

Salt reduction initiatives in the UK savoury snacks sector

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(SNACMA)





About SNACMA

The Snack, Nut and Crisp Manufacturers Association (SNACMA) is the trade association for the savoury snackfood industry in the UK.

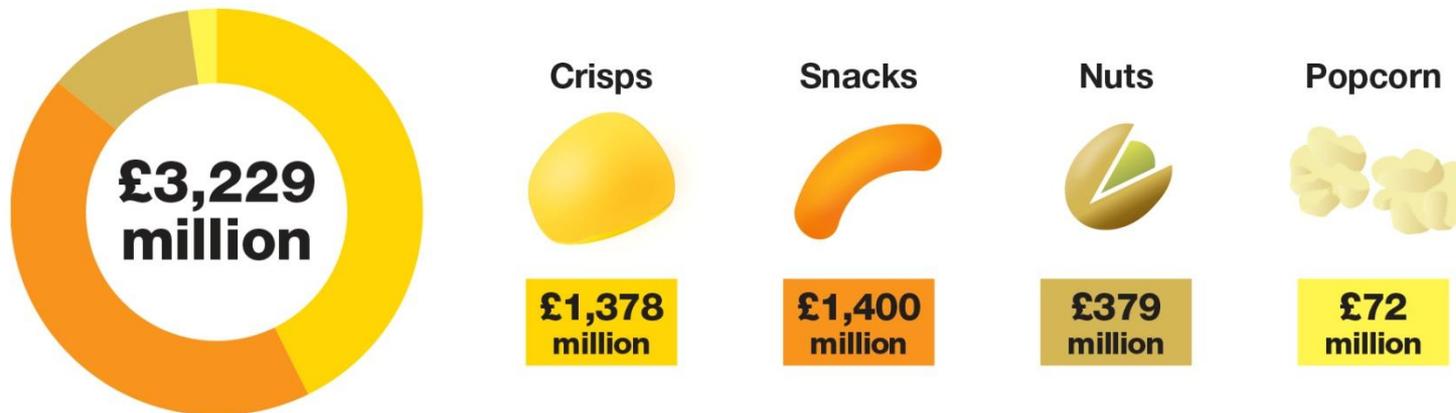
SNACMA membership is open to any UK manufacturer of potato crisps, savoury snacks or snack nut products.

Current SNACMA membership includes the six main savoury snack manufacturers operating in the UK market, who together account for over 90% of all sales volume.



Context: Size of UK market

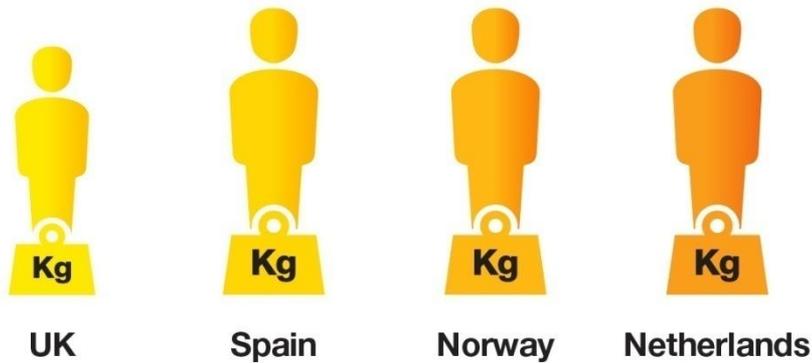
Market Worth UK



As with other parts of the food industry, the savoury snack sector makes a significant contribution to the UK economy, and plays a vital role in the country's manufacturing strength.

In 2013, the value of the UK crisps and savoury snacks market was estimated at £3.2 billion (Estimated total value of the FDM sector is ~£78 billion).

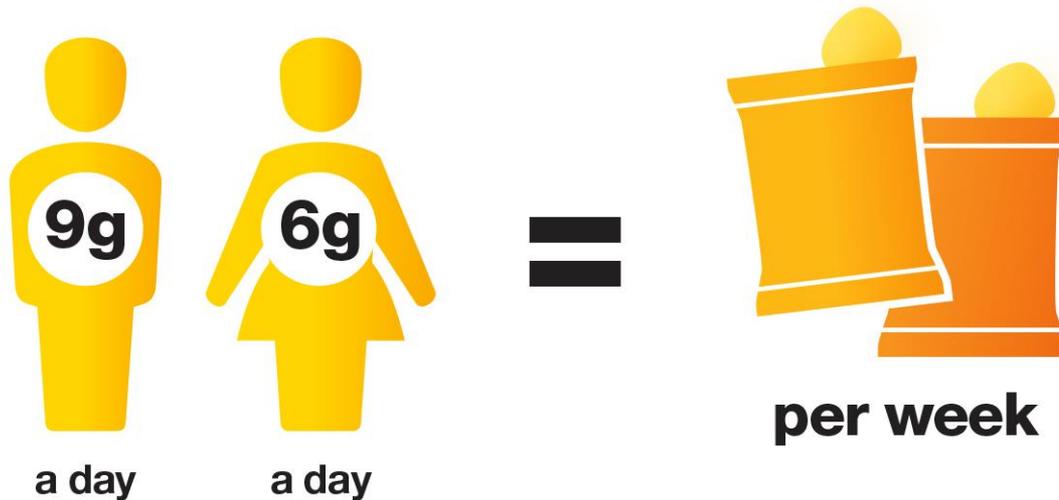
Per Capita Consumption Europe



Although the UK is the biggest single market for crisps and snacks within Europe, we certainly aren't the biggest savoury snackers.

Consumers in the Netherlands, Norway and Spain all consume considerably more crisps, savoury snacks and snack nuts (per capita) than the UK

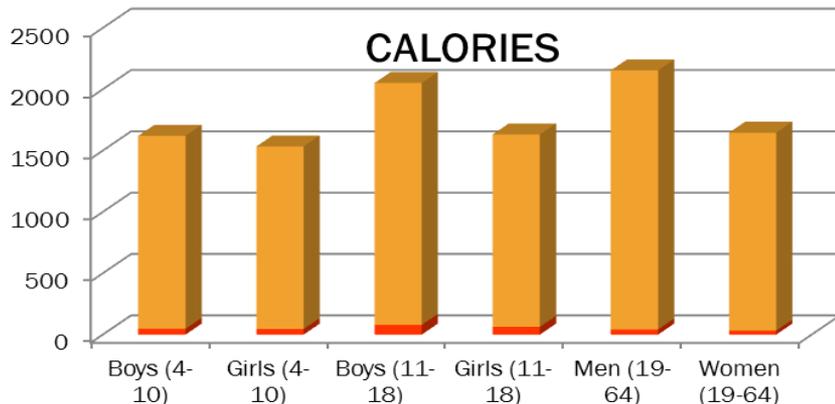
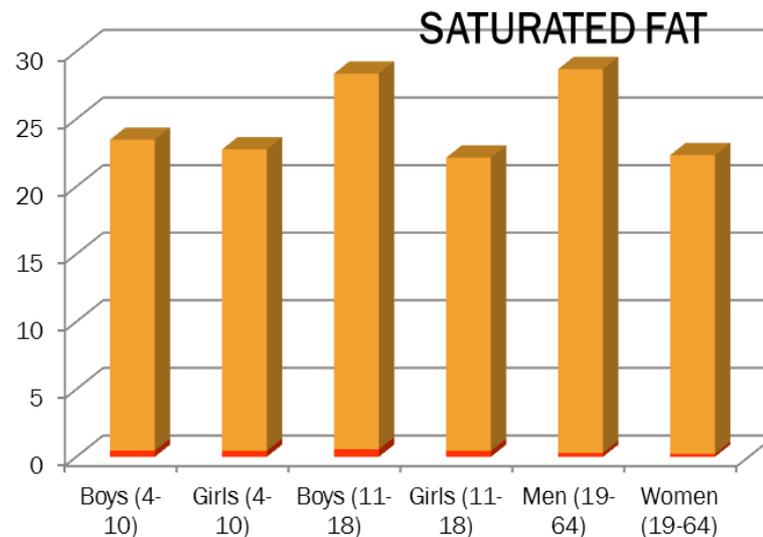
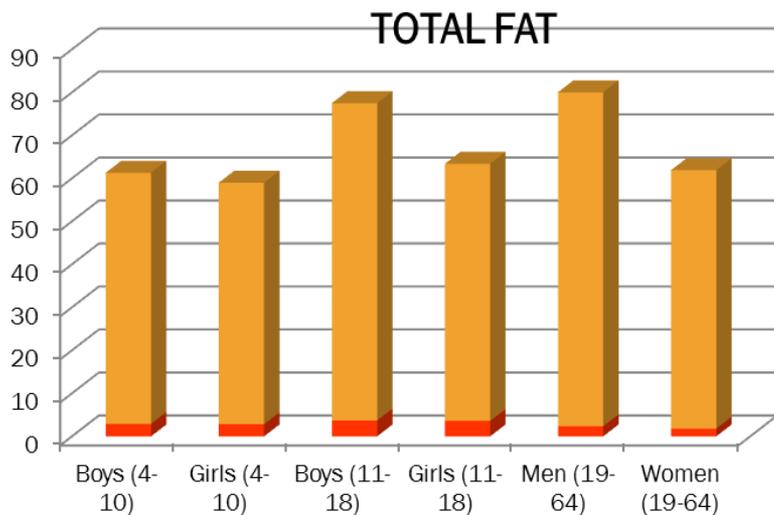
Average Consumption UK



According to the National Diet & Nutrition Survey the average man (aged 19-64) eats approximately 9g of crisps and savoury snacks per day, while the average woman (aged 19-64) eats 6g per day.

This is equivalent to approximately 2-3 (25g) bags of crisps/snacks per week, which obviously affects the contribution to average dietary intakes.

Salt reduction against a back drop of other reformulation activities

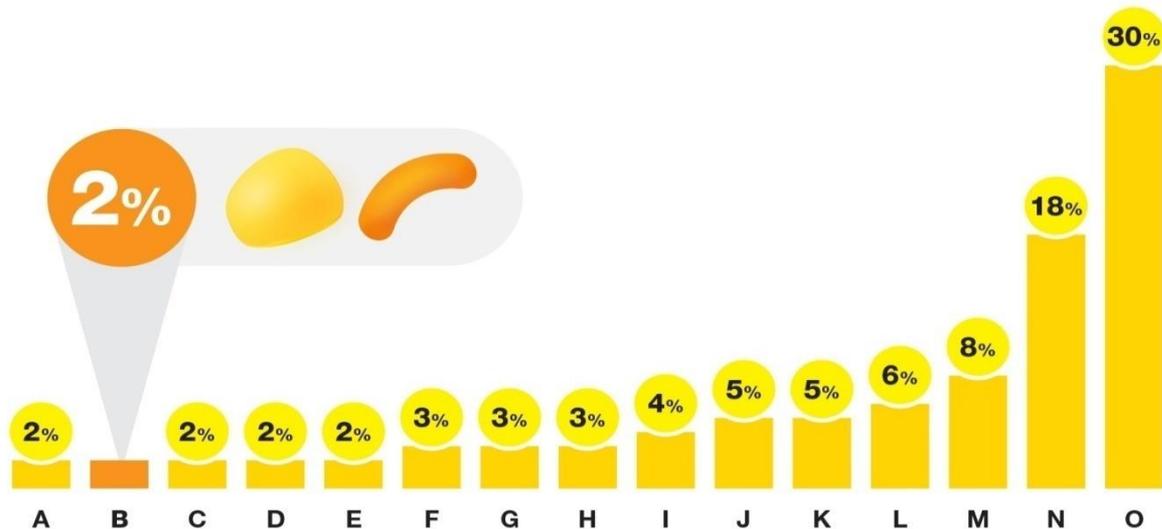


Fat	3%
Saturated Fat	<1%
Calories	3%

■ Savoury snack contribution to average daily intakes

Contribution to overall intakes is limited

Dietary Salt Intake Crisps & Savoury Snacks



- A Eggs and egg dishes
- B Crisps and savoury snacks**
- C Buns, cakes, pastries and fruit pies
- D Biscuits
- E Breakfast cereals
- F Soup, manufactured/retail and homemade
- G Fat spreads and butter
- H Milk and cream

- I Cheese
- J Fish and fish dishes
- K Savoury sauces, pickles, gravies and condiments
- L Pasta, rice, pizza and other miscellaneous cereals
- M Vegetables, potatoes
- N Bread
- O Meat and meat products

Basis for Government action on salt

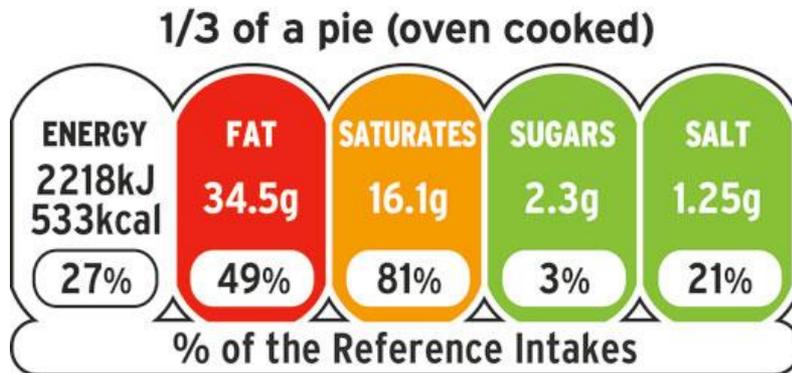
- 1994: Committee on Medical Aspects of Food (COMA): dietary salt intake should be reduced to 6g a day.
- May 2003: “Salt and Health Report of the Scientific Advisory Committee on Nutrition” (SACN) published:

“...Reducing the average population salt intake would proportionally lower population average blood pressure levels and confer significant public health benefits by contributing to a reduction in the burden of cardiovascular disease...”

FSA/DH Salt Reduction Strategy

The work has been taken forward in two main areas:

- Public awareness campaigns to inform consumers of the issues and provide them with guidance on how to reduce their salt intake.
- Reformulation work - which entails working with all sectors of the food industry to reduce the salt content of processed food products.



Typical values per 100g: Energy 1210kJ/291kcal



Crisps often used by third parties as common reference point for consumers



New Study Reveals Huge Differences in Salt Levels in the Same Iconic Food Brands in Different Countries

Compares cornflakes in two countries – “a difference of more salt than a standard packet of ready salted crisps”

Healthy Salads Stuffed with Secret Salt Revealed in New Survey

Three quarters of salads ‘contain more salt than a packet of crisps’

New Research Exposes Completely Unnecessary Levels of Salt Hidden in Butter and Margarine

‘Just one slice of buttered toast can contain more salt than a packet of crisps’

Salt Reduction Targets

- Voluntary salt reduction targets drafted in August 2005 (85 categories of processed food).
- Finalised March 2006, with targets based upon average levels set for 2010.
- Review of targets began in December 2007.
- Finalised May 2009. Revised targets set for 2010 along with new targets for 2012.
- Revision of targets started in 2013 under the RD.
- Finalised March 2013.
- Revised targets set for 2017.

FSA/DH Targets

Product Category	Original FSA 2010 Target g/100g	Revised FSA 2010 Target g/100g	FSA 2012 Target g/100g	DH 2017 Target g/100g
Standard Crisps	1.5	No change	1.38 (ave) 1.63 (max)	1.31 (ave) 1.45 (max)
Extruded Snacks	2.8	2.25	1.88 (ave) 2.50 (max)	1.7 (ave) 2.00 (max)
Pelleted Snacks	3.4	2.5	2.25	2.13 (ave) 2.88 (max)
Salt & Vinegar Products (all)	3.1	2.38	2.13 (ave) 3.0 (max)	1.88 (ave) 2.5 (max)



Industry data collection activity

- Industry data collected from members by the SNACMA Secretariat.
- Secretariat calculates a Sales Weighted Average (SWA).
- SWA acts as a 'sense check' to see how the sector compares with the targets.
- DH uses Kantar data - which is expensive – but also there is the potential that products are incorrectly categorised/coded.
- SNACMA figures reflect the collective market, not individual companies.
- SNACMA figures do not cover supermarket own brand.

Progress to date

- The crisps and snack sector have made good progress on salt reduction.
- In 2013 it was confirmed that SWA targets had been met for 3 out of the 4 crisps and snacks categories (extruded snacks, pelleted snacks and salt and vinegar products) with a small amount of work still to do on the remaining category (standard potato crisps).
- Sector is now working towards the even more challenging 2017 targets.

Standard crisps

- A thin slice of fresh potato, fried to impart a desirable colour, 'crisp' texture and taste via the absorption of oils into the potato base and the reduction of moisture content to a specified level.
- Raw potato does contain naturally occurring sodium, however this will typically be at very low levels (e.g. raw potatoes <10mg/100g)
- Oils and fats used in savoury snacks production contain only trace amounts of sodium.
- 'Salt' in standard crisps is therefore present mainly as part of the seasoning.



Extruded snacks

The extrusion process normally involves mixing, cooking and application of intensive energy to product at high pressure, within a very short space of time

Results in starch modification, protein denaturation and in many cases direct expansion of the product as it exits the extruder's die into atmospheric pressure.

Direct extruded snacks are often characterised by large to medium bubble size, open structure and very light textures e.g. puffed cheese snacks.

Salt is present as flavour in both the base and topically applied. Also present to help regulate shape and expansion.

In extruded snacks which use low moisture dough, and which are then fried (e.g. potato hoops) salt can be used as a binding agent to help maintain the structural integrity of the extruded form.



Pelleted Snacks

- Also created through an extrusion process, to produce more intricate shapes. However the product is subject to drying processes to remove moisture content and to produce a shelf stable pellet.
- The pellet can then be expanded using a variety of techniques as appropriate for the particular product (e.g. hot oil expansion, hot air expansion, microwave expansion).
- As with extruded snacks salt is present as flavour in both the base and can be topically applied.
- Present to regulate shape and expansion (acts as a nucleation point) and in some instances salt may be present in a product to help ensure shelf-life stability.



Salt in flavourings (1)

- Salt's main role is as a flavour and an enhancer/extender of other flavour components present.
- It may also have secondary role acting as a carrier for the uniform distribution of other ingredients such as other flavours and some colours
- Alternative carriers do exist, but each has its own flavour characteristics which could make them unsuitable as direct replacers for salt in all flavour profiles e.g. maltodextrose, as a sugar, will convey a sweet rather than savoury characteristic.
- Salt/sodium can also be used to suppress the intensity of sharp tastes and acid flavours.
- Research suggests that larger salt crystals take longer to dissolve in the mouth, and as a result provide greater 'length' to the flavour profile of the product.
- Larger salt crystal are also easy to see and can therefore also provide a visual cue to the flavour.
- Smaller crystals, have a greater surface area and therefore dissolve quickly in the mouth. They have a sharper more immediate taste impact.

Salt in flavourings (2)

- Changing the size of salt crystals will also impact upon application and adhesion of salt to the snack product and this will also affect the flavour profile of the product.
- With standard potato crisps, oil content is typically around 30%, which means that larger crystals are still able to adhere to the surface.
- However, reformulation to remove oils or use of alternative cooking methods, may inadvertently affect the ability of larger salt crystals to adhere to the finished product
- Potassium chloride can supply a characteristic 'salty' flavour of salt chloride and can act as a carrier for other flavours within a seasoning, but has its own issues (as do ammonium chloride (E510), calcium chloride (E519), or magnesium chloride (E511)).

Flavour enhancers/yeast extracts

- There are a number of flavour compounds and additives that are legally permitted for use in savoury snacks which will provide an 'umami' or savoury taste to a seasoning.
e.g. glutamate-containing compounds such as Monosodium glutamate (E621), hydrolyzed yeast and yeast extracts, and also nucleotides such as and Disodium 5'-ribonucleotides (E635).
- Often used alongside salt to enhance other flavours or provide distinctive flavours on their own.
- Use of these ingredients can result in significant salt reduction in specific seasonings, however they may also enhance off-flavours.
- **HOWEVER** in recent years consumer demand for products which do not contain artificial flavours and additives has led to reformulation to remove flavour enhancers (particularly MSG) from ingredients lists.

Summary of constraints to Reduction

- Quality (taste, texture, function).
- Costs involved in reformulation
- Lack of consumer demand (Consumers perceive snacks as a treat, 'Natural' is the key driver of NPD)
- Safety (preservation, shelf-life).
- Possible Lack of incentive due to perceived 'regulatory' hurdles
 - Broad threshold of traffic lights model may actually reduce incentives to reformulate in some products – 'Medium/Amber' salt content between 0.3g and 1.5g per 100g
 - OFCOM Nutrient Profile Model

Most important element is dialogue

Open dialogue with FSA/DH regarding opportunities and barriers to salt reduction has proved to be the most rewarding.

Accepted that:

- Change cannot happen overnight
- Need to focus on those products contributing most to dietary intakes e.g. top sellers in each sub-category
- Scope for reduction varies by product type – need to recognise feasibility and set different targets for each sub-category

Thank you for your attention

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