

# DANISH CONSUMERS INTERPRETATION OF DATE LABELS

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# FOOD WASTE

- Most of the food is wasted in retail and households in developed countries
- In Denmark food waste is estimated to be 82.6 kg per person/household per year
- What is the role of date labels in consumer behaviour?



# DATE LABELS AND FOOD WASTE

- Date labels mentioned as a possible reason for food waste
- The possible causes can be that consumers

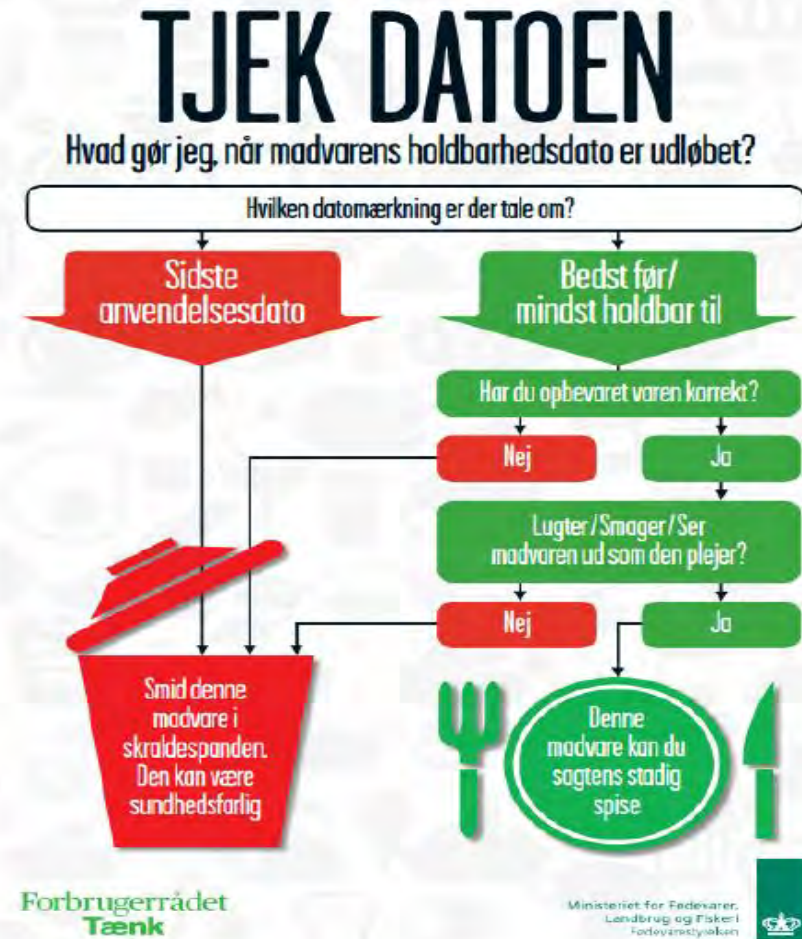
**1) do not know what date labels stand for**

**2) are unsure about the eating quality**

3) have different ideas about what is edible and what is not/  
what is considered food waste

# DATE LABELS IN EU

- **Best before**  
= can be eaten after the date has passed, but quality needs to be checked (look, smell and taste)
- **Use by**  
= should be thrown out when the date has expired - possible food safety/health risk

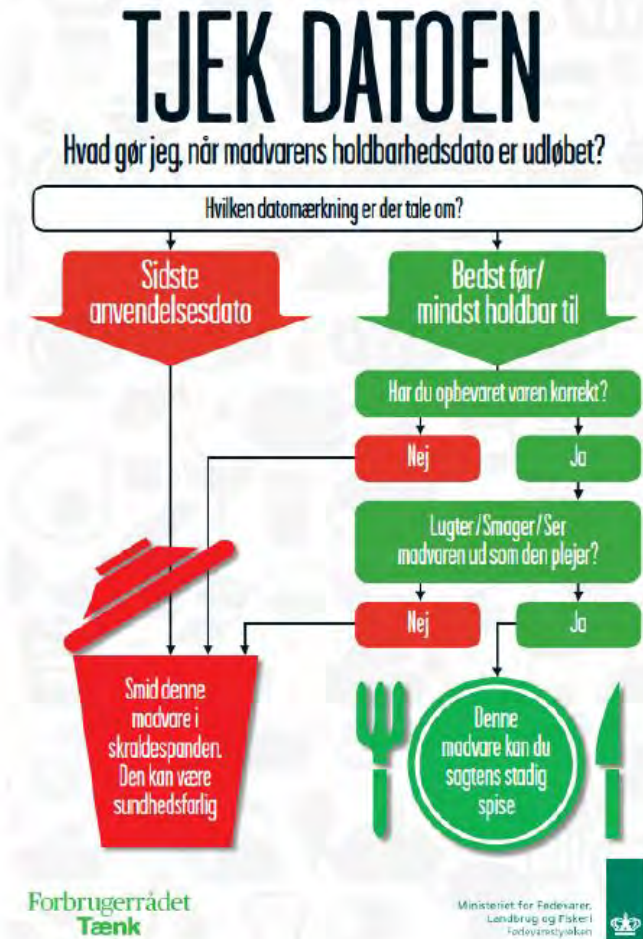


Figur 2: Forklaring på datomærkninger (Fødevarestyrelsen, 2015)



# ARE DATE LABELS ENCOURAGING FOOD WASTE?









	Use by (% True responses)	Best before (% True responses)
Q1. Product should be used by this date	78	16
Q2. Product can be eaten after this date, if it smells and looks normal	33	84



Figur 2: Forklaring på datomærkninger (Fødevarestyrelsen, 2015)

# ADDING SYMBOLS DID NOT CLARIFY MESSAGES

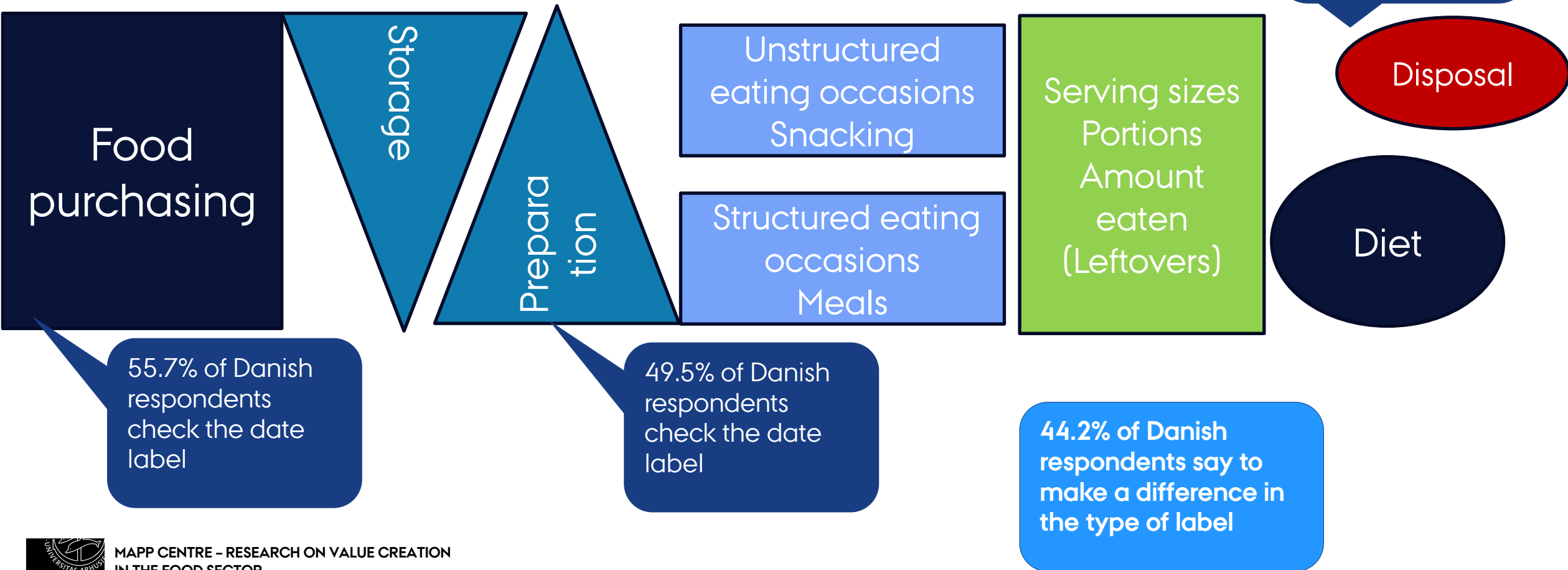
Date label and symbol combined

	Bedst Før			Sidste anvendelsesdato			
	Throw away	– check the product – just use it		Throw away	– check the product – just use it		
	18,8%	73,3%	7,9%		31,1%	63,9%	4,9%
	20,5%	77,6%	1,9%		37,1%	58,1%	4,8%
	18,2%	69,8%	11,9%		32,5%	66,7%	0,8%
	17,5%	70,6%	11,9%		42,0%	52,9%	5,0%
<b>Kontrol</b>	19,7%	74,5%	5,7%	<b>Kontrol</b>	27,8%	58,7%	13,5%

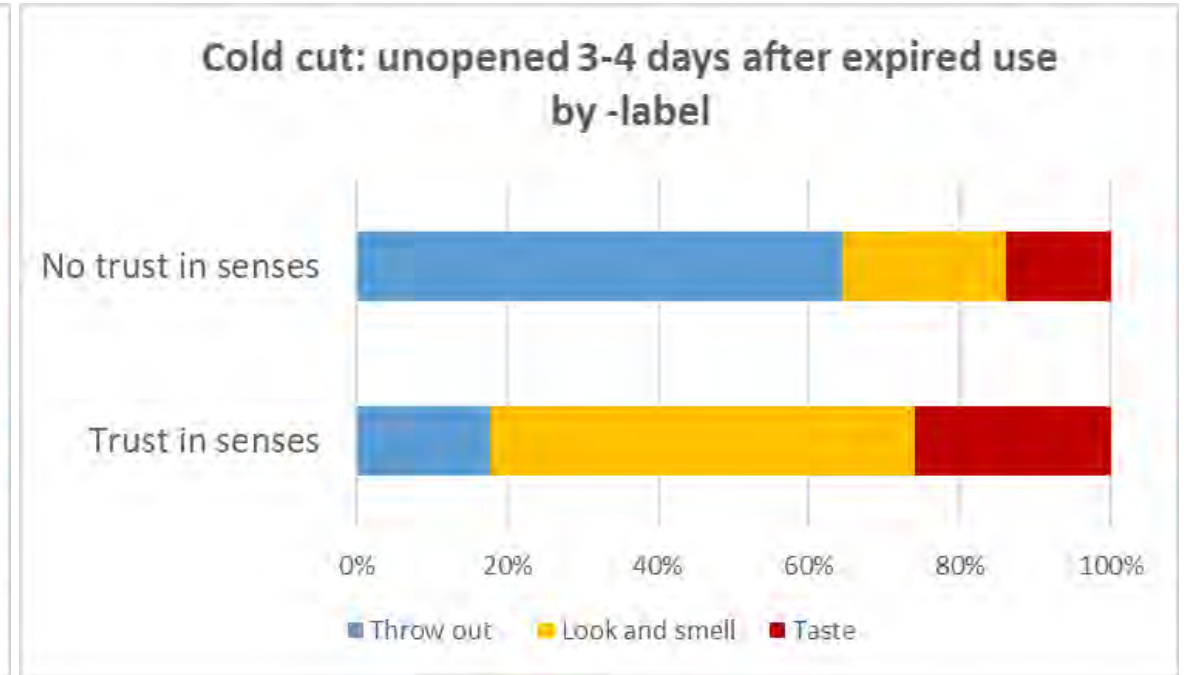
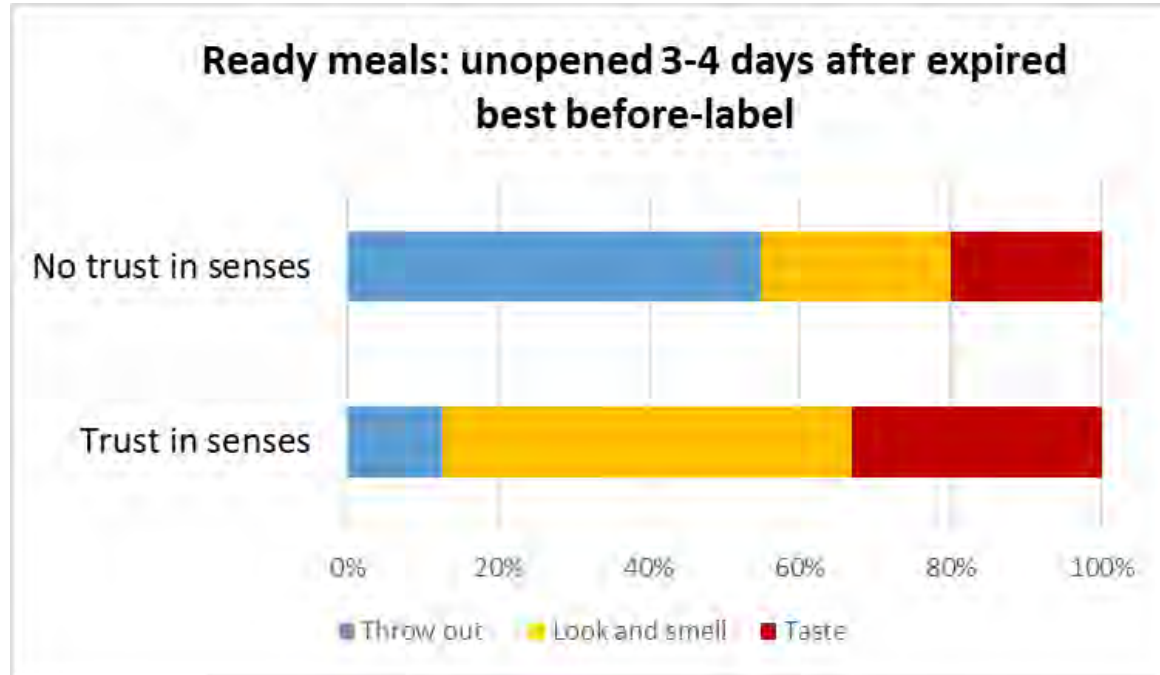
N=647 best before;

N=469 use-by label

# Food provisioning practices at households



# CAPABILITY AND SKILLS TO ASSESS THE QUALITY OF FOOD





# “KEEP OR THROW OUT?” – DATE LABELS AND FOOD WASTE PRACTICES IN HOUSEHOLDS

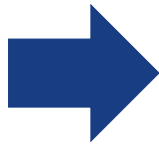


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# CONSUMERS' ASSESSMENT OF RISK IN PRODUCTS WHEN THE DATE LABELS HAVE EXPIRED?

Interviews with 15 and ask them to tell what they would do in different scenarios with products with expired date labels/been opened beyond recommendations



Focus groups were asked to discuss statements that were extracted from the interviews describing different themes

*Statement on social risks: If I have invited guests, I would never serve a products that has an expired date label, it would be unethical. I think it is ok to serve it to my family, but it is not appropriate to invite guests and then serve food that has gone over the expiry date.*

## Example: Scenario 2

You are about to set the table for breakfast and take out a package of smoked salmon. You realise that the package is open, and start to think that you opened it on Saturday and today is Monday, so it has been open for two days. What do you do?



” I think I would be most careful with meat. With milk products I am more scared it would become disgusting, but like, I think you can drink sour milk, if you want to, I don't; but, from a health standpoint, I believe meat to be more dangerous. However, I would always assume there was no risk, if it was only just past the date. You can always judge something by smell and look.

- MALE, 22, FG1

## PERCEIVED RISKS: IT IS THE PRODUCT TYPE,

### NOT THE DATE LABEL

- Risk is linked **to type of product**, not the date label
  - Minced meat, chicken and fish seen more risky than yoghurt, milk or rice when the date has expired
- In products such as milk, rice and pasta the **quality** is expected **to deteriorate before** it becomes a safety risk
- **Chicken** most often linked to **food-borne diseases**, such as salmonella.
- Risk was seen mostly **as stomach pain** but not being anything severe
- **Serving** date expired food **to guests divided views**: some found it inappropriate and some thought it to be completely fine.



*[I would eat the product], because I know when I opened the package, and I know it has been kept cool, and I know what the date label said. I know how the food has been handled after it was opened.*

- MALE, 45, INT



# HANDLING OF PRODUCTS

Handling of products was seen as an important part of product quality, both at the store before buying, during the transport from the store and at home in order to use the products once the date label has expired

For interviewees good hygiene in the kitchen, re-sealing the packages after opening and storing in right temperatures was important as well as transporting product from the store in a responsible manner (for example cooling box for meat, if the shops are at a distance)

Shared responsibility between store (handling before buying) and consumers in the way product is handled

” *I am not too worried that it [expired food] is a health risk, there I just think, well does it smell bad or well good? Does it have an odd consistency? Well then I would never touch it, regardless of if it in date or not.*

- MALE, 25, FG3

# SELF-EFFICACY

– belief in ability to detect the quality



- Using **common sense** was often used term when talking about the decision to either assess the product quality and then use it or throw it out.
- Common sense **protects against becoming ill** due to eating a food product
- **Only few participants** pointed out that one **cannot always smell that something has gone off**, but even after acknowledging that there **was a tendency to use** products such as chicken after the use by date had expired.
- The more self-assured participants were in their ability to judge the quality of the food products, the more they **saw date labels as guidelines**.

” I think we have some generations now that are much more conscious about waste, that we **shouldn't just** look in the fridge and **throw half of it out, just because it expired two days ago**. It has changed completely because we are much more aware of the environment, resources, and overconsumption. I think it has opened their eyes, **I was very conservative in my youth, but young people today are much less likely to be scared of these dates and whatever**.

- MALE, 50, FG2

# FOOD WASTE AND EXPIRY DATES

- Food waste was a recurring theme in the focus group discussions and interviews
- Participants **wanted to emphasise that they waste very little food at home**, especially if they made a decision to throw out a product
- Decisions about throwing products out seems to be a **balancing act between food safety and food waste**
- **Avoiding food waste** seems to be the **socially desirable choice** that may result in using products that have a high food safety risk.
- **Food waste communication** has been effective, but this success **may create safety risks**, especially to vulnerable consumer groups.





” I think that when a producer produces something, then he is very risk averse, and then he says this product keeps four weeks, knowing well it keeps four to five weeks. Better safe than sorry, better this than going to the limit and then risk someone getting ill. Just one shit storm, where someone has gotten ill eating the product. That can ruin a business, so I think they will be safe. [...] I think producers are truly scared that someone might get ill, so therefore they set very conservative expiry dates.

- MALE, 56, INT

# WHAT CONSUMER THINK DATE LABELS ARE FOR?

- Date labels are seen as consumer protection, but they believe dates (both 'best before' and 'use by') are set well before the true "expiry" date :
  - Cannot steer biology (process of deterioration) that exactly
  - Safety margin to protect consumers against food-related disease
  - Safety margin to protect producers against court cases and bad reputation
  - However, a few suggested that dates are set earlier because then consumers need to throw food out and buy products more often
- Even if participants thought that date labels are set earlier than needed, in general they believed them to be necessary and expressed that they have trust in date labels.



# DATE LABELS AND FOOD WASTE



Consumers **know that there are two types of labels but do not make a difference between 'best before' and 'use by' labels** in their practices - both date labels are mostly **interpreted as best before labels** (look, smell and taste and then decide).



Consumers **vary in their self-efficacy in assessing the eating quality**: those with high self-efficacy throw less food out, including food that may contain a safety risk. **Self-efficacy is good for avoiding food waste, but can be counterproductive in food safety**



**Avoiding food waste** is regarded as the main goal and has a central role in discussions about how handle food - **food safety does not cause worry** to most consumers in Denmark.

# MAIN REFERENCES

- Hansen S, Lähteenmäki L. (2021a). Datomærker 2020. DCA - Nationalt Center for Fødevarer og Jordbrug, 2021. DCA rapport; No. 189, 101 p.
- Hansen S, Lähteenmäki L. (2021b) Date Labels 2021 : Consumer practice, perceived risk and self-efficacy. DCA - Nationalt Center for Fødevarer og Jordbrug, DCA Report; No. 197, 74p.





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