



**Rabobank**

# Talking Points

## Opportunities Abound, Part Two

### **RaboResearch**

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This month, we wrap up the findings of our [annual survey](#), summarizing the remaining themes prompted by our second question: “What food innovation do you think presents the biggest commercial opportunity over the next five years?” [Part one in January](#) covered the three themes of: solutions over products, clean meat, and the connections between food and health. Here, in part two, we cover the following topics, as well as some select quotes on a range of topics:

- 1. Customizing Food—Does That Come in a Size Small?
- 2. The ‘Plantification’ of Food
- 3. All About the Supply Chain
- 4. Select Quotes—“No Limit...”

## 1. Customizing food - Does That Come in a Size Small?

***“I think the mass customization of the food offer will take hold.”***

***“Personalized meal solutions, where we bring personalization based on consumer preferences, priorities, and data.”***

***“Individualized nutrition is the biggest commercial opportunity for the next five years.”***

***“The most important food innovation [...] will be enabling people to cook healthy, delicious food at home, based on their own values and value preferences, culture and taste, and kitchen capital.”***

Customizing food, and “the rise of personalized foods” and solutions where technology, “health, and food are merging in a completely new way” has been a common subject since we began these surveys in 2015—ranging from excitement to fatigue over home delivery of meal kits (see December’s Rabobank report, [Food Delivery 2.0: Implications for Incumbents](#)) through to “personalized” or “individualized” nutrition, as well as offering up mass customization at scale.

This time around, in discussing the opportunities around personalized nutrition, our readership pointed to technological advances, where “the advent of big data and computational biology” allow us for the first time to “unlock personal nutrition insights from our DNA, blood, and metabolic functions.” These “breakthroughs” in using these biomarkers will allow companies “to tailor specific diet and nutrition profiles that provide the ‘ideal’ diet for the health of specific individuals.” Similarly, one observed the sheer number of solutions being offered, ranging from the “most sophisticated science (SCL acquired by Beingmate for USD 300m, Habit by Campbell Soup)” to “probiotics to individualized nutrition supplements” to the “crudest plastic bag of your mixed pills from a start-up.”

**SURVEY**

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# THE BIGGEST COMMERCIAL OPPORTUNITIES OVER THE NEXT FIVE YEARS

## THE REVOLUTION IS EVERYWHERE

"Five years ago, I would have answered with a product answer, this year I'm answering with a 'solution' view."

### CLEAN MEAT

"This will be the biggest change in food since we domesticated animals."

## PLANT-BASED FOOD

"Plant-based options are in their infancy and will accelerate."

### FOOD & HEALTH

"Health and food are merging in a completely new way."

## CUSTOMIZED FOOD

"I think the mass customization of food will take hold."

## IT'S THE SUPPLY CHAIN, STUPID

"The next five years is all about direct-to-consumer and data."

WE PUT OUT A SURVEY AMONG FOOD INDUSTRY LEADERS ASKING "WHAT FOOD INNOVATION DO YOU THINK PRESENTS THE BIGGEST COMMERCIAL OPPORTUNITY OVER THE NEXT FIVE YEARS?"

WE RECEIVED OVER 200 RESPONSES ON A BROAD RANGE OF TOPICS; AS ONE NOTED, "THERE IS A LOT GOING ON IN FOOD INNOVATION."



Technological advances aside, others recognized a number of factors now in place to drive consumer awareness or appreciation of personalized nutrition. First, “understanding your genes has gone mainstream,” where a number of DNA-testing companies such as 23andMe and Ancestry.com have “opened millions to the idea that then can know more about themselves at a cellular level.” Also, consumers have been accustomed to personalizing their experiences in other aspects of their life—from clothing to soft drinks—and have begun to expect the same options for their nutrition, but until very recently “food and nutrition have been one-size-fits-all throughout the industry.”

Others discussed the opportunities around “the mass customization of food,” which will enable “people to cook healthy, delicious food at home, based on their own values, culture, taste, and kitchen capital.” As an example, one foresaw “subscription and delivery services that can be customized to the N of 1 instead of mass-assembled boxes—say, for people dealing with type 2 diabetes who are Hispanic and cook a lot with legumes and spices. This will be enhanced through the kitchen’s Internet of Things appliances, which will sense what groceries are in pantry and fridge, and inform the supplier (Amazon to Aldi) what’s needed.” Even recipes would become personalized for each individual consumer, “based on taste, health, budget, and ability to cook.” One survey respondent thought the move towards personalized foods would lead to “a different way of processing food,” predicting “smart micro factories,” reflecting the need for “an even more flexible production environment, where food is processed and tailored to the needs of an area or city.” Another saw the solution as centralized kitchens, as “this will help solve the supply-side problem of on-demand delivery companies and expand their offering opportunities.”

## 2. The ‘Plantification’ of Food

***“I think plant-based options are in their infancy and will accelerate.”***

***“The plant-based food trend will be a huge financial opportunity over the next five years.”***

***“The new meat substitutes, especially Impossible Foods and Beyond Meat, represent one of the most interesting opportunities and risks in the food marketplace.”***

***“The improvement of product quality and general consumer trends will drive this growth (faster than we think).”***

I know, I know: we weren’t going to highlight plant-based foods again, but it was hard to ignore the number of folk who remained excited about the commercial opportunity (especially plant-based meats). Typical comments included “the plant-based food trend will be a huge financial opportunity” and “we continue to be bullish on plant-based... still early.” Even one Rabobanker known to be an obligate carnivore conceded the opportunity “that is a hard one for me... plant protein.”

Although recognizing the market was “still in its infancy,” many expected it to grow rapidly over the next five years. This “plantification” of the diet—that is, the mainstreaming of plant-based food in terms of consumer acceptance—was also a theme. Several commented specifically on the mainstreaming of plant-based diets, such as “I think the seeds have been pretty firmly planted, and there’s still a ton of room for growth as it is popularized with various athletes and public figures.” Also, one noted: “This trend dovetails well with consumer sentiment and concern over the environment.”

Some felt the availability and positioning of the newer generation of plant-based options was an important developments in gaining wider consumer acceptance. “The Beyond Meats of the world make it a little more accessible,” because they are not competing for the vegan wallet (there are less than 2m vegans in the U.S., out of a population of 327m), but out to take on the beef burger crowd directly. As one put it: “Brands like Beyond Meat and Impossible Foods came out swinging

by boldly describing themselves as plant-based burgers that weren't just for vegans or vegetarians." Likewise: "It's clear that companies like Beyond Meat, which have launched a plant-based burger that challenges a beef burger (instead of other veggie burgers), are breaking out into mainstream meat channels, as evidenced by their rapid adoption in meat counters and into meat-focused restaurants," including Epic Burger, Bareburger, and TGI Fridays. (In May 2016, Beyond Meat's burger became the first non-meat burger to be sold in the meat section of a store and is now available in more than 3,000 stores nationwide.)

Also, one observed "how rapidly big meat producers have shown interest and investment in plant-based and clean meat," and how this represented "a tacit acknowledgment of plant-based meats and their future potential for market share." Recognizing the current market for plant-based meat was a miniscule portion of the zillion-dollar meat & dairy market right now, others looked to the growth on the plant-based milk market, which "went quickly from 1% to 10% of the fluid-milk market," as a possible proxy for how the market might grow. According to Circle Up's Helio platform, in the U.S., there are now over 265 food brands that list "plant-based" as one of their primary attributes (and about 60 plant-based milk alternative brands). No surprise, therefore, that some of the large food companies have begun to buy into the market, such as Nestlé's recent acquisition of Sweet Earth and Maple Leaf buying Lightlife.

### 3. All About the Supply Chain

***"The battle of retail to try to survive Amazon's entry."***

***"The next five years is all about DTC (direct-to-consumer) + data."***

***"I think the innovation that presents the biggest commercial opportunity in the next five years perhaps isn't so much about food as it is about how food companies gain a competitive edge online."***

***"At retail, closing the 'last mile' for perishable-item delivery is a tremendous opportunity, but without breakthrough innovation, we don't see a sustainable model."***

There were lots of suggestions about innovations along the supply chain. Here are four sub-topics:

**Amazon angst.** Second-guessing the impact of Amazon and what they will do next in food appears to be popular enough to warrant becoming an Olympic sport. A lot of the conversation centered around the challenges of incumbents in adapting to an omnichannel environment, such as balancing the online and offline worlds. For example, will brick-and-mortar retailing just become "a showcase to entice trial and subscription" or "morph into a grocerant—a destination food experience and eating occasion?" Also, people were interested in "how food companies gain a competitive edge online," and how this meant having the marketing savvy to know how to engage with consumers and create engaging experiences to get their attention. Simply "being there is not enough." Survey responders were also thinking about direct-to-consumer (DTC) models and how Amazon (and everyone else for that matter) "desperately wants to get that 'last mile' right." What to do with all the data generated from these transactions, and how it feeds back into the algorithms that try and influence consumer behaviour was also a point of discussion: "If I know what you are ordering, and I learn more about you, I can start using data to help you make better decisions... from discovering new products through recommendations to nutritional recommendations."

**Waste-free chains.** Cleaning up the food chain by reducing waste was a popular opportunity: “I think any food innovations related to reducing food waste will be on the forefront for the next five years.” Some talked about opportunities around “upcycled” waste products, such as turning stale bread into beer or distiller’s grains into snack bars, where “there will be lots of opportunity for re-purposing food that would have gone to landfill.” As one put it: “Changes in packaging to reduce waste, increase recycling, and cut food waste represent the next big potential win, and those that handle this in the ‘coolest’ way face an opportunity to grab market share in an otherwise stagnant space.” And always a question on Amazon: “I am curious if Amazon’s ability to know where and when to have products will make a dent in food waste?”

**In blockchain we trust.** Survey respondents were excited about the potential for applying blockchain technology to the food system “as a means for tracking the supply chain” and “to improve transparency.” As one explained: “We’re going to see private, permissioned blockchain ledgers transform supply chains, especially for difficult-to-source products coming from remote locations, such as cacao, coffee, and botanical extracts.” Others saw profound benefits to retailers who “carry such a risk to their brand with the distribution of fresh produce that they will be in the vanguard. There’s widespread fraud in ‘organic’ products of all kinds that harms retailers and some of the branded food companies, so they too will be interested in technology that helps authenticate their products.”

**Automation.** This paragraph will write itself... “I believe that innovations in the area of farm and supply-chain automation represent the largest opportunity going forward. The economics of food supply and retail are becoming so competitive that anything that contributes to cost efficiencies in those two areas will have the best chance of ‘making a buck’. I believe a few elements are driving automation: consumer/market trends (need for speed of delivery, omnichannel experience, food safety, environmental protection), competition for share and the resulting imperative to be competitive in pricing (automation contributes to a leaner supply chain, and thus a lower per case cost), and also labor shortages.”

## Select Quotes—“No Limit...”

In addition to the themes above, our readers were excited about a broad range of commercial opportunities over the next five years. As one put it, there is, “no limit, except the imagination of our industry.” In [January’s part one](#), we listed some quotes highlighting category opportunities, but here are some more trends around that still have some life in them, such as sugar reduction, as well as more on technological advances—in addition to those discussed above and a new vocabulary to learn:

### Trends that still have runway

- “As obesity rates continue to break records, sugar will only enhance as itself as the ‘new tobacco’ that has already seen labeling legislation (showing ‘added sugars’), but will continue to drive innovation in alternate areas (sugar substitutes, category substitutes.”
- “Continuing to deliver what millennials and Gen Z want (transparency, clean labels, sustainability), but telling the story in a more compelling way.”
- “Let’s not forget about protein (and healthy fats), which I believe will continue to win over sugar and carbs in the minds of consumers.”
- “Of course, probiotics will continue to play well in the kombucha and other fermented foods/beverage categories.”
- “Sugar reduction poses the biggest commercial opportunity, because of the growing awareness of the health impact of sugar and Americans’ love of sweet foods and drinks.”
- “Over the next week five years, it’s going to be about no/low added sugar.”
- “Stevia has the potential to continue its disruption of sugar unlike any other sweetener.”
- “The ability to produce ‘clean’ food with integrity at scale.”

- "The new consumer will continue to look for cleaner labels, increase her scepticism, and demand true transparency."
- "The shift away from all that is artificial."
- "We continue to believe the fundamental consumer tailwinds behind snacking, high-protein, low-sugar, and low/minimally processed foods will drive a majority of innovation in the coming years from a product standpoint."

#### **Other technological advances across the food chain**

- "3D printing will be further out than five, but will gain steam in the next five."
- "A different way of processing food—'smart micro factories'. We will be moving to an even more flexible (because of all the trends, including personalized food) production environment, where food is processed tailored to the needs of an area or city."
- "All technology related to tracing food (where does it come from?) and extend the ability to keep food fresh."
- "Automated checkouts have significant potential. More and more retailers are implementing more advanced technology on this front, which could ultimately sharply reduce their labor costs."
- "CRISPR is a potential candidate if those who leverage it can win the trust of the consumer."
- "Indoor/urban farming—what they are doing is incredible and will have a big impact on the category over the next five years."
- "I'm intrigued by the promise of the MATS (microwave-assisted thermal sterilization) technology." "It might possibly disrupt frozen foods/prepared frozen food and might be the answer to home-meal delivery/meal kits." "The technology has the potential to allow someone like Amazon or Walmart to scale up production of prepared meals, because they would have a longer shelf life (possibly up to a year) and not require refrigeration. The net result is a home-meal delivery model that is more efficient and lower-cost than the existing options available to consumers."
- "Longer shelf life for food products, while staying fresh and maintaining flavor."
- "New products are all just improvements on old products, or technologies to make our existing food move faster, taste better, or be healthier or more convenient."
- "Over the next five years, new shelf life-extension technologies can completely reinvent the processing, supply, and distribution of produce."

#### **Words to learn**—some buzzwords we suspect you will be hearing more about:

- "adaptogens," "agroecology," "Ayurvedic," "blockchains," "FODMAPs," "grocerant," "ketogenic," "MATS," "nootropics," "omnichannel," "upcycled."

# Imprint

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