The FSAI Salt Reduction Programme

Ten Years of Progress?

Karl McDonald
What changed since 2003?
“...current consumption contributes to increased blood pressure and higher risk of CVD”

European Food Safety Authority – The EFSA Journal (2005)
“...measures to reduce intake requires reductions in the content of processed foods.”

Salt and Health – FSAI (2005)
“..industry efforts have failed, scientists call for mandatory, phased in limits on salt in food”

Centre for Science in the Public Interest - May 13th 2013
“...available evidence on associations between sodium intake and direct health outcomes is consistent with population-based efforts to lower excessive diet...”

Institute of Medicine – May 14th 2013
“...dietary guidelines for Americans recommend a maximum daily consumption of 2300 mg salt for healthy adults and 1500 mg for people at risk of heart disease....”

The Lancet – May 25th 2013
So the FSAI began working on reducing salt in processed foods (2003)

*Initial Goals:*

“.....to achieve gradual, sustained and universal reductions in the salt content of processed and prepared foods.”

and

“..... achieve a 6 gram per day salt intake for the Irish population by 2010.”  (revised to 2012)
Key components of this FSAI work

- Examine the relationship between salt and public health
- Identify foods and target with most effect on salt intake
- Negotiate industry commitments to reduce salt in key foods
- Publish annually industry progress and commitments
- Monitor salt in food and publish this data
- Regular dialogue with key stakeholders *(annually in many cases)*
- Estimate total salt intake in population from key foods
Reducing Salt in Food has Required Extensive Collaboration and Negotiate

FSAI Salt Reduction Programme

Indigenous and Multi National Food Industry: Manufacturers Retailers Catering/Wholesale Food Service Sectoral Trade Bodies

Sectoral Groups

FDII / Retail Ireland

FSAI Retail & Food Service Forums

FSAI Scientific Committee

Public Analyst Laboratory (Galway)

European Salt Action Network

FSAI Salt Reduction Working Group

EC HL Group on Nutrition & Physical Activity

Health Service Executive

Researchers & Scientists

Government Depts.

Health Care Professionals
FSAI Timeline Concerning Salt Reduction

2003-2004
Publication of annual updates and monitoring data by FSAI

2005

2006

2007

2008

2009

2010

2011

2012

2013

FSAI 6g target for 2010 will be missed – consumers must become salt aware

Discretionary intakes increasing?

Average intakes from food fall by 1.1g per/day

Numbers in FSAI programme decrease

Data Gathering, Dialogue, and Negotiation Continues

FSAI Salt Reduction Group

Voluntary EU framework on salt reduction 2008-2012

Participation in ESAN

Numbers in FSAI programme increase

Target of 6g by 2010
What's been achieved?
Better Data: Where's the salt coming from in our diets 2013? a

In Asia and Africa its discretionary sources

In Europe, United States and Australia processed foods and the food service sector

From Processed Food
Naturally Occurring
Added During Cooking
Added at the Table

65% - 80%
10% - 15%
5% - 10%
5% - 10%

a Source: IUNA Report on Salt Intakes in Irish Adults (2011)
**Better Data:** *Analysis of processed foods for salt* \(^{a-c}\)

The FSAI acknowledges the extensive work of the Public Analyst Laboratory (Galway) in analysing samples.

**Planned 2013 surveillance:** 450 samples = 50 products *3 for soup, bread and snack product categories.

**More representative sampling of products began in 2010 with a minimum of three samples of selected products with different batch numbers collected and tested.**

\(^a\) The FSAI acknowledges the extensive work of the Public Analyst Laboratory (Galway) in analysing samples.

\(^b\) Planned 2013 surveillance: 450 samples = 50 products *3 for soup, bread and snack product categories.

\(^c\) More representative sampling of products began in 2010 with a minimum of three samples of selected products with different batch numbers collected and tested.
Better Data: Establishing levels of salt in processed foods

Table 2  Soup Products (Sodium in mg/100g)

<table>
<thead>
<tr>
<th>Category</th>
<th>Mean Sodium (Std Dev) [Range]</th>
<th>t-test (α = 0.05)</th>
<th>% Sodium Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fresh Soup</td>
<td>280 (76) [183 - 471]</td>
<td>230 (66) [90 - 380]</td>
<td>0.0052</td>
</tr>
<tr>
<td>Ambient Soup</td>
<td>277 (65) [202 - 433]</td>
<td>251 (77) [130 - 370]</td>
<td>0.2065</td>
</tr>
<tr>
<td>Canned Soup</td>
<td>362 (123) [208 - 641]</td>
<td>268 (118) [140 - 590]</td>
<td>0.0015</td>
</tr>
<tr>
<td>Dried Soup</td>
<td>4083 (1370) [1876 - 8609]</td>
<td>3320 (1055) [1430 - 6400]</td>
<td>0.0014</td>
</tr>
<tr>
<td>Total Samples</td>
<td>126</td>
<td>114</td>
<td></td>
</tr>
</tbody>
</table>

NSD = No Significant Difference
Better Data: Tracking progress in salt reduction\textsuperscript{a-c}

- Blk Bean Sauce (2004 to 2012): 71%
- Cornflakes (2003 to 2011): 59%
- Luxury Crisps (2006 to 2011): 45%
- Canned Soup (2005 to 2010): 26%
- Lasagne (2004 to 2009): 23%
- White Bread (2003 to 2011): 18%
- Butters (2007 to 2011): 18%
- Rashers (2004 to 2012): 14%

**Smaller reductions but bigger impact on population intake due to consumption patterns associated with these foods.**

\textsuperscript{a} In conjunction with the PAL (Galway)

\textsuperscript{b} Statistically significant reductions at p=0.05 (95%)

\textsuperscript{c} Other non statistically significant reductions are seen in other products.
Practical Example: *Effects of reduction on salt consumption*

**Average levels of salt in white bread 2003** were 1.4g/100g

Approx: 11.2g in an average 800g loaf

Assuming family consumes a loaf per/day/year. Total intake from bread only

Approx: 4.1kg in 2003

≥ 18% Reduction

**Average levels of salt in white bread 2011** were 1.1g/100g

Approx: 8.8 to 9.1g in an average 800g loaf

Assuming family consumes a loaf per/day/year. Total intake from bread only

Approx: 3.3kg in 2011

≥ 800g Reduction
Better Data: Tracking progress in salt reduction

“….. Decrease the average salt value for processed food with a tighter range of salt values for products within a category…..”
Better Data: Tracking progress in salt reduction

<table>
<thead>
<tr>
<th>Example</th>
<th>Average (g/100g)</th>
<th>Std Dev (g/100g)</th>
<th>Range (g/100g)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Date to</td>
<td>Date</td>
<td>Date to</td>
</tr>
<tr>
<td>Dried Soup (2005 to 2010)</td>
<td>10.4</td>
<td>8.4</td>
<td>3.5</td>
</tr>
<tr>
<td></td>
<td>3.5</td>
<td>2.7</td>
<td></td>
</tr>
<tr>
<td>Blk Bean Sauce (2004 to 2012)</td>
<td>3.2</td>
<td>0.6</td>
<td>3.2</td>
</tr>
<tr>
<td></td>
<td>0.6</td>
<td>0.6</td>
<td></td>
</tr>
<tr>
<td>S&amp;V Crisps (2006 to 2011)</td>
<td>NSD</td>
<td>NSD</td>
<td>0.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Sausages (2004 to 2012)</td>
<td>NSD</td>
<td>NSD</td>
<td>0.6</td>
</tr>
<tr>
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<tr>
<td>White Bread (2003 to 2011)</td>
<td>1.4</td>
<td>1.1</td>
<td>0.2</td>
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</table>

NSD = No Significant Difference
Improved: Annual Industry Progress and Commitments

Salt Commitments & Updates

The latest updates on the ongoing salt reduction programme are detailed below.

- FSAI Salt Reduction Programme - Written Achievements and Undertakings by the Food Industry: Update Period August 2011 - August 2012
- FSAI Salt Reduction Programme - Written Achievements and Undertakings by the Food Industry: Update Period August 2010 - August 2011
- FSAI Salt Reduction Programme - Written Achievements and Undertakings by the Food Industry: Update Period August 2009 - August 2010
- FSAI Salt Reduction Programme - Written Achievements and Undertakings by the Food Industry: Update Period August 2007 - August 2008
**Example:** Annual Industry Progress and Commitments

<table>
<thead>
<tr>
<th>Name of Business/Organisation</th>
<th>Achievements 2010-2011</th>
<th>Undertakings 2011-2012</th>
<th>FSAI Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neville's Bakery Dublin</td>
<td>General Comments:</td>
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<td></td>
<td>• Since 2004 the company has reduced added salt in all sliced pans by 21% to average &gt; 430mg Na per 100g</td>
<td>General Comments:</td>
<td>The FSAI acknowledges the company’s continued commitment to the FSAI-SRP going forward into 2012.</td>
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<td></td>
<td>• In all crusty products, in 2011 the company made further reductions of 5% on both amount of added sodium bicarbonate and/or baking powder and the amount of added salt to achieve reductions of added salt of approx 19% in yeast products and 22% in sodium bicarbonate products, i.e. soda breads since joining.</td>
<td>• The company is currently in the process of further reducing added salt in all plant bakery sliced pan products by a further 5%, with average lab results indicating a level of 410 mg Na per/100g. The company is confident it is on target to achieve the 2012 FSA-UK target of 400 mg Na per/100g</td>
<td>The FSAI commends the company for its continued product development programme which has resulted in substantial reductions in salt in its products.</td>
</tr>
<tr>
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<td></td>
<td>• The company is satisfied that its progress since 2004 shows its continued commitment to the FSAI-SRP going forward in to 2012.</td>
<td>The FSAI is pleased that Neville’s Bakery is on course to achieve the 2012 FSA-UK target of 400mg sodium per/100g in all plant bakery sliced pan products.</td>
</tr>
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<td></td>
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<td></td>
<td>This supports the FSAs understanding that a target of 400mg of sodium per/100g is achievable in plant bakery sliced pan products.</td>
</tr>
</tbody>
</table>
Summing Up: Pros cons, and realisations after 10 years
Significant Positives: Experience of voluntary process

- The voluntary, partnership approach has:
  - Improved FSAI understanding of the food industry
  - Improved industry understanding of health concerns
  - Provided an internationally recognised and copied model
  - Helped increase the output of Irish research on salt reduction
  - Improved the FSAI understanding of the role of consumers
  - Provided experience to facilitate new public health initiatives

- Decreased average salt content of many processed foods

- Decreased mean daily/intake from processed foods by 1.1g

- Improved consumer choice

- Improved labelling of salt on consumer products
Significant Positives: *Experience of voluntary process*

- Considerable FSAI database on the salt content of foods now established due to collaboration with PAL Galway

- Driven improvements in production and process control:
  - Tighter range of salt values for products within food categories
  - Improving standard deviations
  - Higher salt versions of products decreasing

- Technology of salt reduction is improving:
  - Improving understanding of the role of salt in processed foods
  - Increased number of patents being lodged *i.e. 75% increase 2002 to 2007* *
  - Increasing range of processing technologies available
  - Increasing range of salt replacers, ingredients options available

* Toldrá & Barat (2009). *Recent Patents on Food, Nutrition & Agriculture*, 1, 80-86
Significant Negatives: Experience of voluntary process

- It's all taking time to make the changes we want
- Process of reduction has been much slower than anticipated
- In some foods significant reductions have not been achieved

Further reductions are required across many products:
- In particular processed meats
- Further reductions in breads e.g. in-store bakeries

The voluntary approach is not a level playing field:
- Not everybody gets involved especially SMEs
- Not everybody makes same commitments or achieves same results
- Reduction in food service sector have been limited and difficult to drive and track
Significant Negatives: *Experience of voluntary process*

- Imports often not be subject to similar reductions
- There are many competing factors at play:
  - Companies jockeying for competitive advantage/market share
  - Escalating public health issues related to diet
  - Very difficult economic conditions and a desire not to change what is selling well
  - The increasing importance of the food industry to our economy
Some Realisations: Experience of voluntary process

- 6g salt target will not be achieved in short/medium term
- But no other country is likely to achieve this target
- Discretionary salt intake maybe higher that previously thought
- Poor public awareness about the links between:
  - Salt intake and health
  - The salt content of processed food
  - Discretionary use of salt during cooking and at table
  - Consumer behaviour and consumption patterns
- Investment of public money for health awareness and behavioural change needed
Some Realisations: Experience of voluntary process

- Greater uptake by the food service sector required
- Three year rolling programme of studies to assess salt intake in Irish population needed
- Technological barriers to salt reduction in some foods remain and further research funding is needed
- FSAI will continue its voluntary salt reduction programme with monitoring and oversight of industry commitments
- Any legislative approach, if considered in the future by policy makers, should be at European Level due to the free movement of food within the European Union.