

Reducing The Cost of Plant-Based Chocolate



Skimpflation, a relatively new term is forecasted to emerge in 2023, influencing food purchasing habits this year. As the name suggests, it is where food manufacturers reformulate their products with cheaper ingredients to reduce manufacturing costs while keeping the prices the same². Inflation is hitting the market hard, especially seen in the grocery aisle⁷ and those most vulnerable categories to trading down are chocolate, confectionery, desserts, and pet products². Under the circumstances, consumers are shifting their attention to simple but affordable nutritious food.

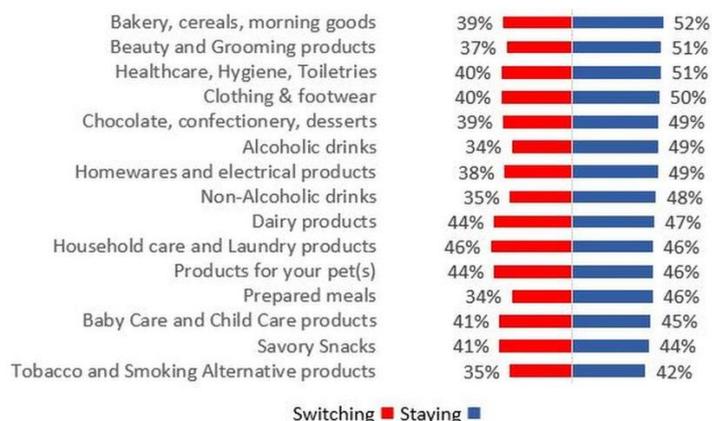


Chart 1. Global: consumers who are staying vs switching brands in light of rising cost of living, by category, 2022²

Key Trends in F&B 2023

In fact, Innova Market Insights has placed “Redefining Value” at the top in its Top Ten Trends for 2023³ as in contempt of political and economic instability, consumers are adapting to the global cost-of living crisis and re-evaluating the values of their food and beverage in a variety of ways¹. One of the biggest long-term ways to capture the redefining value’s trend is “Plants Made Convenient” which is another growth trend with mass-market interest for the year 2023 and it could be a low-cost health selection for families⁸. We can see that the cost of plant-based is relatively high, this sector is continuing to innovate into a wide range of confectionery, snacks, bakery, dairy, and meat alternatives. Plant-based confectionery products have shown a strong upsurge and the market size is expected to expand at a CAGR of 11.8% from 2022 to 2030⁶. Nevertheless, formulating appealing plant-based confectionery products is full of challenges. That’s the reason why in particular the plant-based chocolates sector has yet to perform in as big a way as other plant-based sectors¹⁰.

Cost Reductions Hit the Wall

The biggest challenge in dealing with plant-based or dairy-free chocolate is to achieve the relatively soft consistency, nice meltdown, and clean flavour release. Generally, to carry through this challenge, dairy-free chocolate manufacturers incorporate sunflower or soy-based lecithin and extra cocoa butter to replace the milk components in order to make the chocolate flow properly. Nonetheless, global sunflower lecithin production has been affected by the Ukraine-Russia war and COVID-19 related backlogs⁹. Thus, most of the manufacturers are re-evaluating their ingredient and utilizing soy-based lecithin in light of the sunflower lecithin shortage and skyrocketing prices. Even so, soy-based lecithin would face allergenicity and genetically modified organism (GMO) issues. On most occasions, soy lecithin is suggested to be avoided for those soybean-allergic patients when it is included as an ingredient in food

products¹³. Besides the fluctuations in supply and prices for lecithin, manufacturers were encumbered by the ups and downs of the cocoa butter market.

Much More Than Just an Alternative

To overcome the ingredient shortage, over-use of cocoa butter and higher production costs for manufacturers of plant-based chocolate, a revolutionary emulsifier, ammonium phosphatide (AMP) which is produced from rapeseed oil is being introduced into the market. AMP emulsifiers have been used by the confectionery industry as an efficient lecithin alternative since the late 1950s¹². AMP emulsifier with the E number, E442 was first invented by Cadbury UK in 1966 with the original purpose to replace soy lecithin to get rid of its unwanted off-flavour concern. In June 2007, the United States Food and Drug Administration (USFDA) approved the GRAS status and usage of AMP as an emulsifier in vegetable fat coatings and chocolates at a level of up to 0.7%⁴.

The main goal for any manufacturer is to use fewer raw ingredients to obtain the same final effects and with a cost reduction advantage. A good quality lecithin may lead to cocoa butter savings of 4% in chocolate production, in spite of that, AMP has been proven to provide an additional 2%, translating to annual savings of 700,000 € for 10,000 MT of medium-sized chocolate production per year, this delivers huge savings on expensive cocoa butter¹¹. In the meantime, the flow properties of the chocolate are not affected at ambient temperatures although using the same amount of AMP to replace standard lecithin. Moreover the reduction of the Casson plastic viscosity and yield value is achieved too. These properties could potentially increase the productivity and improve both the quality and the cost-effectiveness of the final product.

Make the Switch for a Better Future

Amid ongoing demand for the ingredients and their alternatives, manufacturers may adopt an option which is more sustainable, available and supply-chain secured. Hence, switching lecithin to AMP emulsifier is not a complicated process at all but in fact simplifies production process and with cost-saving advantage. At DPO International, we are honoured to be in partnership with **Palsgaard** to bring you a range of ingredient choices that will elevate the quality of your confectionery products.

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