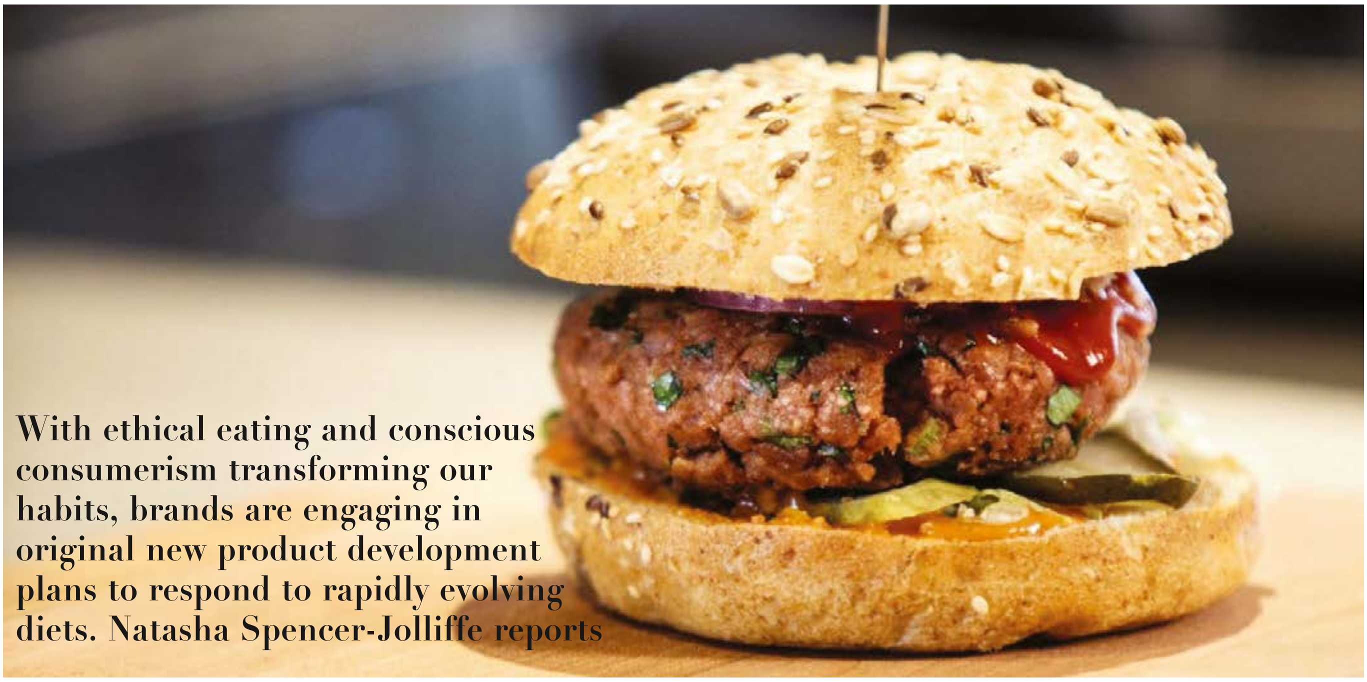
More than Just Taste: plant-based innovation moves beyond the meat-free label



With ethical eating and conscious consumerism transforming our habits, brands are engaging in original new product development plans to respond to rapidly evolving diets. Natasha Spencer-Jolliffe reports

As the rise of flexitarianism, vegetarianism and veganism brings an array of plant-based innovations to market, we delve into how this surge in demand is shaping the alternative protein source landscape. From popular and emerging protein sources and trends to buying considerations and production challenges — we explore what we can expect from the meatless market.

Tasty alternatives

Many food and beverage manufacturers have overcome the initial production hurdle of making a meat alternative taste good, with the market now boasting an array of plant-based products.

Putting the improvement of taste in plant-based choices down to "food scientists finding ways to integrate various new ingredients to make taste and texture come alive", Mindy Leveille, global strategic marketing manager, proteins, Kerry Taste & Nutrition adds: "constant innovation over the last few years has led to plant-based alternative options that are much tastier, with good organoleptic profiles."

Protein source potential

The plant-based space has seen eager manufacturers and retailers frantically rush to the shelves, wanting a piece of the growing market. As we enter the next chapter of the plant-based protein story, brands need to maximise their product's meat-mimicking capabilities, enter new categories, and embrace new formats to respond to consumers' changing eating habits.

Soybeans, pulses — peas, beans, chickpeas, lentils, vetches, lupin — and oilseeds are among consumer protein favourites. Multiple proteins, starches, fibres, spices and flavours are appearing on ingredient lists and in more complex products.

"We also see 'protein out of the tank' opportunities for sources like microalgae, yeast, fungi and bacteria," explains Dave Reynolds, sales manager of protein solutions & ingredients, Buhler. "These raw materials can be processed into protein ▶

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isolates, or protein concentrates and used as the main protein source for the production of plant-based products."

However, despite the accessibility of many plant proteins: "It is fair to say that we have significantly more work to do in exploring, identifying and extracting new plant protein sources," shares Kerry's Mindy Leveille.

Conscious eating gathers momentum

Health, sustainability and affordability are the leading trends influencing the ongoing expansion of the plant-based segment. We take a look at what consumers are seeking from their alternative proteins:

Sustainable sourcing

Increasingly, the industry is focusing on its ability to sustainably source and produce food. "The global population is expected to reach nine billion by the late 2030s, and this is expected to lead to a projected 60 per cent increase in food suppliers, and to meet this demand, we will need to continue to innovate with new sustainable food sources," highlights Mindy Leveille.

With sustainability a core consumer value, sustainably sourced ingredients and proteins are highly sought-after.

Drawing on the excitement of plant proteins becoming mainstream, Kerry's Mindy Leveille explains: "We see significant investments in the plant protein supply chain, including finding sustainable sources and the most optimal ways to process them."

Brands are also looking for the "ability to consistently source the same quality at much higher volumes," Dave Reynolds says. Manufacturers' capacity to achieve this will play a pivotal role in the long-term uptake of protein sources.

Vegan rice plant milk

Clean labelling

Brands that prioritise full transparency by using cleaner labels will also spur NPD.

Advancing beyond heavily processed foods with long ingredient lists, we're now "moving towards 'plant-based 2.0', with manufacturers reformulating their products to clean up the ingredient lists", reveals Maartje Hendrickx, market development manager, GNT Group.

"In a crowded market, it's more important than ever that plant-based food and drink matches consumer expectations for healthier, clean-label products," adds Maartje Hendrick.

Sensory experiences

As sensory experiences are still new and emerging, "consumers may not find it easy to articulate what they like or what they would like to see going forward", Cintia Nishiyama, DuPont Nutrition & Biosciences explains.

Consumers will, therefore, look to brands to support them. And new technologies such as sensory analysis can help. By reading brain signals to identify sensory attributes that consumers may be unaware of, this technology can indicate the appeal of new food products made with alternative ingredients.

How popular are hybrid/blended proteins?

The use of hybrid or blended products — which contain a mix of real meat with plant-based ingredients, known as meat extenders — has been identified as a way to appeal to consumer calls for sustainability, health and affordability.

Traditional meat processors are interested in plant-based meat alternatives due to their significant market potential. However, "they have the kit, but not necessarily the know-how", says Mindy Leveille. Brands with plant protein processing capabilities that centre on sustainability, taste, texture, functionality and nutrition are, therefore, teaming up with meat processors to offer plant proteins in various formats via multiple applications.

With the ongoing development of technology, innovation and volumes for cultured meat products, the demand for hybrid products is only expected to rise.

"The field is open, and every week the products get better and better," Dave Reynolds enthuses. While the best tasting protein sources and most cost-efficient options prove appealing, those that "continuously improve will be the most successful", he explains.

"The next challenge will be improving further and integrating the cultured meat products into the mix," Dave Reynolds adds.

New product development challenges

With the plant-based market experiencing rapid expansion, NPD and continuous improvement in quality, taste and texture in the plant-based market will be "critical for longevity", urges Dave Reynolds.

1. Innovation

From further enhancing taste, improving nutritionals and forming a full muscle experience, to expanding categories, including meatless bacon, fish-free fish and baby formula beverages — conscious consumers are propelling NPD.

Companies are considering extending their existing dairy protein-based product lines by developing plant-based versions, Mindy Leveille says: "Creating plant-based extensions of currently successful animal-based food and beverage products can be a winning strategy."

"One of the challenges with plant proteins can be off-notes, gritty texture and mouthfeel," says Kerry's Mindy Leveille. Flavour-masking technologies and processing-technique innovations are improving the taste and reducing the grittiness texture of proteins.

New developments in equipment processing are "very active", Dave Reynolds shares, with "operating costs and the cost per kg of finished product driving this innovation".

2. Time

Along with new technology, equipment manufacturers are focusing on upgrading existing equipment to increase capacity, improve the company's bottom line and reach consumers in search of plant-based food and beverages.

"If you look at where the market was and how fast it is moving right now, time is the biggest challenge," says Dave Reynolds. Investments are available for brands ready to launch new products and scale quickly in the volumes required.

3. Scalability

"A large challenge for new protein sources is scalability," shares Mindy Leveille. International NPD requires a large volume of planted acreage in order to extract the quantities of protein required to support a new product.

Plant-based manufacturers are having to hone their production methods to remain competitive. To scale to the volumes of consumer demand at an affordable price point, "manufacturers have to understand the cost per kg of product and the overall operating costs of the technology being utilised", Dave Reynolds relays.

4. Palatability

Consumer acceptance, or palatability, poses a challenge as some protein sources, in particular, insects and algae, "will need to overcome taste, regulatory challenges and consumer concerns before they can gain widespread use in food and beverage product development," highlights Mindy Leveille.

GNT Group Exberry plant-based burger (from GNT Group)

5. Ingredient Selection

As consumers want more plant-based information, manufacturers will need to examine the variations in quality, raw material consistency, functionality and supply chain reliability when choosing proteins.

New ingredients are continuing to crop up in the meatless space, emphasises Dave Reynolds: "There is an increase of ingredient variations and side streams (i.e. citrus and apple fibres) with nutrient value being upcycled into functional ingredients that can have an impact on the overall recipe."

As well as taste and texture, colour is a core consideration too. "If a meat-free burger has the same appearance as a beef burger, for example, shoppers are more likely to buy it. They're also more likely to enjoy it because the appearance of products helps influence perception of the flavour," states Maartje Hendrickx.

Entering plant-based 2.0

As the plant-based market continues to evolve, diversification is vital.

Consumers will seek food and beverage options that move beyond simply tasting like meat. They'll look for texture, colour, and for the entire supply chain to support wider environmental, sustainability and health goals. Rising price sensitivity will also come into play, with affordability a key decision-making factor.

As manufacturers strive to keep up with expectations for newly-designed and formulated formats and applications that provide a complete sensory experience — ongoing innovation in the plant-based market is crucial.