Who?
<p>In households, <b>the perception that food can be heated only 1 time after cooking causes an increase in food loss;</b></p> <p>Most disposed foods in households are fruits, vegetables, milk &amp; dairy products and bread.</p> <p>It is observed that <b>87%</b> of households utilize stale bread thanks to the social sensitivity and awareness in preventing food loss for bread.</p>	<p>Preparing a guide for consumers about cooking and storage, and informing consumers</p>	<p>Turkish Food Safety Association</p>

# CONCLUSION AND RECOMMENDATIONS



## STRATEGIES FOR FOOD LOSS REDUCTION

Finding	Recommendation	Who?
<b>77% of the consumers</b> certainly check the expire date of the products at discount.	Dissemination of the methods of selling the products of which expire date is approaching with the information on the special shelves	Sales points
<b>6 out of 10 people</b> lean towards selling the deformed fruit / vegetable at a more affordable price.	<b>Foods which are not placed on the shelves only because of their deformed shapes</b> can be consumed safely	Relevant stakeholders



# THANK YOU...



This research has been carried out with the valuable contributions of the above-mentioned companies.  
*Logos are listed in alphabetical order.*