

Meeting the Coronavirus Challenge for Healthier & Sustainable Foods

The Role of Chocolate in Making 'Better-for-you' Confectionery, Snacks & Baked Goods



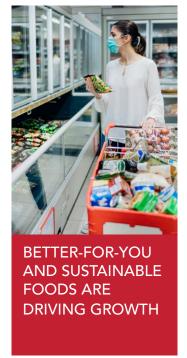


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EXECUTIVE SUMMARY

The arrival of the novel coronavirus has further exacerbated public health and regulatory pressures on food suppliers and processors by uncovering the tight linkage between poor food nutrition and obesity, susceptibility to serious illness and adverse environmental impacts.

The entire food supply system has come under question which is placing groundbreaking demands on the industry to change its sourcing, formulation and production practices. Consumers more and more are insisting on products that are sustainably sourced, processed and packaged while offering "better-for-you" benefits.

This paper presents evidence that "better-for-you" and sustainable products are driving growth and that sweets & snacks must answer the call to deliver more of these versions,

especially as these categories have been identified as the #1 public health target to make nutritional improvements.

Meeting this challenge will require ingredient R&D expertise to help confectionery, snack and baked goods companies deliver sustainable products with:

- Superior taste
- Reduced sugar
- More plant protein

Chocolate can play a major role in addressing these needs by enabling manufacturers to satisfy both consumer and public health demands.

This white paper was published by the Fuji Oil & Blommer Chocolate Global R&D Center in collaboration with Hank Cardello, director of Food Policy at Hudson Institute.

1. The coronavirus pandemic has underscored food's direct link to consumer health

The coronavirus has brought to light that people with compromised health conditions closely linked to dietary factors, such as hypertension, obesity and diabetes, were more likely to be hospitalized with COVID-19.

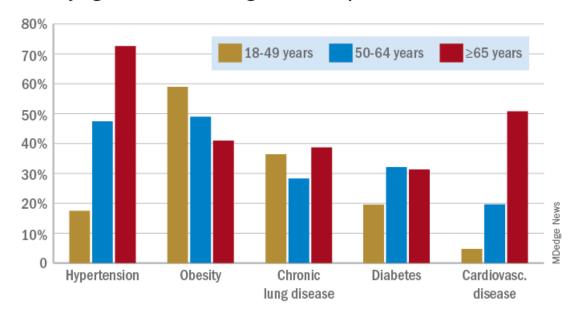
According to the T.H. Chan School of Public Health at Harvard University, "Poorly nourished individuals are at a greater risk of various bacterial, viral, and other infections."



Rates of obesity and diabetes are projected to continue their upward climb over the coming decades.^{2,3} It is imperative that foods improve their nutritional content to help reverse these trends. Research studies show that eating fewer refined carbohydrates, less saturated fat and more plant-based foods can help lower the risk of these conditions.⁴

A Hudson Institute study⁵ titled "Why They Buy: Fighting Obesity Through Consumer Marketing Research" revealed that those with obesity purchase significantly more packaged pastries, sweet baked goods, ice cream, cookies and soda than healthy weight respondents (with chocolate and candy as exceptions). These findings make clear that these categories must make more concerted efforts to improve the nutrition content of the products they sell.

Underlying conditions among adults hospitalized with COVID-19



Note: Based on data from the COVID-19—Associated Hospitalization Surveillance Network for patients hospitalized in 99 counties in 14 states from March 1-30, 2020.

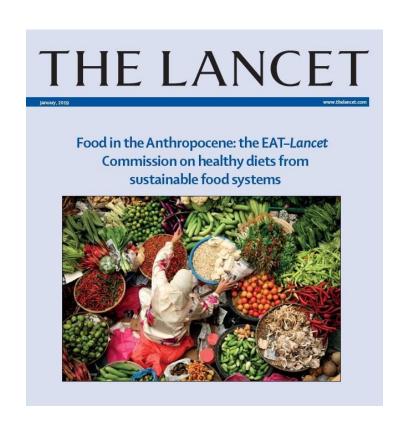
Source: MMWR. 2020 Apr 8:69(early release):1-7

2. Public health and regulators are pressuring industry to reduce sugar & convert to plant-based proteins

Prior to the arrival of the coronavirus, regulatory and public health pressures had been building to revamp food and beverage nutritional profiles. The World Health Organization declared war on sugar⁶ and subsequently the Dietary Guidelines for Americans⁷ cited that sugar should comprise no more than 10% of daily calories. Additionally, as of January 1, 2020, Added Sugar labeling is now required on all manufacturer food packages. Even more draconian are "Black Stop Sign" labels highlighting products high in calories, sugar, saturated fats and sodium, which are now cascading across Latin America.

In January 2019 the EAT-Lancet Commission, a consortium of global public health experts, issued a report⁸ heralding the need for "Healthy Diets from Sustainable Food Systems," stating that the food industry was culpable for the "Global Syndemic" of obesity, undernutrition and climate change. The Commission called for drastic changes by 2050, including a 50% reduction in sugar and red meat consumption and an increase in the consumption of plant-based foods by 100%.







3. Consumer desire for healthier foods is heightened

More people around the world are thinking more carefully about the link between food and health. In a survey of consumers in 18 countries? regarding their attitudes about food as a result of the coronavirus pandemic, 73% said they are changing the way they eat to improve their health and immunity. When asked what specific steps they would be taking, 45% indicated they would reduce their sugar intake and 37% would eat more protein.

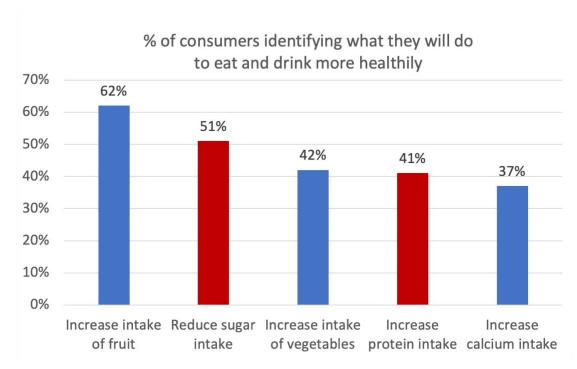


An International Food Information Council (IFIC) survey¹⁰ highlighted that consumers say they are eating healthier now, with eating more fruit and vegetables and limiting sugar intake the top changes. And an April 2020 study¹¹ conducted by MMR Worldwide found that immunity is now the #2 health concern in the U.S. behind heart health.

Ingredient suppliers and food manufacturers must recognize these trends and help consumers eat healthier diets. Products with reduced sugar and more plant-based proteins are increasingly in demand, especially in snacks, confectionery products and sweet baked goods.

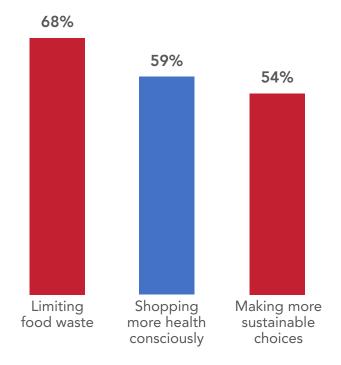


Reducing sugar and increasing protein intake rank in the top 5 actions to eat and drink healthier¹²

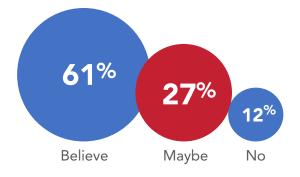


4. Food that is sustainable is on the rise

Shopping for sustainability & health to be permanent¹⁴



6 in 10 consumers believes that food impacts climate change 16



According to the International Food Information Council (IFIC),¹³ 59 percent of consumers say that the sustainability of foods is important, and 45 percent indicate that they have changed their diets over the past two years in order to lead a more sustainable lifestyle. Six of ten consumers now believe that food impacts climate change. When asked to rate which aspects of an environmentally sustainable diet are most important, eating healthy for the planet is their highest priority.

This linkage between food and sustainability is highlighted in an Accenture Covid-19 Consumer Research study¹⁴ which identified that the most permanent changes shoppers are making are behind health, sustainability and food waste.

With disruptions in the food supply and evidence of lower pollution as a result of the coronavirus crisis, the food industry's environmental impact will undergo even more scrutiny as its supply system contributes 24% of all greenhouse gas emissions.¹⁵ Calls by the EAT-The Lancet Commission will further exacerbate these pressures to change.



BETTER-FOR-YOU AND SUSTAINABLE FOODS ARE DRIVING GROWTH

Strong evidence has been compiled that companies benefit from their Environmental, Social and Corporate governance (ESG) efforts. Deutsche Bank reports¹⁷ that "companies that experienced positive press on climate change saw share prices outperform the MSCI World Index by 26%."

Barron's amplified these findings citing on February 7, 2020 that "more than half of companies with the highest ESG scores were top performers in the stock market." ¹⁸

Studies by Hudson Institute¹⁹ have demonstrated that foods and beverages that are better-for-you and lower-calorie are driving sales growth for consumer packaged goods companies, supermarkets and restaurant chains. Nielsen reports²⁰ that nearly half of U.S. consumers (48%) would definitely/ probably change their consumption habits to reduce their environmental footprint, and that since 2014

sustainable product sales have grown at a compound average growth rate (CAGR) at four times the rate of traditional products.

Since 2013, sustainability-marketed products have accounted for more than half of the growth in consumer packaged goods (CPG), despite the fact that these items only comprise 16.6% of dollar sales.²¹

Supporting the rapid growth of more sustainable foods, plant-based foods are experiencing strong sales increases, growing at over five times the rate²² of all foods sold at retail. Other healthy/sustainable products are enjoying high growth rates, according to NMI's 2019
Sustainability Trends Database,²³ with vegetarian/vegan items +170%, Fair Trade certified ingredients +97% and products from farms practicing sustainable agriculture +59%.

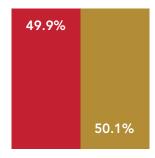
\$ Share of market



16.6%

\$ Share of market growth

(2013-2018)



- Sustainably marketed products
- Conventional products



IMPLICATIONS FOR CONFECTIONERY, SNACKS & BAKED GOODS

According to Mintel, taste is the #1 attribute consumers desire in a snack. A May 2020 survey conducted for Blommer Chocolate highlighted that 73% of respondents indicated that taste is most important when buying a chocolate candy product.

Technomic's 2018 Snacking Occasion Consumer Trend Report²⁴ found that 34% of consumers say they are snacking healthier than they were two years ago, with 25% planning to snack healthier in the year ahead. Two areas in particular are driving the 'better-for-you' trend:

1. Sugar Reduction

Sugar remains the top item that consumers look for on the nutrition label. Seventy-four percent of consumers are now looking to limit or avoid sugars²⁵ and 41% of consumers are looking for snacks with less sugar. For chocolate candy, 32% would be interested in purchasing a 50% reduced sugar version and 30% would likely buy a No Sugar Added product.

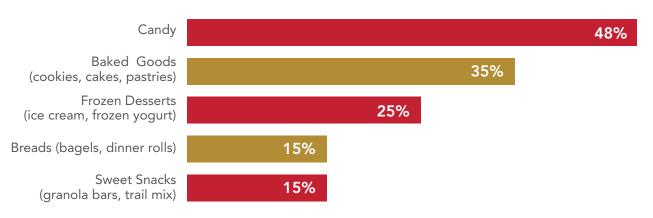
2. More Protein

Protein has also established itself as an important attribute. Fifty-two percent of U.S. consumers are eating more plant-based foods and nearly 70% indicated that protein from

plant sources is healthy. According to Technomic's 2019 Center of the Plate report, ²⁶ more than half (52%) of consumers are finding high-protein snacks appealing.

Despite these attractive trends, sustainability-marketed chocolate, candy and cookie products are grossly underdeveloped, where these items comprise less than 5% of dollar sales. This represents a significant opportunity for producers.

Consumers are looking at confectionery, snacks & baked goods to reduce/eliminate sugar²⁷



FORMULATING FOR TOMORROW'S CHOCOLATE LOVER

Sustainable and "better-for-you" chocolate is an underdeveloped business with huge upside advantages.

There are several growth opportunities available for the industry to capitalize on, especially in confectionery, snack and baked goods applications.

Considerations include:

- Chocolate suppliers and manufacturers must deliver more products containing both health AND sustainability benefits
- These "better-for-you" and sustainable products must be developed without compromising on TASTE
- Focus areas include:
 - 1. Reduced sugar
 - 2. Plant-based protein versions
 - Ingredients that are sustainably sourced and environmentally conscious

When considering a partner to successfully reformulate your products to meet these changing times, **look** for a partner who:

- Brings expertise and capabilities in formulating "better-for-you" ingredients that deliver superior taste
- Has a reputation for sourcing ingredients in the most sustainable way and for making commitments to preserve the environment and to practice plant-friendly procedures
- Understands changing consumer needs to ensure ingredients and products are on trend
- Provides insights on where consumer, public health and regulatory trends are going



REFERENCES

- 1. "The role of diet and nutritional supplements during COVID-19," The Nutrition Source, Harvard University T.H. Chan School of Public Health, April 9, 2020, https://www.hsph.harvard.edu/nutritionsource/2020/04/01/ask-the-expert-the-role-of-diet-and-nutritional-supplements-during-covid-19/
- 2. Zachary J. Ward et al., "Projected U.S. State-Level Prevalence of Adult Obesity and Severe Obesity," The New England Journal of Medicine, December 19, 2019, https://www.nejm.org/doi/full/10.1056/NEJMsa1909301
- 3. James P. Boyle et al., "Projection of the year 2050 burden of diabetes in the US adult population: dynamic modeling of incidence, mortality, and prediabetes prevalence," Population Health Metrics, October 22, 2010, https://pophealthmetrics.biomedcentral.com/articles/10.1186/1478-7954-8-29#:~:text=Assuming%20low%20incidence%20and%20relatively,US%20adult%20population%20by%202050
- 4. "A Closer Look Inside Healthy Eating Patterns," Chapter 1, USDA Dietary Guidelines for Americans 2015-2020, https://health.gov/our-work/food-nutrition/2015-2020-dietary-guidelines/guidelines/chapter-1/a-closer-look-inside-healthy-eating-patterns/?mbid=synd_msnhealth
- 5. Hank Cardello, "Why They Buy: Fighting Obesity Through Consumer Marketing Research," Hudson Institute, June 2018 https://s3.amazonaws.com/media.hudson.org/files/publications/CardelloFINAL.pdf
- 6. "WHO calls on countries to reduce sugars intake among adults and children," World Health Organization, March 4, 2015 https://www.who.int/mediacentre/news/releases/2015/sugar-guideline/en
- 7. USDA Dietary Guidelines for Americans 2015-2020 https://health.gov/our-work/food-nutrition/2015-2020-dietary-guidelines/guidelines
- 8. Boyd A. Swinburn et al., "The Global Syndemic of Obesity, Undernutrition, and Climate Change: The Lancet Commission report," The Lancet, January 27, 2019 https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(18)32822-8/fulltext
- 9. "Evolving eating habits as a result of COVID-19," New Food, May 5, 2020 https://www.newfoodmagazine.com/article/109890/evolving-eating-habits-as-a-result-of-covid-19
- 10. 2019 Food & Health Survey, The International Food Information Council (IFIC) Foundation, May 2019 https://foodinsight.org/wp-content/uploads/2019/05/IFIC-Foundation-2019-Food-and-Health-Report-FINAL.pdf
- 11. "Brands urged to consider immunity as a growing demand space in their category," FoodNavigator, April 30, 2020 https://www.foodnavigator.com/ Article/2020/04/30/Brands-urged-to-consider-immunity-as-a-growing-demand-space-in-their-category#
- 12. FMCG GURUS Evaluating the Uncertainty & Future Outlook of COVID-19, April 2020 https://fmcggurus.com/covid-19
- 13. 2018 Food & Health Survey, The International Food Information Council (IFIC) Foundation, May 2018 https://foodinsight.org/wp-content/uploads/2018/05/2018-FHS-Report-FINAL.pdf
- 14. "COVID-19 will permanently change consumer behavior," Accenture Now Next Research Report, April 28, 2020 https://www.accenture.com/us-en/insights/consumer-goods-services/coronavirus-consumer-behavior-research
- 15. Global Greenhouse Gas Emissions Data, United States Environmental Protection Agency, https://www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data
- 16. "Food manufacturers, farmers and consumers can change climate for good," New Hope Network, November 8, 2017 https://www.newhope.com/market-data-and-analysis/food-manufacturers-farmers-and-consumers-can-change-climate-good
- 17. "Past the tipping point with customers and stockmarkets," Deutsche Bank Research report, September 2019 https://www.dbresearch.com/PROD/RPS_EN-PROD/PROD0000000000000500285/Climate_change_and_corporates%3A_Past_the_tipping_po.pdf
- 18. "These Are the 100 Most Sustainable Companies in America," Barron's, February 7, 2020 https://www.barrons.com/articles/the-100-most-sustainable-companies-51581095228
- 19. Hank Cardello, "Better-For-You Foods: An Opportunity to Improve Public Health and Increase Food Industry Profits," Hudson Institute, March 6, 2013 https://www.hudson.org/content/researchattachments/attachment/1096/better_for_you_combinedfinal.pdf
- 20. "Was 2018 the Year of the Influential Sustainable Consumer?," Nielsen Insights, December 17, 2018 https://www.nielsen.com/us/en/insights/article/2018/was-2018-the-year-of-the-influential-sustainable-consumer
- 21. Sustainable Share Index™: Research on IRI Purchasing Data (2013-2018), NYU STERN Center for Sustainable Business, March 11, 2019 https://www.stern.nyu.edu/sites/default/files/assets/documents/NYUSternCSB_SustainableShareIndex_2019.pdf
- 22. "Retail sales of plant-based foods surge," Supermarket News, July 16, 2019 https://www.supermarketnews.com/consumer-trends/retail-sales-plant-based-foods-surge
- 23. "Consumers search for sustainable, environmentally friendly foods," Snack Food & Wholesale Bakery, April 14, 2020 https://www.snackandbakery.com/articles/94485-consumers-search-for-sustainability-environmentally-friendly-foods
- 24. "How Healthy Snacks Help Boost the Bottom Line," CSP Daily News, January 29, 2019 https://www.cspdailynews.com/snacks-candy/how-healthy-snacks-help-boost-bottom-line#:~:text=Technomic's%202018%20Snacking%20Occasion%20report,they're%20also%20seeking%20quality
- 25. 2020 Food & Health Survey, International Food Information Council, May 2020 https://foodinsight.org/wp-content/uploads/2020/06/IFIC-Food-and-Health-Survey-2020.pdf
- 26. "Protein-rich Appetizers and Snacks Fuel All-day Sales," Restaurant Business, August 13, 2019 https://www.restaurantbusinessonline.com/food/protein-rich-appetizers-snacks-fuel-all-day-sales
- 27. 2018 Food & Health Survey, The International Food Information Council (IFIC) Foundation, May 2018 https://foodinsight.org/wp-content/uploads/2018/05/2018-FHS-Report-FINAL.pdf



