

## Upfield Upside – Portfolio Footprint method

May 2022

### Executive summary

The *Upfield Upside* is the CO<sub>2</sub>e benefit of buying Upfield products instead of dairy equivalents.

To calculate the Upfield Upside, representative products were mapped to Upfield product groupings based on Upfield classifications. The impacts of the representative products were expanded by sales figures to provide total impacts across the whole 'portfolio' of sold products. In parallel, the impacts of dairy comparator products were also calculated to show the CO<sub>2</sub>e impact of the sale of equivalent dairy products (For spreads, the comparator product was dairy butter). The highest value of available Life Cycle Assessment's (LCA) in any given group was chosen to give the most conservative estimate of Upfield's climate impacts.

This approach is designed to complement existing product and operational footprinting, with a different audience in mind. The aim is to demonstrate beneficial impacts of plant-based products, and to support investors and policy makers in their decisions. Ultimately it is about creating the drivers to produce systemic, sustainable change in the way we produce and consume food.

### Results

The Upside compares the carbon impact of an Upfield product compared to an equivalent dairy product, expressed in the percentage carbon lower to produce the same amount. The Upside has been calculated for the three main Upfield product categories: Spreads, Creams and Plant-based cheeses which represents over 95% of the Upfield product portfolio.

The Upside for these product categories is summarised below:

	% lower than dairy equivalent
Spreads	70%
Creams	50%
Cheese	74%

### Upfield Upside – More information on the Portfolio method

The purpose of the Upfield portfolio footprint study was to estimate the CO<sub>2</sub>e savings from Upfield products, compared to the hypothetical CO<sub>2</sub>e impact of the same dairy equivalents.

The study has used the Anthesis Portfolio Footprint method, tailored to meet the Upfield study aims. In summary, representative products were assigned to Upfield product groupings based on Upfield classifications, and country where applicable. The impacts of the representative products were expanded by sales figures to provide total impacts across the whole portfolio of sold products. In parallel, the impacts of dairy comparator products were also calculated to show the CO<sub>2</sub>e impact of the sale of equivalent dairy products.

### Upfield product classifications

Upfield classifies products in its spread category by three main attributes:

- 1) Sub-category e.g. Margarines / Spreadable butter
- 2) Brand e.g. Bertolli, Flora etc
- 3) Sub-brand e.g. Spreadable butter / Plant butter

#### **LCA's used as representative products**

Upfield provided a large set of around 220 peer-reviewed LCA's for their own products, plus LCA's for dairy comparator products (butter for the spreads category, cream of similar fat content for the cream category, and cheeses of similar characteristics for the cheese category). The LCA's were country-specific and there was at least one LCA from 19 European countries, USA and Canada. Most LCA's were carried out in 2018 but a few have been added more recently.

The LCA products were classified by Upfield into Sub-category, Brand and Sub-brand, to align with the Upfield internal classification scheme.

For each aggregation the highest Upfield value among the countries was selected by region for Europe and North America regional values and the highest Upfield value from all the countries is selected for the global default.

For example, if there were three LCA's for MARG/LIGHT in Austria, the MARG/LIGHT-Austria group was assigned the highest CO<sub>2</sub>e value of those. The dairy comparator product was from the same country to maintain consistency. The MARG/LIGHT Europe value would be the highest value from any Europe LCA's present, and the global MARG/LIGHT value would be the highest value across all LCA countries in the group.

#### **Applying representative products to sold product groups**

All products were classified by Sub-category, Brand and Sub-brand. The aim of mapping was to give the best LCA match to each product group.

For brands represented among the LCA's, matching at Sub-category/Brand/Sub-brand product level was attempted to make best use of the range of LCA's available. The best match from country, region or global values was applied.

For brands that were not represented among the LCAs, mapping was based entirely on the product groupings, applying the best match available from Sub-category/Sub-brand, Sub-category or Category as described above.

A corresponding comparator product LCA was assigned to each product group.

The highest value of available LCA's in any given group was chosen to give the most conservative estimate of Upfield impacts. This avoids any danger of presenting an artificially low CO<sub>2</sub>e total and therefore over-estimating the difference between Upfield products and comparator products.

#### **Expanding product impact by sales value**

From the mapping process, each product group has values for CO<sub>2</sub>e impact per kg from its Upfield representative LCA and comparator product. The total impact of all sold products is calculated by multiplying the CO<sub>2</sub>e impact per kg by the total kg sold, to give total CO<sub>2</sub>e per product group and total CO<sub>2</sub>e impact for Upfield sales in the category.

The CO<sub>2</sub>e impact of the comparator product is calculated in the same way to give total comparator CO<sub>2</sub>e per product group and for Upfield product.

## **Calculating the current Upside**

The Upfield Upside is based on the difference between the comparator CO<sub>2</sub>e – the impact associated with the same sales of a dairy equivalent product – and the Upfield product CO<sub>2</sub>e.

In 2020 we calculated this difference to be 6m tonnes. Because the 2020 Upfield total footprint has been calculated using more up-to-date emission factors than the LCA's, the portfolio CO<sub>2</sub>e result calculated from LCA's was higher than the current footprint. To avoid over-estimation of the Upside, it was then recalculated by applying the percentage saving (from the portfolio calculation) to the 2020 total footprint emissions from the production of spreads (from the 2020 Scope 1, 2 & 3 GHG inventory).

Spreads are 87% of production by weight (though more than that by impact) so the Upside was calculated by applying the Upside percentage to 87% of the total Upfield production footprint for 2020.

## **Assumptions and limitations**

The portfolio footprint approach implicitly assumes that it is valid to use LCA results for one product to represent many other products. The method here has taken the most conservative approach to minimise the risk of misleadingly low results.

The LCA's are mostly from 2018. Since then, the carbon intensity of electricity will have decreased in most countries, and other parts of the life cycle may have changed for both Upfield products and dairy comparator products. These changes may not occur equally in Upfield products and dairy products, and it is believed by Upfield that the difference between the two sets will be greater in 2020 than in 2018 – more favourable to Upfield products. Therefore, using the 2018 LCA's gives a conservative estimate of the Upfield Upside.

The Upfield Portfolio Footprint provides estimated total CO<sub>2</sub>e impact for all sold Upfield spreads and for the dairy equivalent sales, and a total difference between the two. This difference can be used to estimate the percentage “savings” for Upfield products. It is not valid to apply the total difference to an Upfield total impact calculated by other methods. By applying percentage savings, with suitable caveats described above, the result is a more conservative approach and assessment.