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Quadram Institute and Food Databanks National Capability Response to Front of Pack Nutrition Labelling Consultation

The Government recently held an open consultation regarding "Front-of-pack nutrition labelling in the UK: building on success" https://www.gov.uk/government/consultations/front-of-pack-nutrition-labelling-in-the-uk-building-on-success. Views were requested from business, research and consumers, on making sure the 'traffic light' front-of-pack nutrition labels (FOPNL) scheme continues to help people choose what food and drink to buy.

Quadram Institute and Food Databanks National Capability submitted the following response:

Executive Summary:

The submission is from the **Quadram Institute**, a UK centre for food and health research, comprising Quadram Institute Bioscience (formerly the Institute of Food Research), the Norfolk and Norwich University Hospital's endoscopy centre and researchers from the University of East Anglia's Norwich Medical School and the Faculty of Science.

The Quadram is located on the Norwich Research Park and brings together a community of scientists and clinicians working to deliver healthier lives through research and innovation in food and the gut microbiome.

The UK's **Food Databanks National Capability (FDNC),** based at the Quadram Institute, provides new and updated data and knowledge on food composition and intake. These data, and related tools, are used in four main areas supporting UK biosciences: Research and Innovation, Industry, Healthcare, and Consumers and Policy.

FDNC compile data on the composition of foods eaten in the UK, published as McCance and Widdowson's Composition of Foods and as CoFID, an integrated dataset available at https://www.gov.uk/government/publications/composition-of-foods-integrated-dataset-cofid. These data provide the nutritional information for food labelling, and underpins research at the Quadram Institute, across Europe, and beyond, into the links between diet and health, whilst also helping to inform policy to promote a healthy lifestyle.

Scientific experience working with food labelling

Paul Finglas (Head of the FDNC) is an experienced food and nutritional scientist having published over 250 publications (h-index = 41) on a wide range of topics in food sciences and nutrition. Paul leads the team that edited McCance & Widdowson's 'The Composition of Foods' (7th Summary Edn; 2015) and has recently developed an online tool for the UK's CoFID with Public Health England (2019)[1]. Paul has recently published a

[1] https://quadram.ac.uk/UKfoodcomposition/

book chapter relevant to this consultation "Supporting the European Food Industry to Meet Nutrient Labelling Regulations"[2]

FDNC has been involved in a number of European Research and Innovation projects around food composition, food labelling and health claims, including front of pack (FOP), back of pack and health claims. In particularly, FDNC was involved in an EU H2020 SME project (2017-2018) "Nutritional labelling software and claims: service, training and innovation offering to SMEs and industry in Europe"[3]. The project covered the roadblocks to mandatory nutrition labelling for businesses, an evaluation of labelling software systems used by SME businesses, and a framework for a possible future accreditation system that could improve the use of the software, make the data and results more traceable and provide the consumer more confidence in product labelling.

Consultation Response

We welcome this timely consultation and believe it addresses some important health-related issues for consumers. Our view is that there are a number of key factors, which could help consumers make better informed and healthier choices in future:

- No nutritional consumer scoring system currently addresses the issue of fibre content and, as noted by SACN[4], dietary fibre content needs to increase to help improve the health of UK consumers and reduce disease burden. Addressing this issue should be a priority for any revised labelling system.
- In our experience small to medium sized enterprises (SMEs), of which there are many in the UK food industry, sometimes struggle to understand the science behind nutritional content on labelling and often don't have ready access to reliable information to help them accurately label products. Software and web applications that aim to bridge this gap in knowledge are unregulated and can be of variable quality. We will continue to support SMEs with this through our Nutritional Information Solutions service but the risk of mislabelling remains.
- Our view is that any food labelling system really ought to address nutritional content by portion size and should relate to the nutritional content of cooked food, where appropriate. In terms of other labelling systems, the Nutriscore system, for example, does looks flexible but currently does not address the question of portion size.

1. Our experience working with small to medium-sized enterprises (SME) food producers on food labelling

As experts in food composition data, FDNC handles many enquiries per year relating to nutritional composition of foods, many of which were from the UK concerning food nutrition labelling via calculation, including ingredient food matching, and the EU regulations.

We deal with frequent enquiries related to; comparing the nutrition of packaged foods from different countries; how processing affects nutritional composition; how nutrients change over time and queries over ingredients.

We support food producer SMEs with nutritional labelling of products in line with the 2014 Food Information Regulations (FIR)[5]. Operating though Nutritional Information Solutions, we have calculated nutritional values for

[2] Macháčková, Roe, Ranic and Finglas, Royal Society of Chemistry book "Health Claims and Food Labelling", Editor: Sian Astley https://pubs.rsc.org/en/content/ebook/978-1-78801-073-3

[3] Horizon 2020 Nutritional labelling software and claims: service, training and innovation offering to SMEs and industry in Europe https://cordis.europa.eu/project/id/739622

[4] https://www.gov.uk/government/publications/sacn-carbohydrates-and-health-report

[5] Food Information to Consumers Regulation (EU) 1169/2011: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02011R1169-20180101&from=EN

100s of product recipes (e.g. jams, confectionery, ready meals, breads, drinks) and produced the associated nutrition and traffic light labels for UK SME customers.

The enquiries from SME food producers confirm that in many cases they do not have nutritionists working with them and therefore do not have any understanding on how to produce or interpret their labels. Examples of concern being "why is my traffic light red, we only use vegan products" "Why is my sugar label red, we use dates, not sugar" "why is my fat level so high, we don't use butter, only natural coconut cream" "why is there salt in my product, I didn't add salt". These queries we deal with reinforce a problem with general nutritional education including difference between types of fats, intrinsic sugars and naturally occurring salt.

2. Apps and software for label creation

Food nutrition and front of pack labels can be produced using a calculation method, linking the quantity of ingredients used in product recipes with the nutrient composition of these ingredients. If nutrient data from product specification sheets is not available, it is acceptable to use data from composition of foods datasets, such as the national dataset produced by FDNC. It is also essential to consider weight loss and processing method.

When calculating labels there are intrinsic and extrinsic nutrient composition issues of which the SME may not be fully aware. These include how to link product ingredients to similar foods held within databases, for example different cuts of meat or fat content of milk. Additionally, even minor changes to reformulation and cooking methods may change colour of the FOP food label.

Apps and software systems exist to help SME food producers create labels from their recipes. However, these are not regulated and do not have any method of accreditation or standardisation. Incorrect use of these tools may produce inaccurate results due to improper choice of the correct generic ingredients and food data, lack of conversion of food nutrition composition table information to labelling data, and failure to understand weight losses during cooking. All these issues require training and understanding by the food producer, any errors will feed into the front of pack label for consumer use.

3. Comparison of UK Front of Pack with international alternatives

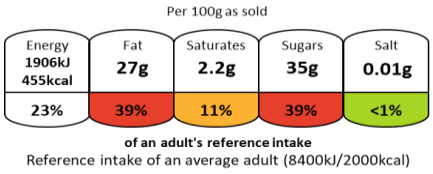
As mentioned in the consultation documentation, there are a plethora of international food labelling options all of which have different algorithms for calculations.

Nutriscore[6] is becoming the system of choice throughout Europe and uses a larger range of factors than the UK front of pack traffic light system. Nutriscore is calculated by defining a 'negative' (N) score (taking into account nutritional elements that should be limited e.g. saturated fat, simple sugars and sodium) and a 'positive' (P) score (% of fruits, vegetables, pulses, nuts, fibres, protein, fibre content and protein) and deducting one from the other. Nutritional score = total N points – total P points. Final score leads to class A-E and colour code.

Although this is a thorough method and likely to be easily understood by consumers, it lacks the ability for consumers to make simple direct comparison between **fibre** content of similar products. As mentioned in the SACN report fibre consumption should be increased, both Nutriscore and the UK traffic light system fail to provide front of pack information on fibre which would help consumers reach the required intake level.

[6] https://www.santepubliquefrance.fr/determinants-de-sante/nutrition-et-activite-physique/articles/nutri-score

A comparison of all tools and systems available across the world, analysing their different algorithms would be useful. It is probable that some products could have no warning in the Chile system[7], and a positive grade in Nutriscore, however, mostly red in the UK traffic light system. We can show this difference using an example of a confectionary vegan product, comparing the UK traffic light system with the Nutriscore: UK FOP: high in fat, sugars, energy, Nutriscore -1: high % fruit and nuts, high fibre, and protein high



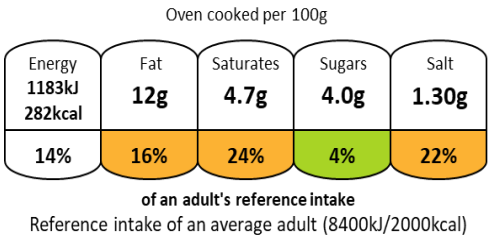
We feel that the Nutriscore method seems to be much more adaptable to allow for changes in regulations, for example, in the future changes in the calculations could include intrinsic/added sugars.

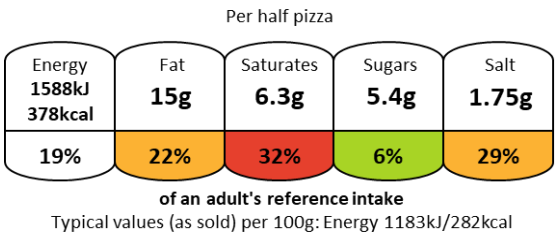
4. Portion size and cooking causes differences in FOP labels

As noted in the consultation, portion size information and how it may change a FOP label may cause confusion to the consumer. There is no agreement on portion size within and between countries and individual's perception of portion size greatly differs[8].

Nutriscore does not deal with portion size and is calculated as per 100g of product.

These two FOP labels show the difference in colours for a stone baked pepperoni hand stretched pizza, per 100g and per half pizza, showing a colour change in saturated fat when portion size is considered. The consumer needs to be clear and understand portion sizes may change the label.





The Nutriscore for the pizza would be 5 and look like this for 100g:

However, it is worth noting that if Nutriscore was calculated using half a pizza portion (135g), the rating becomes 11 (orange – D). We would suggest that since in the UK traffic light system labels have different colouring and

[7] Reyes, M., Garmendia, M.L., Olivares, S. Aqueveque, C. Zacarias, I., Corvalan, C., 2019. Development Of The Chilean Front-Of-Package Food Warning Label. BMC Public Health 19:906 [online]. https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-019-7118-1

[8] Church S. Trends in Portion Sizes in the UK—A Preliminary Review of Published Information. Report to the Food Standards Agency; 2008. Available at: https://webarchive.nationalarchives.gov.uk/20120403160936tf_/http://www.food.gov.uk/news/newsarchive/2008/jun/portionsize

rules per portion size when portions are over 100g, UK traffic light labels have different colouring rules for portions sizes above 100g. We would suggest that Nutri-score should probably do the same.

When a product is cooked, change in water content means there will be a change in labelling where there will be an increase in negative components and the positive ones. See below an example for raw and cooked nut roast. In this case the Nutri-score rating will remain at green B for both raw (score 1) and cooked (score 0). It is unlikely that most consumers would understand the reasons for changes, so we would suggest a FOP for the cooked product is better for consumer understanding.

5. Additional notes

In our experience Trading Standards are expected to check for correct labelling. However, their resources are limited, and some incorrect nutrient labels are missed. Their main focus is very much on the allergen labelling, which can be life threatening to consumers. It is expected that producers are trusted to provide correct labelling data especially when product formulation changes and packaging stays the same. We have an example of a pie producer telling us they had not bothered to produce the correct labels for their pies, they are simply copying FOP labels from those sold in a supermarket.

Regarding the Chile warning label, FDNC are of the opinion that positive messages are better for consumers than negative warning labels.

Free sugars content is very interesting, and organisations have tried to get them included on FOP, but in our opinion the concept of free/intrinsic sugars are too complicated, without education, for general consumer understanding.

We would be interested in any socio-economic research into whether a traffic light FOP makes any difference if price is more important. Additionally, it would be an interesting analysis to check price vs traffic light label colours.

ENDS

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