

Survey overview

In May 2013, DSM conducted an international perception survey around food and taste of 5000 18-45 year olds (50:50; men: women; living in key urban areas) from emerging markets Brazil, China, Nigeria, Poland as well as the USA.

Examining the global salt gap - confusion around salt intake persists

When it comes to salt there is a widespread assumption that people everywhere are eating too much of it and that this is having a negative impact on global health. Around the world governments and health bodies continue to encourage consumers to curb their consumption to safeguard their health. Recently, new research has indicated that the health benefits of achieving the lowest sodium consumption targets may not be as clear or comprehensive as has been believed.¹

But what is really happening on the ground in new markets as diverse as China, Nigeria, Poland, and Brazil? And do they differ from an established market like the United States? How aware of salt consumption are people, how much do they believe they consume and how important is this to them? Will they give up salt for health when cravings strike? These are the issues puzzling savory foods manufacturers and salt reduction campaigners alike.

As part of its drive to help the food industry improve their processes and deliver healthy, tasty and attractive products to consumers, DSM has launched a global insights series, investigating people's perceptions around food and taste and shedding light on these fascinating and commercially crucial topics. As food manufacturers face continuing pressure to cut sodium levels and even, in some cases, the looming prospect of legislation, this paper explores the outcomes of our survey in light of consumers' experiences of sodium issues.

Uncertainty about recommended salt intake is seen around the world

Among young, urban, global consumers, there appears to be a lack of clarity and understanding around the amount of salt and/or sodium they should be consuming on a daily basis. While the World Health Organization (WHO) recommends adults consume 5 grams or less of salt on a daily basis (2,000 mg of sodium),² only half (51%) of the adults surveyed believe the recommended daily intake (RDI) for salt is 5 grams or less. Shockingly, results show that one-in-four (26%) believe the RDI for salt is more than 10 grams, with 3% believing it to be 100 grams - the equivalent of a medium sized banana.

**Perceived Recommended Salt Intake
By Country**

	Total	Nigeria	China	US	Poland	Brazil
Five grams or less	51%	70%	39%	39%	60%	45%
Six to 10 grams	23%	19%	41%	14%	23%	19%
11 to 20 grams	11%	8%	13%	14%	10%	13%
More than 20 grams	15%	3%	7%	33%	7%	23%

¹ http://www.nytimes.com/2013/05/15/health/panel-finds-no-benefit-in-sharply-restricting-sodium.html?pagewanted=all&_r=0

² http://www.who.int/mediacentre/news/notes/2013/salt_potassium_20130131/en/; According to the NHS, adults should not consume more than 6 grams of salt daily; according to the Mayo Clinic, "The Dietary Guidelines for Americans recommend limiting sodium to less than 2,300 mg a day (2.3 grams) – or 1,500 mg if you're age 51 or older, or if you are black, or if you have high blood pressure, diabetes or chronic kidney disease."

- *Insight: We can't assume that consumers can make accurate judgments about the amount of salt in the foods that they consume - or that they have an accurate picture of what constitutes a lot of salt or a little salt. Furthermore, a significant proportion remains unaware of World Health Organization (WHO) guideline amounts. With this in mind we must consider whether these can provide any practical guidance for consumers that are conscious about how their diet contributes to their health or whether communication claims on a product level like 'lower salt', or 'reduced salt' and a percentage of RDI may be more meaningful.*

Older adults are better informed and more likely to adhere to guidelines

Data suggest that older adults may have a better grasp on the amount of salt they should be consuming daily: 53% of 25-45 year-olds say 5 grams or less of salt daily is recommended (compared to 46% of 18-24 year-olds).

- *Insight: Health-focused product development and marketing messages may resonate more effectively with older adult audiences, perhaps because the hypertension and cardiovascular issues associated with high sodium consumption are associated with older age. Is a new approach to messaging around sodium needed for younger consumers?*

Are people consuming more than they think?

Perhaps this perceived lack of clarity on the RDI for salt is driven by consumers' inability to accurately track their own daily intake. About half (49%) believe they consume 5 grams or less of salt daily, while nearly one-in-three believe they consume more than 10 grams a day (29% overall, and 35% among 18-24 year-olds).

US adults believed they ingested the highest amount of salt per day with 12% reporting they ate 100 grams - the equivalent of a medium sized banana; 8% of participants from the US also believed the RDI for salt was 100 grams per day.

**Perceived Daily Salt Consumption
By Country**

	Total	Nigeria	China	US	Poland	Brazil
Five grams or less	49%	79%	38%	35%	58%	35%
Six to 10 grams	22%	13%	39%	14%	23%	21%
11 to 20 grams	11%	5%	15%	14%	9%	14%
More than 20 grams	18%	4%	7%	37%	10%	30%

However, these consumers' perceptions on the amount of salt they intake on a daily basis don't align with actual consumption data, and in fact have found that some countries are consuming three times the recommended daily amount. A 2012 report released by the European Commission revealed that men and women in Europe generally consume anywhere from 6 to 18 grams of salt daily³.

These data underpin other research reports and statistics gathered on salt and sodium consumption that point to the difficulty consumers experience in tracking, and ultimately regulating, their salt and sodium intake. According to the Consensus Action on Salt and Health, 75% to 80% of salt intake⁴ in the Western world is found in ready-made or processed foods as well as food bought at takeaways and restaurants. Furthermore, discretionary salt intake (that is the salt we add to our food) is found to be a major contributor to daily intake. In Nigeria, 82% of the country's total intake was found to come from discretionary salt⁵, which means the majority of the 8.1 grams the country actual consumes on a daily

³ Implementation of the EU Salt Reduction Framework Results of Member States survey, Publications Office of the European Union, 2012

⁴ <http://www.actiononsalt.org.uk/less/Reducing%20Intake/79609.html#sthash.vrBSrOLG.dpuf>

⁵ Helpdesk Report: Salt intake. Date: 20 May 2011

basis⁶ is being added during and after preparation. In China, 72% to 76% of the country's daily salt intake occurs during cooking or is added at the table⁷.

Adam Anderson, DSM's innovation manager for Savory Ingredients, has this take on a complex issue facing consumers and manufacturers alike. "There is no 'quick fix' in terms of sodium (or salt) reduction in existing food products, the challenges of delivering the same taste impact with reduced salt differ by the application it is in. This is one of the biggest challenges when looking at reformulating food products for consumers, as the task is generally approached by aiming to reduce salt while maintaining taste, ingredient declaration and cost. The survey may suggest an interesting take on whether the salt reduction is really important to consumers and is understood by consumers, or is more driven by other factors (e.g. health bodies).

A potentially easier approach to take, and longer term delivering a better balance between taste and health, is to remove or adjust these constraints to allow NPD teams to take advantage to rebalance the whole product using other ingredients which in combination, in application, can deliver a preferred product, but not necessarily one with the same taste profile."

- *Insight: Given that more than half of people surveyed believe that they consume more than the recommended amount of salt each day, and 29% believe that they consume more than twice the recommended level, is it time to take more drastic action to reduce salt consumption? Can the industry make a dramatic change to consumption where guidelines and education have yet to overcome the problem? The traffic light system set to be introduced in the UK will give consumers a front-of-pack alert to whether a food has a low, medium or high salt content. Will the future be red, amber and green for the processed food manufacturers elsewhere? Or can we help consumers improve their diets without burdening them with additional information systems?*

Only half of 'label checkers' are checking for salt

Two-thirds reported regularly checking ingredient labels and of these, only around half check levels of salt or sodium. Fat content and calories are the focus.

Checking the Ingredient Labels

	Read Labels	For Calories	For Fat	For Salt/Sodium
Total	68%	61%	66%	51%
Nigeria	77%	63%	63%	46%
China	85%	52%	65%	50%
US	60%	70%	63%	49%
Poland	53%	52%	62%	34%
Brazil	64%	72%	78%	71%

Consumers in Poland are least likely to check labels for information about salt and those in Brazil the most likely.

People are being exposed to information... but the message isn't getting through

⁶ <http://metro.co.uk/2011/02/02/heart-fears-over-salty-afro-caribbean-meals-635890>

⁷ <http://www.hsph.harvard.edu/nutritionsource/sodium-china-japan/>

The effect of exposure to communications regarding the impact salt/sodium has on overall health appears to be having less than an optimal impact on consumers' understanding of the RDI for salt. Among those who have recently been exposed, just 53% say that adults should consume 5 grams or less of salt daily (compared to 47% of those who haven't been exposed).

Effectiveness of Education Programs on Sodium and Health By Country

Exposed to communications about salt / sodium?	Total		Nigeria		China		US		Poland		Brazil	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Five grams or less	53%	47%	71%	71%	41%	36%	34%	40%	66%	55%	51%	38%
Six to 10 grams	25%	21%	20%	16%	42%	42%	15%	13%	20%	26%	18%	21%
11 to 20 grams	10%	12%	6%	9%	11%	14%	15%	13%	9%	10%	11%	17%
More than 20 grams	12%	19%	3%	4%	6%	8%	36%	34%	5%	9%	20%	24%

People say they are prepared to sacrifice taste for health... but are they really?

Over 80% of respondents said that they would be willing to lose some of the flavor in foods that they typically prepare and eat if they knew that it would improve their health. Those living in China are most willing to make this change, while Americans are least likely. In spite of this, only 25% cited healthiness as a reason to purchase a processed food again - taste, convenience and price were all more likely to be given as reasons. In fact, research suggests that main drivers of food purchase comes down to taste (87%) and price (73%)⁸

- *Insight: Coupling great taste with health benefits (such as reduced/low sodium) would be a powerful force in driving repeat purchases. How can manufacturers achieve this?*

Less Flavor for More Health By Country

	Total	Nigeria	China	US	Poland	Brazil
% Willing to lose some flavor in foods if improves health	82%	80%	85%	73%	80%	91%

⁸ The 2012 Food & Health Survey: Consumer Attitudes toward Food Safety, Nutrition, and Health, commissioned by the International Food Information Council Foundation (IFIC)