Analysis Innovation of Products with the Choices logo

28 April 2016

Introduction

The Dutch Choices Foundation has two aims:

1. Stimulate food producers to make healthier products; and
2. Enable consumers to easily recognise the healthier products.

It is important to examine to what degree these aims are achieved. This research is focused on assessing the foundation's success in achieving the first aim concerning product innovation.

The initiative of the Dutch Choices Foundation influences product innovation in four different ways:

1. The development of new products which fulfil the criteria.
2. The reformulation of the existing products to fulfil criteria.
3. The reformulation of products carrying the logo in order to fulfil new or future, more stringent, criteria.
4. The influence of retail and catering on food suppliers and from producers on the suppliers of ingredient in order to deliver (half) products with a healthier composition.

In 2010 the Free University Amsterdam (VU University) published a research examining the influence of the Choices logo on product innovation (Vyth et al, 2010). This research was focussed on points 1. and 2. above. In their research it was demonstrated that the logo helps stimulate companies to develop (new) products which fulfil the criteria of the logo. In various food categories the content of sodium, sugar or saturated fats was changed significantly in order to satisfy the criteria of the logo. The RIVM established in 2015 that an effect of the logo on product innovation is indeed probable.

The foundation has asked itself whether product innovation continues after products have received the logo and conform to the latest available criteria (point 3.). To examine this, we conducted an analysis on the composition of products **with** the Choices logo within all product categories. Below you can find the first preliminary results.

Methodology

Per product category the compositions of all products carrying the logo have been collected for the period 2007-2015. In doing so, we used the products which were at that time (31-12-2015) registered with the foundation. These products were therefore awarded the logo by the body responsible for reviewing products (TNO or SGS). Per given year we assumed that all products which were not taken out of the database were still carrying the logo, except when products did not conform to the criteria of the logo one year after new criteria were introduced. Assurance research has shown that there were practically no violations of products that carried the logo even though these products, following a change in criteria, needed to be innovated.

We looked at the average composition of products within one product category. When there was a large variation within the product category, we also studied the composition of particular sub-groups of this product category.

Results of essential nutrients in selected product groups.

The most important changes in the studied product categories are presented below. For those categories and nutrients which are not mentioned, no significant change in the average composition was found. This does not mean that individual products were not innovated. It could well be that products have made the biggest innovation step at the stage of certifying the product for carrying the logo, i.e. to enter the choices initiative. Next to this, improvements within individual products can be lost in the average composition. An additional research into the changes of individual products over the period 2007-2015 is currently being executed.

In the different graphs it can be seen that the amount of products in the product categories suddenly decreased in the period 2012/2013. This is because in 2012 the foundation asked its participants to remove products from the database which were no longer being marketed or which significantly changed composition. The online database is used by producers and retail to enter its products and to have them approved by SGS.

Basic products with a Choices logo with green circle

Reduction of saturated fats in dairy beverages

In dairy beverages a clear reduction in the saturated fat content was found during the period since 2006. Even though the absolute content per 100g was small, the almost halving of the saturated fat content is still very striking. After 2013 the saturated fat content reduced further while the amount of products increased. This means that more products with less saturated fat were certified for the logo. Within this product category there were further changes realised regarding added sugar and saturated fat in order to obtain the logo (Vyth et al, 2010).

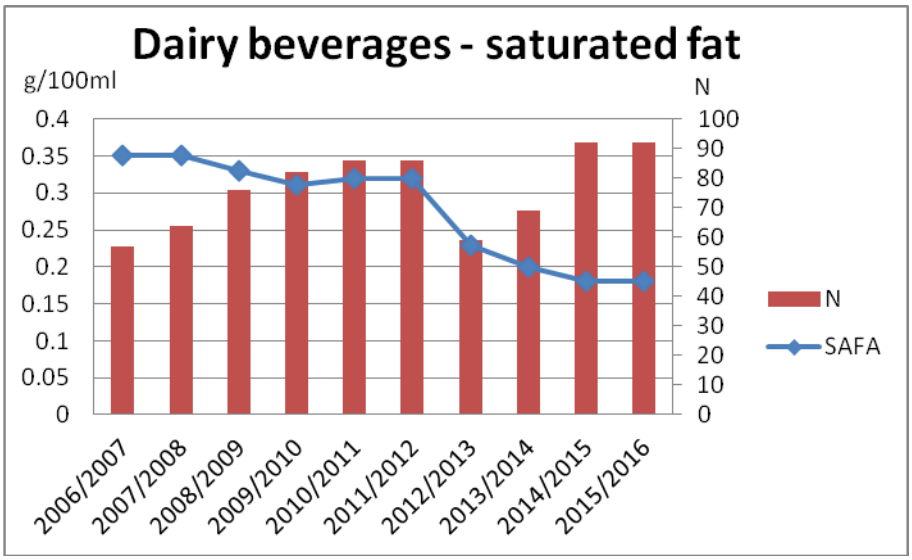

Figure 1. saturated fats in dairy beverages

Reduced sodium in spreadable fats (low fat spreads)

The analysis demonstrates a strong decrease (>75%) of the average sodium content in spreadable fats compared to 2006. This decrease can be attributed to the tightening of the sodium criteria at the end of 2010. This criteria-adaptation has also contributed to the decrease in the amount of products in this product category as part of the products could no longer fulfil the new criteria. After 2013 the amount of products again increased.

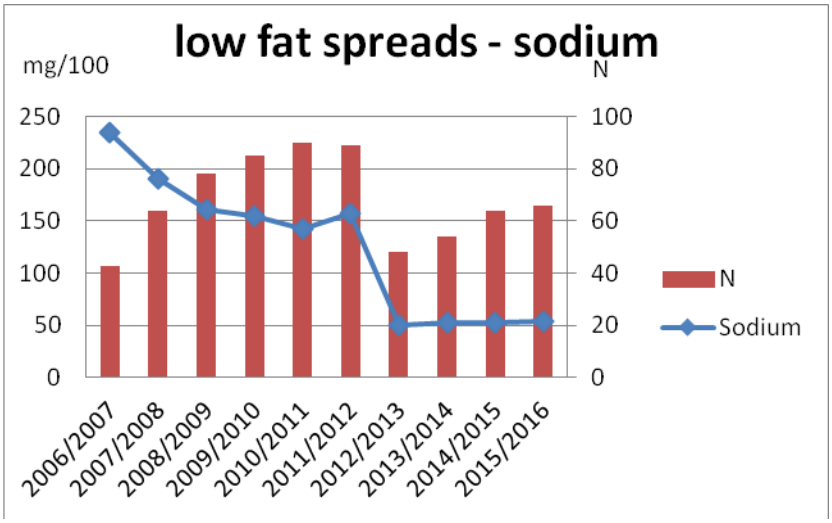

Figure 2. Sodium in low fat spreads

Sodium decrease in cheeses

In the whole product category there was no decrease of the average sodium content found. However, upon examination of hard cheeses only (e.g. Gouda cheese) it was shown that their average sodium content decreased with around 8% since 2006. The amount of hard cheeses carrying the logo increased over the past years.

Sodium in processed fruit and vegetables

After a start-up criterion of 1.6 mg/100kcal, the sodium criterion was changed in 2007 to 120mg/100g. This criterion is far below the average sodium content in processed vegetables (around 250 mg/100g). As a result of the strong sodium criterion the average salt content decreased, but there are only few products with the logo.
In 2010 the sodium criterion was increased to 200 mg/100g, the aim of this was to incentivise more producers to decrease the sodium content of their products. From 2010 onwards the amount of products with the logo increased. Before this date many products were far above the 200 mg sodium/100g, but this border could, through reformulation, be achieved. The new products often have sodium contents which are higher than the previous products with the logo. This resulted in an increase in average sodium content.

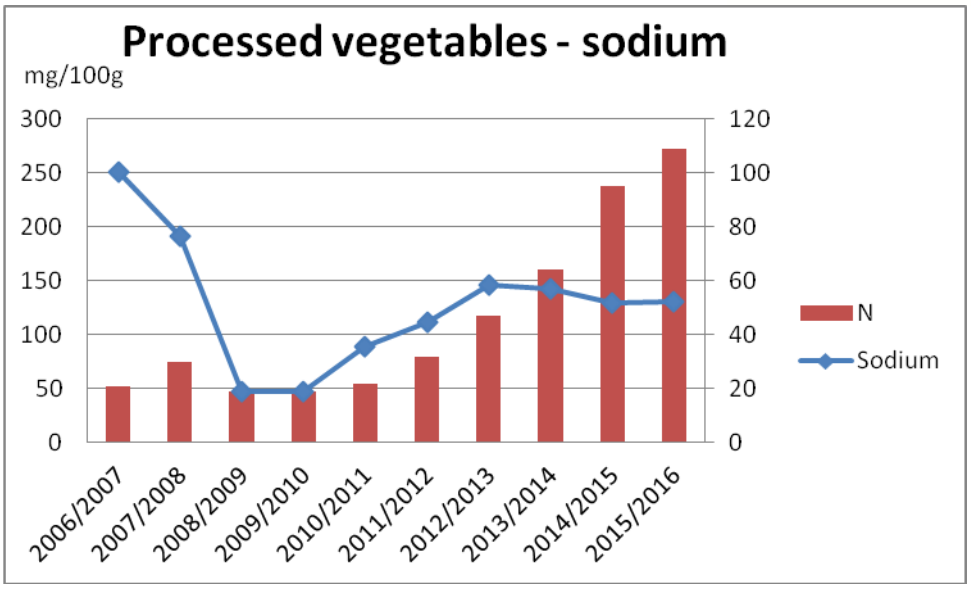

Figure 3. sodium in processed vegetables

Sodium and fibres in bread

The average salt content in bread with the Choices logo has decreased with around 14%. Next to this, the fibre content in bread has increased with 10% whilst the (already low) saturated fat content decreased with 30% (from 0.9 to 0.6 g/100g). The latter finding can be associated with the tightening of criteria for saturated fat in 2010 (from maximal 1.4 to 1.1g/100g).

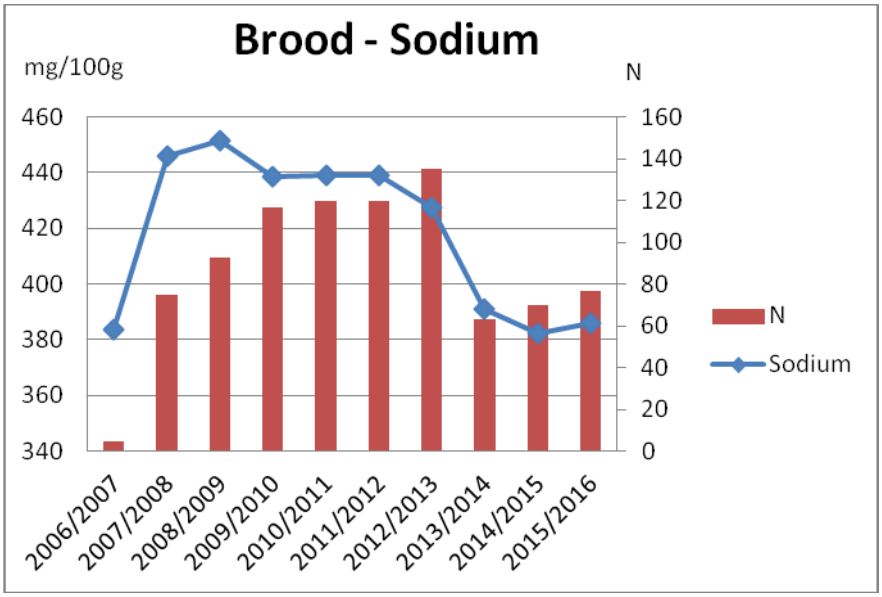

Figure 4. Sodium in bread

Saturated fat in processed meat

In processed meat products the average saturated fat content decreased with almost 25% (from 1.9 to 1.5g/100g). Products within this product category have often already made a big step in order to receive the logo, as described by Vyth et al (2010).

Non-basis products with the blue circle

Sodium decrease in soups

In soups we found a decrease in sodium content of around 5% between 2006 and 2015 (from 320 to 305 mg/100ml). In the research of Vyth et al (2010) it was also demonstrated that many soups had innovated in order to carry the logo. The sodium content of soups before and after reformulation were examined and a decrease of 13.5% percent was found (from 372,4 to 322,0 mg/100g)

Energy or sugars in drinks

The product category 'drinks' consists both of light drinks with an energy content of 0-4kcal/100ml and products with a reduced energy content up to the criterion (33kcal/100ml at first).The energy content of products within this category carrying the Choices logo increased at first because the energy criterion was far above the average of the group. New entrees were, as a result, also often above the average.
After 2012 more products with a relative lower energy content started to carry the logo. This resulted in a decrease of the average energy content of drinks with the Choices logo. The percentage of drinks with less than 5kcal/100ml remained close to equal.

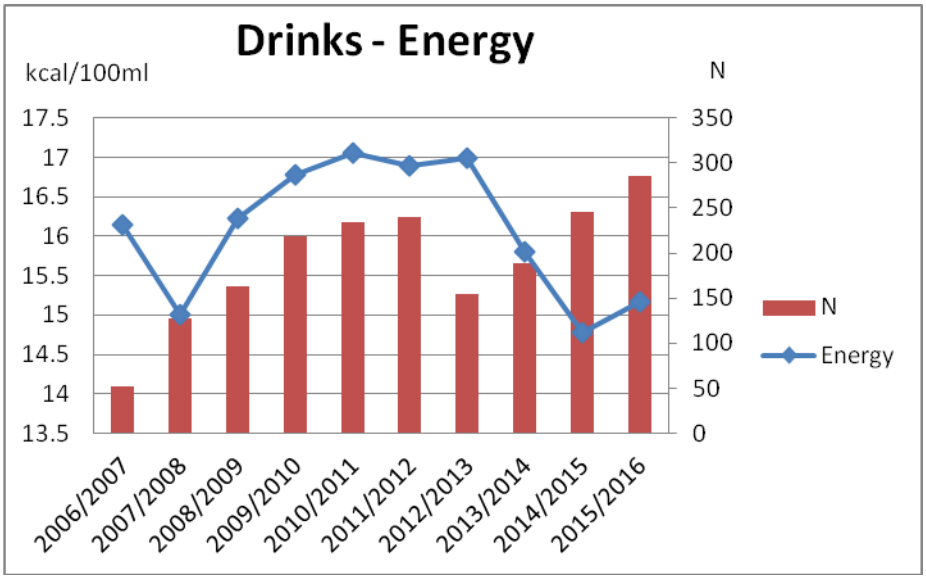

Figure 5. Energy in drinks

Reductions in fats, sodium and energy in emulsion sauces

The category 'sauces' is in 2007 divided in three subgroups with differing criteria.

1. Dinner sauces (e.g. pasta sauces). Usually big quantities of these are used in a meal.
2. Watery sauces (e.g. ketchup). Sauces which are used in smaller quantities and are water based.
3. Emulsion sauces (e.g. mayonnaise). Sauces which are used in small quantities and contain fat.

Saturated fat in emulsion sauces

In the group emulsion sauces, the saturated fat content has decreased 25% compared to 2007 (from 2.65 to 1.99 g/100g). The average energy content has been reduced with 8% since 2007 (from 263 to 242 kcal/100g) and seems to be the result of the decrease in fat content.

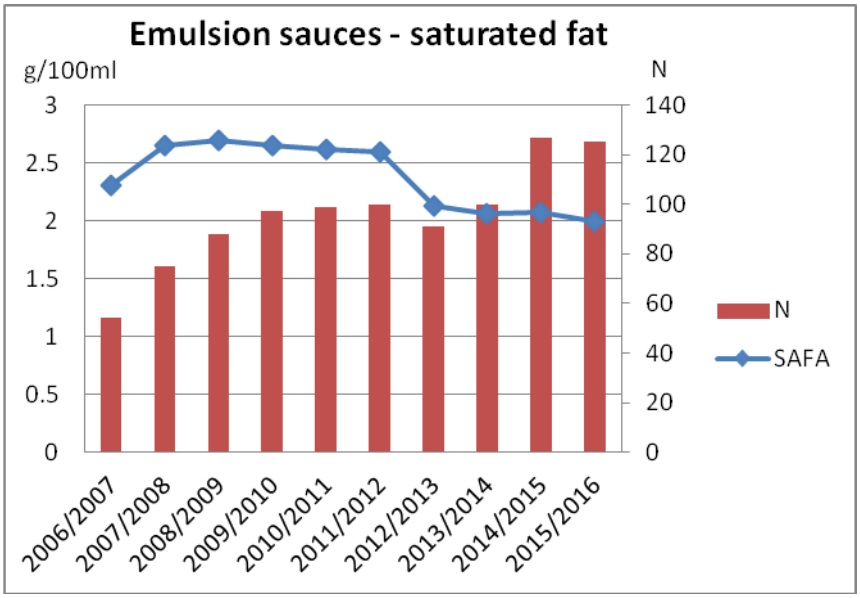

Figure 6. Saturated fat in emulsion sauces

The average sodium content has, since 2006, been reduced with 9% from 651 to 595 mg/100g. This could be the result of a strong tightening of the criterion in 2007

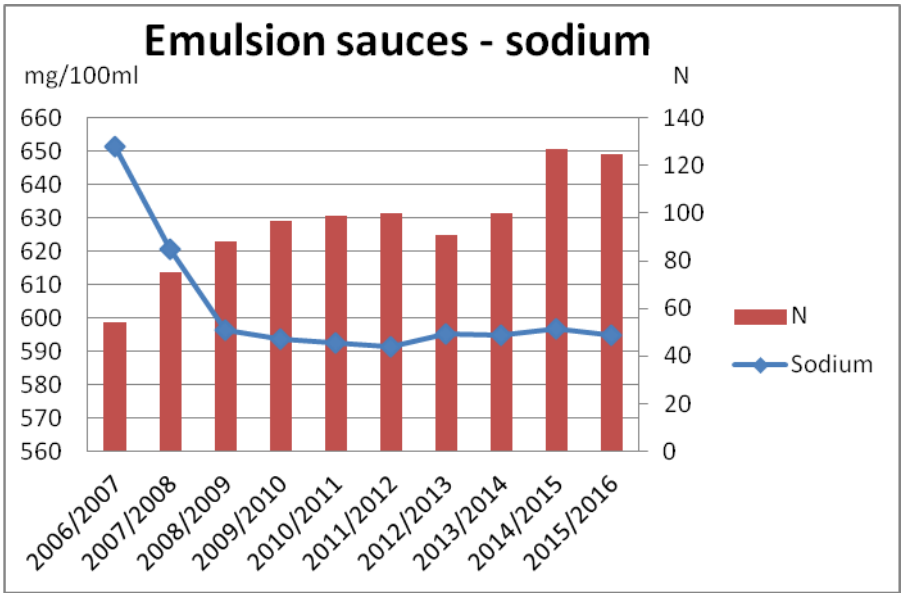

Figure 7. Sodium in emulsion sauces

Sodium in watery sauces

The average salt content in watery sauces has decreased with 27% since 2006, while the amount of water based sauces with the Choices logo has clearly increased throughout the years.

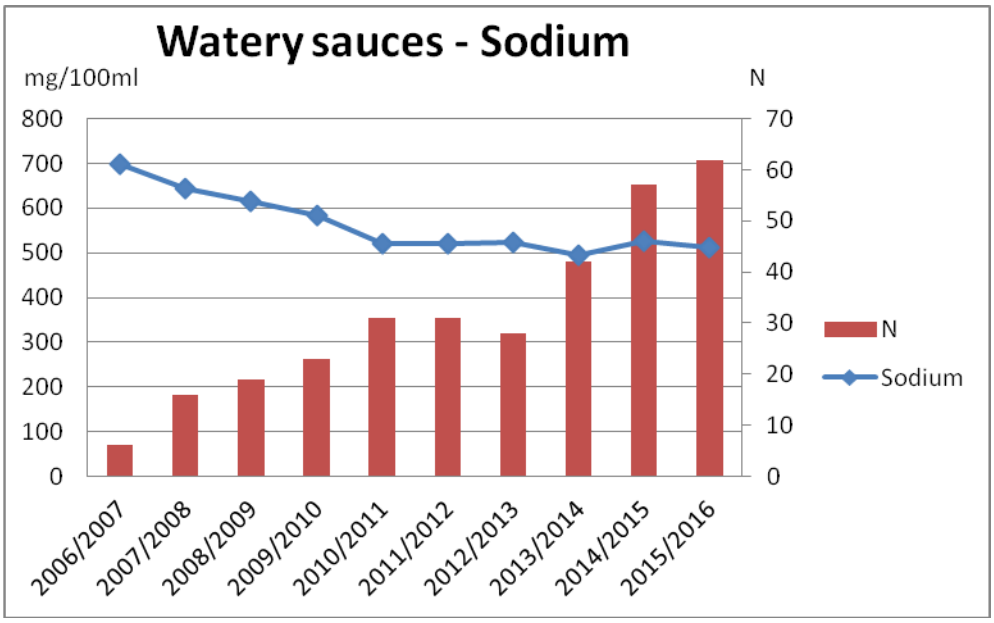

Figure 8. Sodium in watery sauces

Next to this, the average content of added sugars has decreased with over 30% while the energy content has decreased with 25% (not shown).

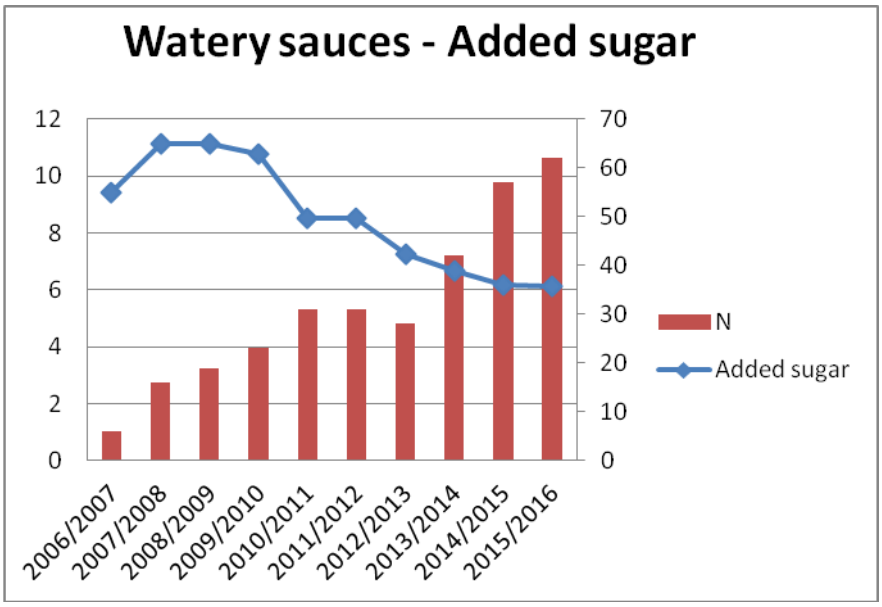

Figure 9. Watery sauces and added sugar

Energy content in dinner sauces

The average energy content in dinner sauces has, since 2006, decreased with 14% (from 77,6 to 66,7 kcal/100g).

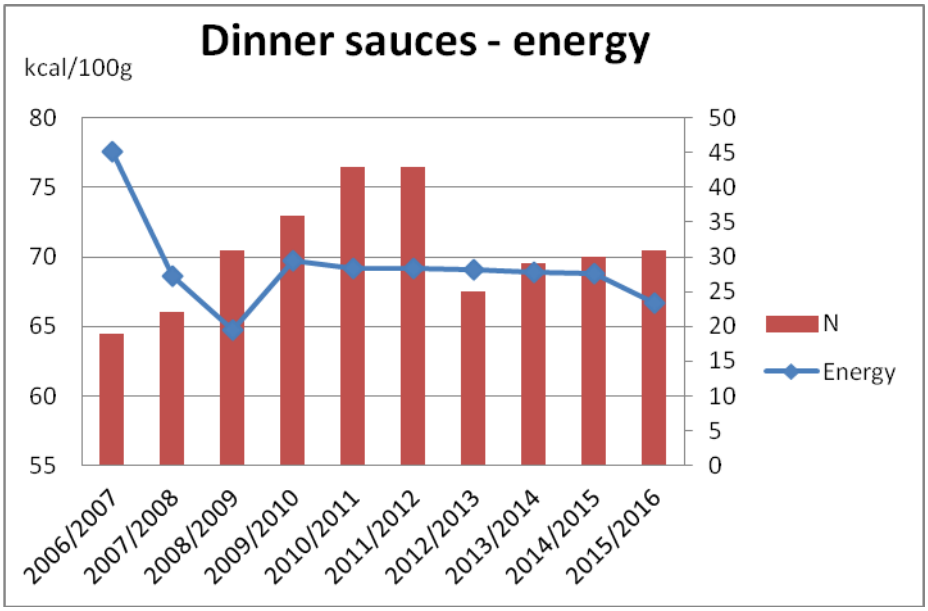

Figure 10. energy in dinner sauces

Energy and saturated fats in bread toppings (salads)

The product-category 'bread toppings' consists some 75% of salads such as celery- or crab salad. The average energy content for bread salads has decreased with over 10%. The decrease of the amount of products and the decrease in energy content might be the result of the introduction of separate criteria for bread toppings, including an energy criterion, in 2010. Because of this the more energy-rich products could no longer carry the logo. The reduction in the energy content was partly caused by a decrease in the saturated fat content (-8%, not shown).

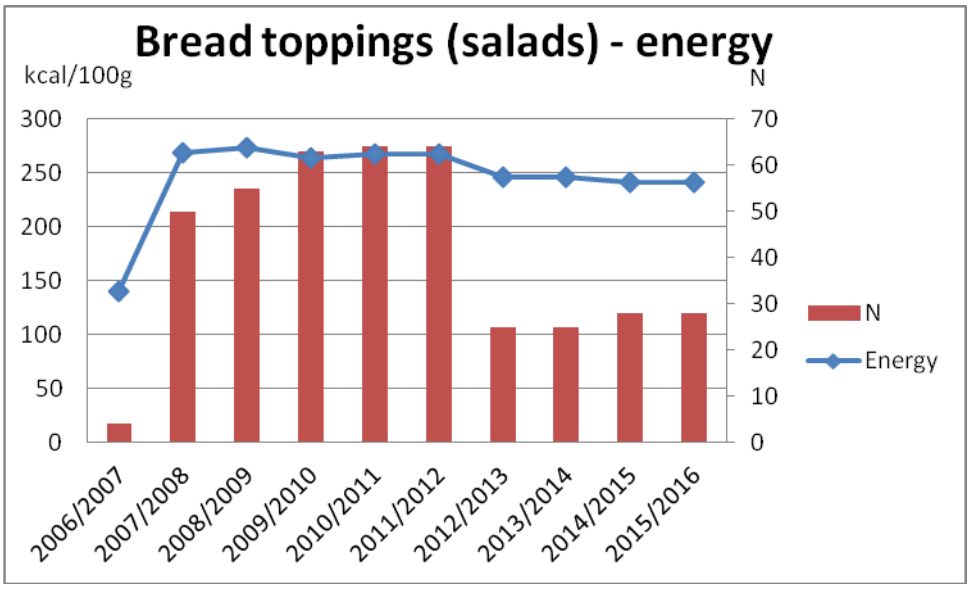

Figure 11. Energy in salads

Snacks

The product category 'snacks' consists of multiple sub-groups such as ice cream, salty snacks, sweets and cookies. We looked into product adaptations in each of these sub-groups. On average, ice-creams with the logo now have 10% less energy compared to 2007. The average content of trans-fats in the sub-group with cookies, cakes and (muesli) bars was already low but further decreased with almost 75% (from 0.29 to 0.07 g/100g). Next to this, products from this category do now contain on average around 15% less sodium and 20% less saturated fats compared to 2007.

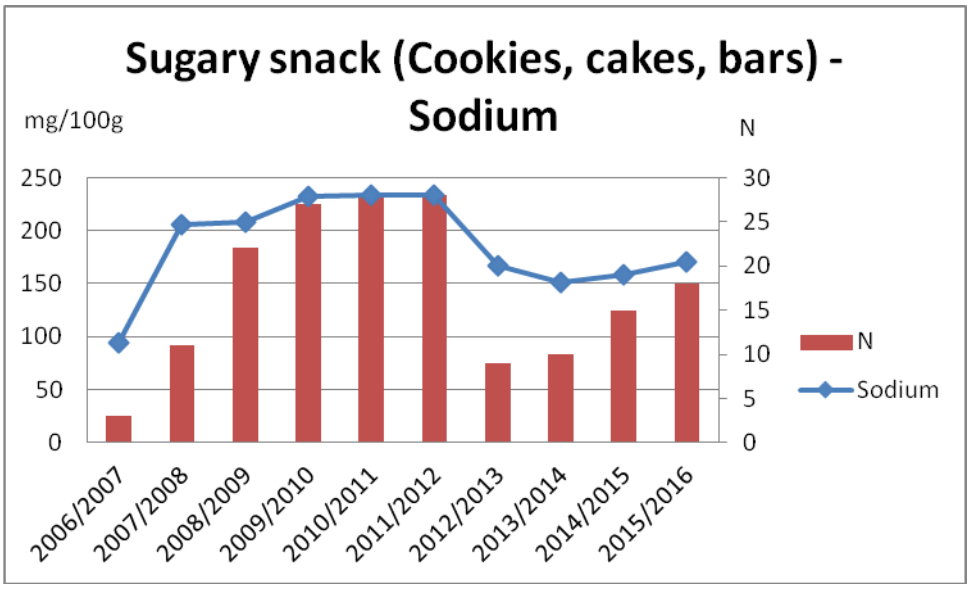

Figure 12. Sodium in sugary snacks

Conclusion and discussion

The preliminary results shown above demonstrate that in the period 2007-2015 product innovation took place in both the basic and non-basic product categories. This can in certain cases be directly linked to the tightening of the product criteria. This only concerns products which already carried the logo. Therefore these data do not refer to the adaptations realised in order to enable products to carry the logo. Next to this we have discussed only average contents. When these have not changed, it might still be the case that individual products were innovated. For this there are many indications. For example, we can demonstrate for 50 different soups that they contained in 2015 8% less energy than in 2007. This is not expressed in the average of the soup product category. Further research into the innovation of individual products is currently being conducted.