

Background & Objective

Reformulation is considered to be a powerful and cost-effective tool to improve nutrient intakes [1]. To-date there is limited research focusing on the potential impact of applying nutrient profiling systems for reformulation.

The **objective** was to estimate the potential of a category-specific nutrient profiling system to improve the energy and nutrient content of the current US and French food supply.

Data and Methods

- Foods reported in national dietary surveys (INCA2 for France and NHANES 2011-2012 for the US) were profiled against the Nestlé Nutritional Profiling System (NNPS) [2]. Serving sizes were set to the US reference amounts customarily consumed (RACC) [3]. Products meeting all criteria were classified NNPS “Pass”.
- Descriptive statistics were used to compare Pass vs Fail products within the same category in terms of average total energy content and energy coming from added sugars (AS) and saturated fatty acids (SFA). Analyses included only food categories with at least 5 Pass and 5 Fail products.

Results

- A total of 614 (37.5% Pass) and 2651 (32.5% Pass) foods items, representing 11 and 16 NNPS categories were identified in France and the US, respectively.
- NNPS Pass products had lower energy content per serving compared to NNPS Fail products in each category, except for juice-based beverages in France (Figure 1).
- The largest potential reductions in energy content were observed in cakes & desserts both in France and the US (134 and 124 kcal/serving, respectively) followed by other snack items like savory snacks and ice cream (Figure 1).
- NNPS Pass products also had a more balanced nutrient composition with lower %energy from SFA and/or AS (Figure 2).

References

- [1] Dobbs R, et al. 2014
http://www.mckinsey.com/insights/economic_studies/how_the_world_could_better_fight_obesity
- [2] Vlassopoulos A, et al. Eur J Nutr 2016.
doi:10.1007/s00394-016-1161-9
- [3] US Food and Drug Administration 2015.
<http://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfcr/cfrsearch.cfm?fr=101.12>

Conclusions

The use of nutrient profiling systems for product reformulation could be an effective method to improve energy and nutrient composition of products. Testing the system in other food composition databases is needed to assess its global applicability. Including dietary intake data would allow testing the potential impact of an industry-wide NNPS implementation on populations' diets.

Figure 1: Average energy content per serving of NNPS Pass and Fail products

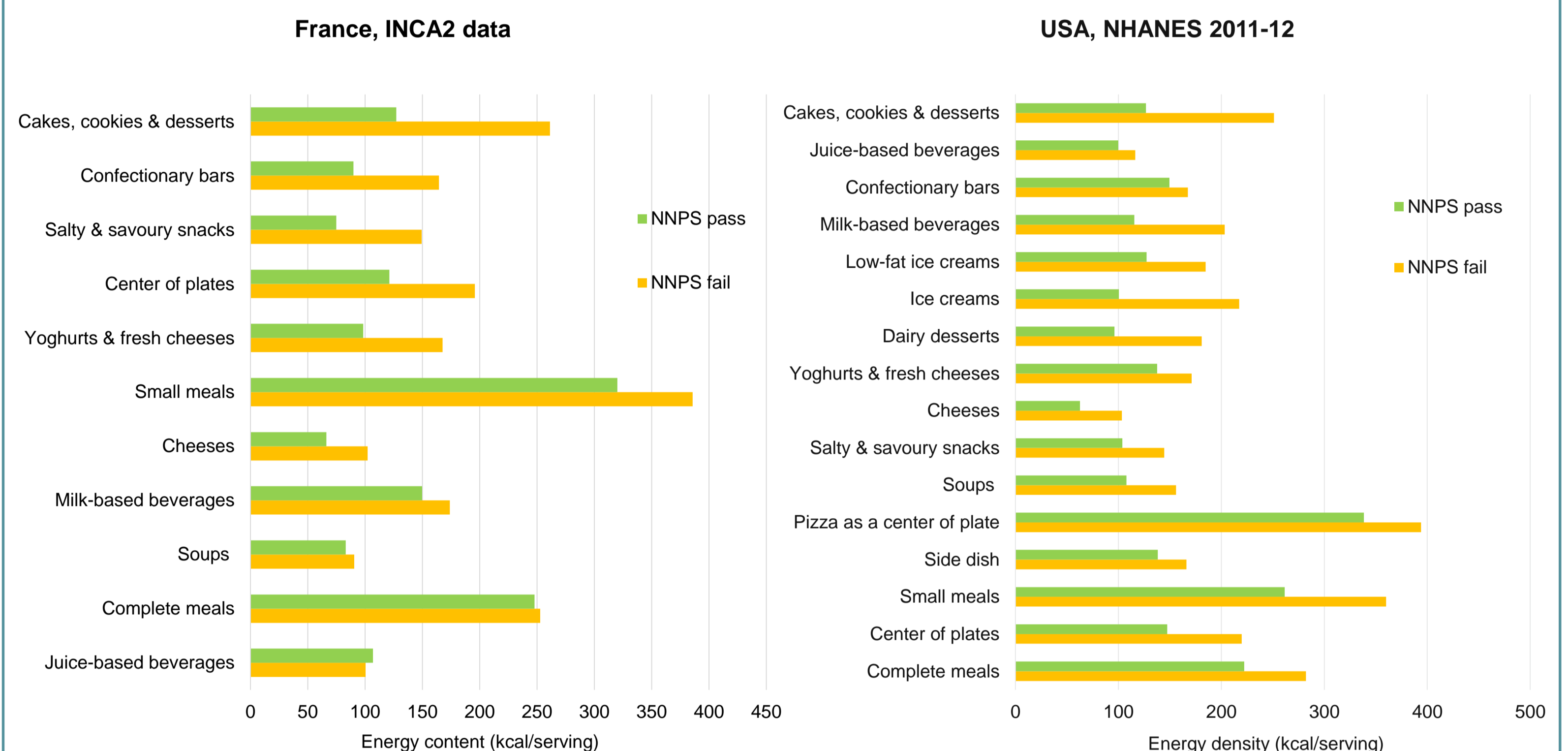
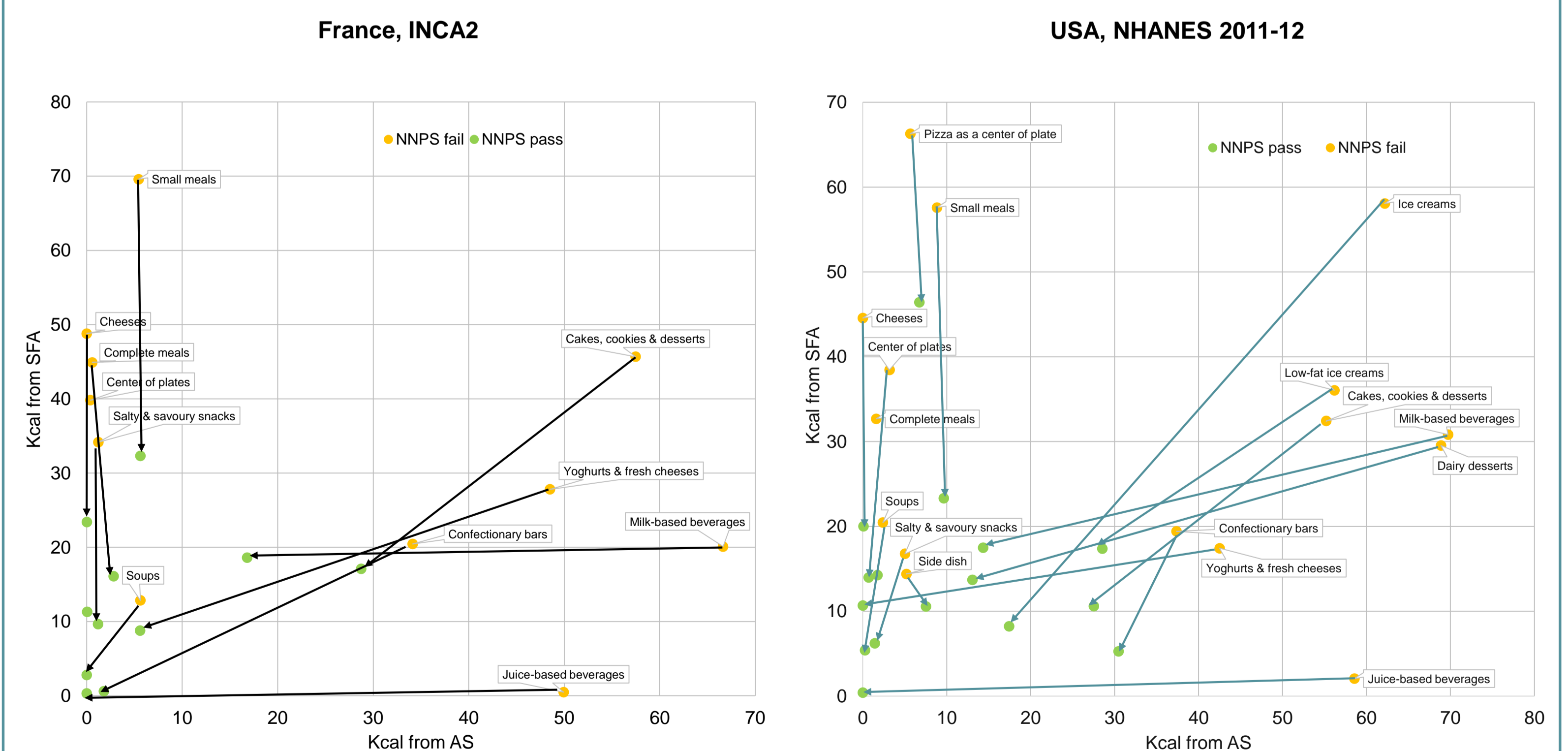


Figure 2: Average amount of energy coming from added sugars (x-axis) and saturated fatty acids (y-axis).



The start of the arrow represents the average nutrient composition of NNPS Fail products (●), the arrow points towards the composition of NNPS Pass products (●).