

Date labelling and food waste

Results from a project under Nordic Green Growth program

Brussel 24th April 2015

Ole Jørgen Hanssen and Hanne Møller,
Østfoldforskning



norden

Nordic Council of Ministers

Research on food waste – Østfold Research

Started in 2004 – Student project on consumer behavior in Fredrikstad – content of refrigerators

Pilot study for Norgesgruppen 2008

ForMat-project 2009-

Business driven project to prevent and reduce food waste

Quantification, analyses, prevention

Food Waste Prevention –

Research project financed by the Research Council of Norway 2010-2013

Østfoldforskning, Nofima, SIFO
In depth statistical analyses and publications

FUSIONS

EU-prosjekt –Reducing Food Waste Through Social Innovation

Methods for quantification and characterisation of food waste

Nordic Council of Ministers

- *Food waste in primary production*
- *Date labelling systems for food*
- *Food redistribution*



Nordic Food Waste projects 2013-14

- Definitions and surveys of food waste from primary production (Ulrika Franke, Jordbruksverket, Sverige)
- Date labelling and its potential impact on food waste (Hanne Møller, Østfoldforskning)
- Redistribution of food in the Nordic Region (Ole Jørgen Hanssen, Østfoldforskning)

Financed by the Nordic Council of Ministers, the Green Growth Program. All projects will report phase I in autumn 2014 and be continued in 2015.

Is date labelling important for food waste?

- 90% of food waste from the retail sector in Norway is due to expiry date being passed
- 30% of Norwegian consumers say they always throw away food that have passed expiry date

Passed date is important for putting food in the waste bin/container, but it is not a root cause. Possible root causes could be:

- Buying or ordering too much compared to real needs
- Not checking food storage before ordering/shopping
- Too big packaging units (Primary and secondary)
- Too many varieties of the same products available

The project report from Phase I



Date labelling in the Nordic countries

Practice of legislation



Can be downloaded from

<http://norden.diva-portal.org/smash/get/diva2:790885/FULLTEXT01.pdf>

Organisation of the project

- The project group consisted of representatives from Danish Veterinary and Food Administration, Swedish Food Agency, Finnish Food Safety Authority Evira, Norwegian Food Safety Authority and Ostfold Research
- Project start in august 2013
- Finnish project leader from Evira (Finnish Food Safety Authority) at the start of the project
- Ostfold Research took over project management when the Finnish project leader changed position before summer 2014

Goal and scope in Phase I

Scope:

- Identify current practice in the regulations and how this practice eventually can be modified to reduce amount of food waste.

Goal:

- Identify how food labelling are practiced in the four Nordic countries
- Identify any differences in how the food safety authorities interpret legislations and give guidelines to the food business operators.

Main activities in Phase I of the project

- Compilation and description of current legislation and guidelines for date labelling
- Survey on how the industry determines the date label and the shelf life in the Nordic countries and
- In depth interviews with selected companies in each country

§ Legislation §

- The same labelling legislation applies throughout the EU and countries that have an agreement in the European Economic Area (Norway, Iceland and Liechtenstein)
- Merging of legislation on labelling and nutrition to FIC (Food Information to Consumers)
- The FIC-regulation will be fully implemented in all member states in December 2014
- Differences in guidelines and how it is practiced from country to country

Food categories represented by products and companies in the survey

Food category	Denmark	Finland	Norway	Sweden	Total
Dairy product	0	2	4	13	19
Fish product	1	1	1	5	8
Meat product	5	6	5	12	28
Ready-to-eat foods and ready meals	20	8	1	3	32
Total number of products	26	17	11	33	87

How is the shelf life determined?

Answers for all product categories in percent of total answers. The question had multiple choices, so there may be more than one answer for each product.

- Most of the companies answered that the shelf life of the products are determined by “Storage experiments in combination with microbiological and sensory analysis” (58%).
- Some companies also answered that “Experience from other similar products” (20%) and “Product characteristics” (16%) are important

Interviews with follow-up questions in selected companies

The interviews focused on the use of product date labels “best before” or “use by”, for following product types:

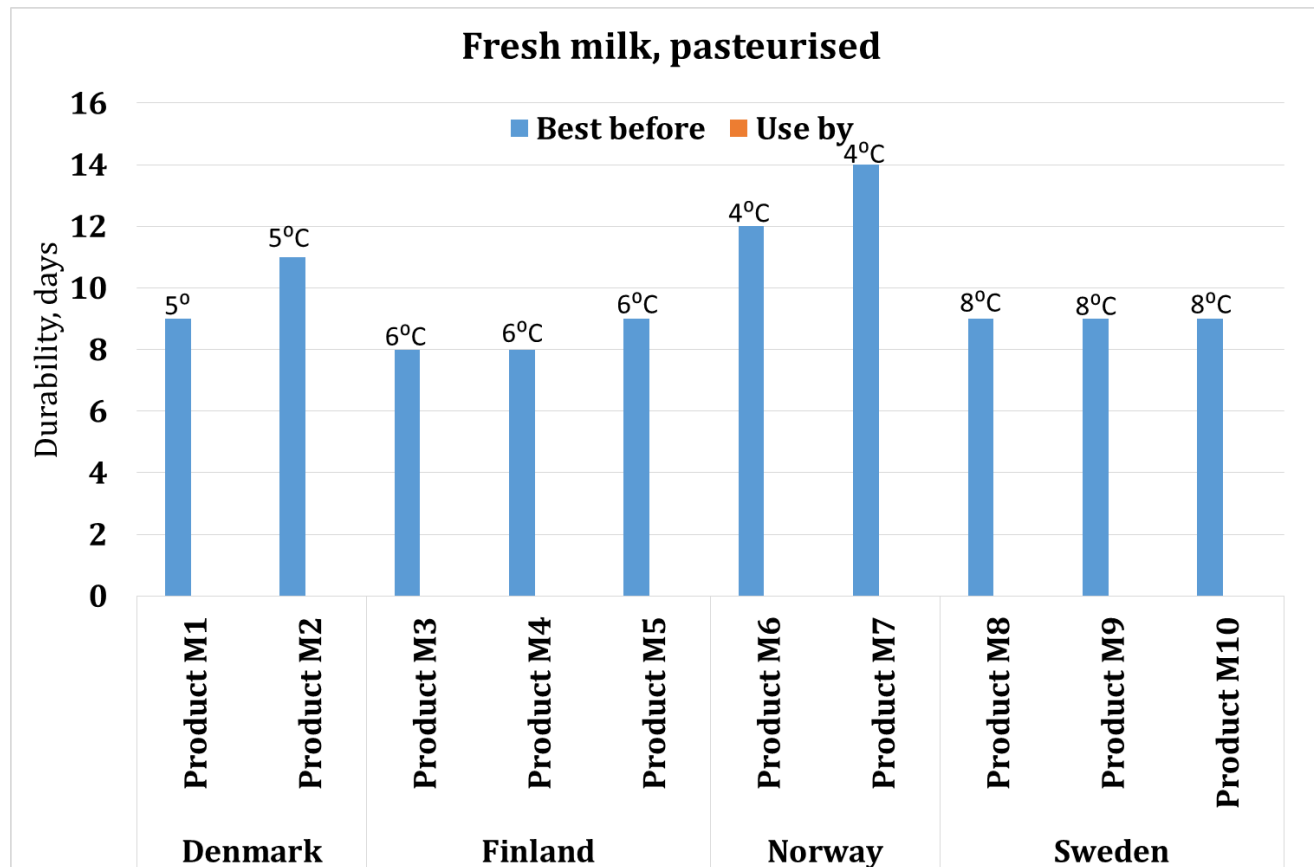
1. Fresh milk, pasteurised
2. Cold smoked sliced salmon, vacuum packed
3. Minced beef, without water and salt, MAP-packed
4. Cooked ham, MAP-packed
5. Warm smoked ham, MAP-packed?
6. Ready-to-eat salad, containing heat-treated chicken
7. Ready-to-eat sandwich, containing chicken (not N)

Questions:

1. Type of data label used (best before or use by)?
 2. Why the specific date label was chosen?
 3. How long durability time? (days) and how is it established?
 4. Processing and packaging solutions?
 5. Other concerns regarding the date labelling (durability/quality/preservatives)?
-
- Are there differences in durability and what are eventually the main reasons? Are the legislation practised equally in all countries?

Fresh milk - pasteurised

Durability in days and type of date marking

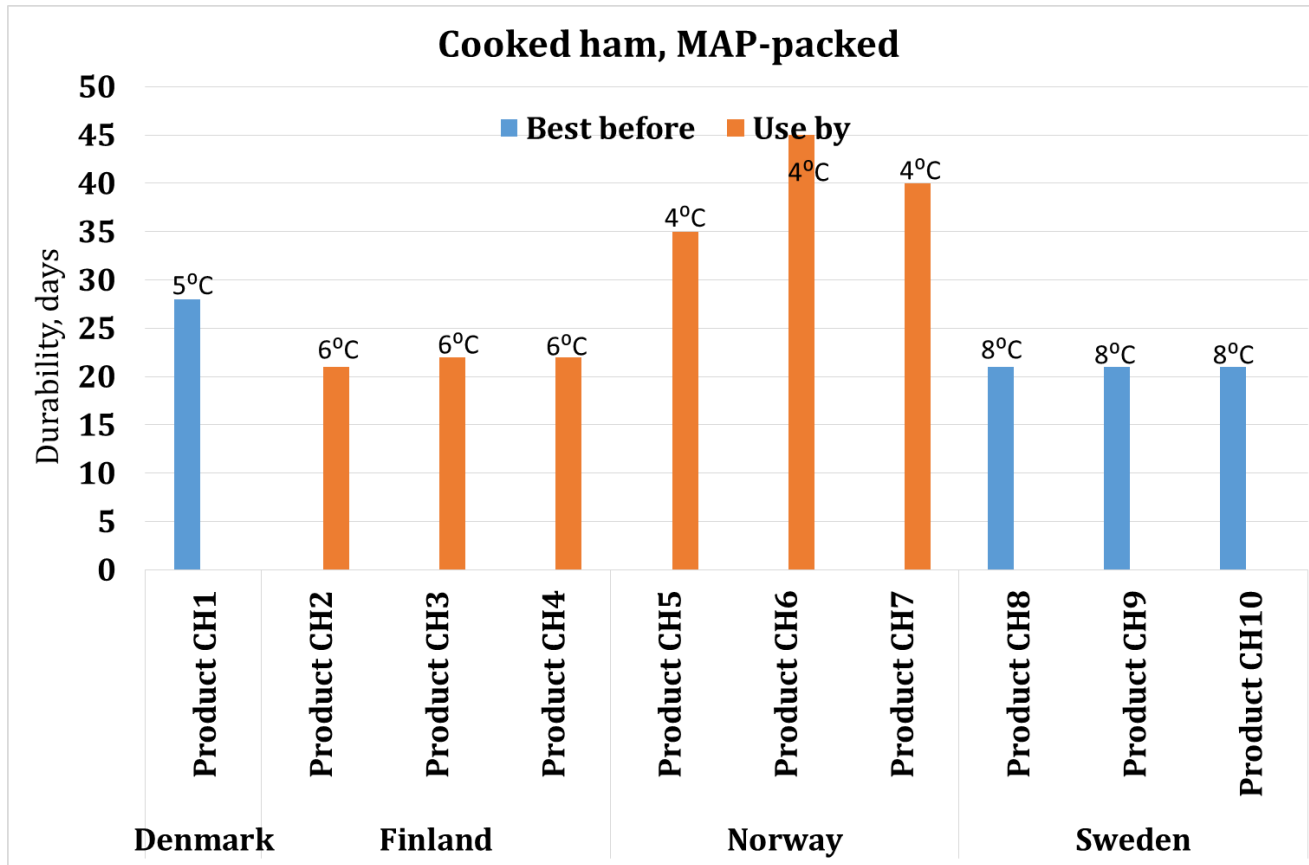


The shelf life of milk varies from 8-14 days. There are also differences in the storage temperature

Marked storage temperature for each product is shown above each bar

Cooked ham, MAP-packed

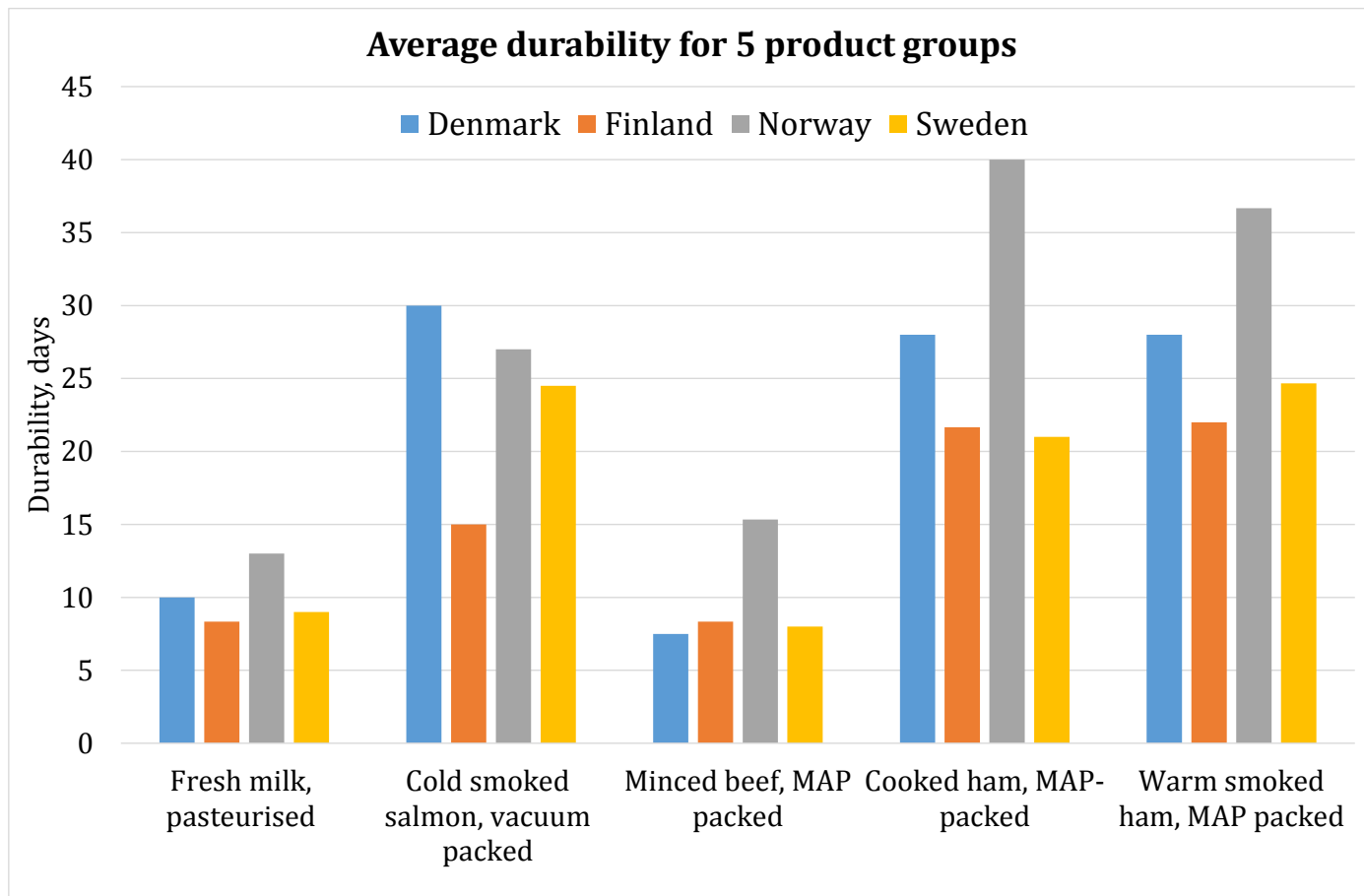
Durability in days and type of date marking



The shelf life of cooked ham varies from 21-45 days and it is used both "best before" and "use by".

Marked storage temperature for each product is shown above each bar

Average durability for the selected products groups



Main findings in Phase I

- For all the products, there was a major difference in the determined shelf life between countries.
- Fresh milk, cold smoked salmon, cooked ham and warm smoked ham had double as long durability between the countries with shortest and the longest.
- Minced beef, had a threefold increase from the shortest to the longest shelf life.
- The ready-to-eat salad and sandwich had even larger difference, but it must be emphasized that different packing methods were used for the ready-to-eat products. Therefore, the shelf life as such is not comparable for these products.

Type of labelling – “best before” or “use by”

- Different type of labelling for smoked salmon, cooked ham, smoked ham and ready-to-eat products.
- Swedish food manufactures use the “best before” label much more often than manufacturers in the other countries for the products included.
- This is probably because there has been an established practise of the Swedish manufactures to only use the label “use by” if the product is included in the guidance document to Swedish labelling legislation (LIVSFS 2004:27). This guidance document is now changed after FIC is implemented.

Differences in practice of the food legislation between Nordic countries

- Both the survey and the in-depth interviews have shown that there are different ways to interpret legislation:
 - Choice of the type of date labelling
 - Assessment of necessary shelf life
- After FIC is implemented in 2014, it is allowed to sell products marked "best before" after the expiry date in all countries (but not necessarily practised) . This was not allowed in Denmark before.

Further work in phase II

- Phase I was first of all a descriptive study to develop methodologies and identify differences between product categories and countries in determining date labels.
- Phase II will have focus on
 - Develop common Nordic guidelines and principles for how to define Study of underlying causes for differences between countries regarding choice of date label and durability time
 - Joint Nordic positions will be developed for guidance of choosing type of date labelling
 - A review of issues related to durability of opened packages will be done
 - Mapping will be done of empirical data for food waste which are directly linked to date labelling

Thank you for listening!



E-post: ojh@ostfoldforskning.no