



**PERSONALIZED NUTRITION:**  
Exploring new territory  
in food formulation

Advances in technology have fueled an increasing degree of personalized life experiences – from bespoke athletic shoes to algorithmically curated entertainment. Next up: the food we eat.

### My plate may not be your plate

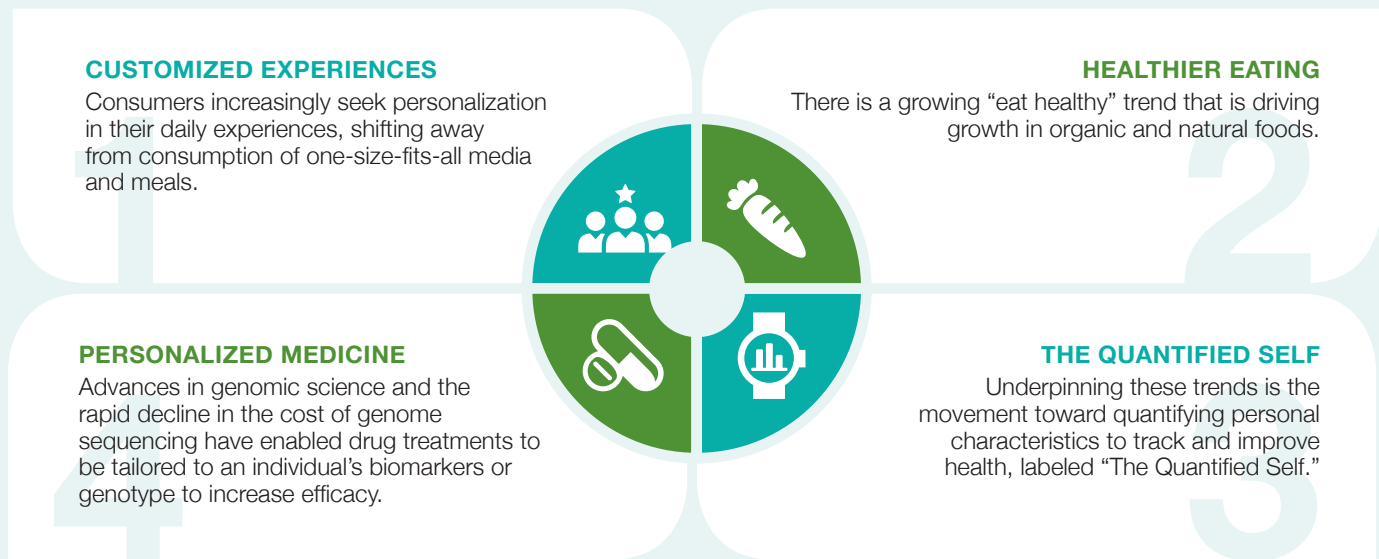
The concept of the Food Pyramid, which has evolved into MyPlate in the U.S., has been used to provide general nutritional guidelines for over 40 years. Some nutritional experts criticize this “one-size-fits-all” approach, suggesting that it targets too few demographic groups and fails to take into account individual factors like genetics, individual health status, environment and personal habits. Furthermore, research indicates that while one food or nutrient might be beneficial for one person, it could have little benefit or even be detrimental to another.<sup>1</sup>

### Empowered consumers

Increasingly, today’s consumers are seeking greater control over their health and nutritional choices. Providing insight into exercise, metabolism and other health metrics, wearable technology use is on the rise. By 2022, a quarter of the U.S. population, or 25.3% of adults 18 and older, are expected to utilize wearable devices at least once per month.<sup>2</sup> Research shows that participants who achieve the daily recommended 10,000-step goal 99.5% of the time achieved higher perceived levels of physical and mental well-being over a 4-year period.<sup>3</sup>

Interest in healthier eating is prompting increased attention to ingredient selection and supply transparency. And at the intersection of these trends toward personalization, quantification and nutrition lies a new, individualized approach to eating.

## Personalized nutrition is at the convergence of four major trends<sup>4</sup>



Source: L.E.K. Research and Analysis

## Informed nutrition

The microbiome, or body's microorganism environment, has evolved as a new area of health interest, as sophisticated testing has made detailed insights more readily accessible. With the completion of a detailed online questionnaire or mailed-in biological sample, a provider can tailor a personalized nutrition plan based on age, gender, genetics, environment, habits and other factors. These recommendations may include recommendations for diet and supplements, fitness and lifestyle habits.

## Targeting opportunity

Consumer interest in healthier eating, functional foods and personalized nutrition presents significant opportunity for food and beverage companies. Valued at \$24.9 billion USD in 2017, the global personalized nutrition market is projected to show a robust 9.1% CAGR, reaching \$50 billion by 2025.<sup>6</sup>

Here are a few of the ways companies can capture that potential:

- **Developing innovative new foods.** Gaining a better understanding of peoples' nutritional needs can help companies develop functional foods designed to support groups with similar nutritional profiles.
- **Targeting more precise demographic groups.** Increasingly detailed consumer data will make it easier to target more specific demographic groups; for example, consumers who metabolize specific nutrients differently or have specific health conditions.
- **Leveraging strengths through partnerships.** A number of major food companies have already invested in nutrigenomics startups, leveraging their respective capabilities.



**Innova Market Insights has termed “Eating for Me” as a top trend for 2019.<sup>5</sup>**

Ranjan Sinha, co-founder and CEO of personalized nutrition firm 3TandAI observes, “The plummeting cost of gut biome and gene sequencing will empower consumers with their bio-individuality. They will demand personalized food and nutrition solutions to meet their personal needs based on their body biology.”<sup>5</sup>

Reflecting this growing demand for individualized nutritional options, Innova Market Insights has termed “Eating for Me” as one of its top trends for 2019.

## Purposeful ingredients

There is a wealth of functional ingredients available today that can support the development of products to meet personalized nutrition goals.

- **Proteins.** Proteins can play a role in supporting cardiovascular health, energy, weight management and muscle development. Plant proteins, like PURIS™ pea protein, are increasingly gaining interest for their label-friendly attributes and great taste.
- **Dietary fiber.** With increased attention on gut health, consumers are becoming aware of the need for increased dietary fiber from a variety of sources. Cargill's Oliggo-Fiber® chicory root fiber delivers beneficial prebiotic fiber which also supports bone health, together with textural and sugar-reduction benefits.
- **Sugar reduction solutions.** While a majority of consumers are looking to limit or avoid sugar, they still expect great taste. Cargill offers a full portfolio of solutions for reducing sugar by up to 100%.
- **Plant sterols.** Clinically shown to lower cholesterol, plant sterols are being added to foods, beverages and supplements. Cargill manufactures plant sterols under the brand CoroWise®.

To learn more, contact your Cargill representative or call 1 877-SOLUTNS (765-8867).

### References

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- <sup>4</sup> Evans, Alex; Matthews, Stephen. Executive Insights Report. "The Customized Diet: Opportunities in Next-Generation Personalized Nutrition." L.E.K. Consulting, 2017. [www.lek.com/sites/default/files/insights/pdf-attachments/1922\\_customized\\_diet\\_personalized\\_nutrition\\_executive\\_insights.pdf](http://www.lek.com/sites/default/files/insights/pdf-attachments/1922_customized_diet_personalized_nutrition_executive_insights.pdf)
- <sup>5</sup> Nutritioninsight.com. "2019 Trends to Watch: Personalization Trend Spawns 'Year of the Empowered Consumer,'" December 28, 2018.
- <sup>6</sup> Grand View Research. "Personalized Nutrition and Wellness Market Size, Share and Trends Analysis Report by Type and Segment Forecasts, 2018–2025. September 2018.