

# In the aftermath of the hype

The plant based category needs to persuade a new customer base

Although plant meat companies like to paint a different picture, it is a fact that – except for the food service sector – sales in the US and some EU countries have decreased by double digits since 2022. Plant meat sales are stagnating, and that is quite a departure from the mega-growth numbers in the years preceding 2022.

By Henk Hoogenkamp

Especially the critical flexitarian consumer category is trading down and opting for less-expensive animal-based options. In 2023, the plant meat category can be seen as a challenging macro environment. To stem the losses, operating expenses across the board are aggressively reduced, including reduction of workforce and sales/marketing costs to support margin improvements. Perhaps the answer to renewed plant meat growth is the restoration of the basic starter products, such as plant-formulated burgers and dinner sausages, with improved quality and price parity.

Because of the declining sales, with some estimates at –25%, it is logical that publicly traded companies like Beyond Meat draw most of the negative publicity. However, most – if not all other plant meat companies are in a struggle to maintain market share. Despite an avalanche of new plant meat product introductions, as well as improved technology, sales of these foods have gotten worse, which is highlighted by shutting down or reducing plant meat production by industry giants like maple Leaf Foods and JBS. Quite a few company consolidations will likely happen in 2023, and some will entirely disappear from the market.

In hindsight, it can be concluded that plant-based meat companies have become too ambitious in expanding their portfolios and servicing too many distribution channels. There is a strange con-

sumer attitude at work which shows that as new plant meat products are commercially introduced, the less likely the consumers are motivated or willing to purchase it.

Branching away from plant meat core products like burgers and chik'n patties is perhaps not something that entices flexitarian consumers to purchase and take a gamble with the taste and texture of the new plant meat offerings. The fact that flexitarians initially switched from animal meat to plant meat does not necessarily mean that this change is on a permanent basis, especially now that the quality of plant meat products has become significantly higher in price than the animal meat equivalents. Price, taste, and texture parity are still very important parameters to consider.

Plant meat advocates often compare their sales to the success of plant milk products. Come to think of it: this comparison is not logical because many consumers purchase plant milk for its lactose-free status. Plant meat products do not have a single ingredient that stands out and needs to be avoided for nutritional reasons such as lactose intolerance. There is nothing analogous in plant meat other than different protein sources.

## Health hedonism and food socialism

There is a relentless stream of global media coverage of vegetarianism as the preferred dietary pathway for the health of humanity and the survival of the planet. Most, if not all, media reports claim that the only way to save the planet is to drastically reduce red meat consumption and replace it with plants such as whole grains, pulses, fruits, and vegetables, as well as sufficient vegetable oil and sugar calories. Although these diets will work for certain groups in society, they may be imbalanced for others and deficient in essential nutrients such as quality amino acids, vitamins (B12),



For soccer star Lionel Messi only real beef counts. He has formed a partnership with the British chain Hard Rock. Photo: Hoogenkamp

and minerals. Furthermore, a few nutrients may be less bioavailable when consumed from plants rather than animal sources.

In a way, the Western vegan movement can be accused of practising “food socialism” because it projects its beliefs on the less fortunate people living in developing and poor countries by steering them towards vegetarian or vegan diets that often fall short of essential nutrients which are abundant in animal-based high-quality protein products like meat, dairy and eggs.

This play is even more complicated, knowing that brain harm can be caused by consuming too much of the fatty acid called omega-6, which is present in unsaturated fats that – not long ago – the cardiologists and nutritionists deemed healthy. What about the elevated quantities of omega-6 fats in cheap vegetable oils like corn, soy, and palm oil, as well as the meat of factory-farmed animals that are mainly fed soy and corn?

A substantial increase in dietary

omega-6 intake may interfere with the body's ability to absorb brain-building omega-3 fats, not to mention the emerging reports that too little omega-3 consumption is associated with obesity, depression, and even violence. There is a hy-

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The Swedish furniture store Ikea (left) was one of the first to add vegan to its iconic menu.

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For the European market, the "100% Whopper 0% Beef" is made by The Vegetarian Butcher, a Unilever company.

Photo: Hoogenkamp

pothesis that the shift from omega-3 to omega-6 is affecting the brain development of fetuses and young children.

The perfect diet for the ballooning world population might very well be a utopia simply because nutritive demands and food availability hugely differ between affluent and poor world citizens. The bottom line is that the elite vegan promoters should avoid food socialism and instead aim for what is realistically attainable while trying to provide a balanced diet for long-lasting health targeted for specific geographic world areas.

### Plant food parenting

The future is today's younger generation, who will likely favor alternative protein sources and plant-based foods more often than older generations. This rapidly growing group of consumers will enjoy eating plant-formulated foods more frequently primarily because they not only feel that these options are healthier than animal-based foods but also believe plant proteins are more sustainable and ecologically friendly. It can therefore be expected that the younger generations will establish a long-term lifestyle and palate for plant-based diets and share these beliefs with their offspring early on in life.

Plant-based (also termed alt-meat) and dairy alternatives should not only taste delicious but also offer a comparable nutritional profile. Potential health benefits

should be coupled with a lower environmental burden, particularly lower carbon emissions and water usage. These consumer trends toward healthier, eco-friendly food directly correlate with an increased manufacturing capacity of existing and emerging plant protein ingredients. Within this development, an emerging trend is expected to replace processing methods for animal or plant protein ingredients using chemicals and lots of clean water with that of producing a clean and natural protein product by eliminating or using less harsh chemicals, unsustainable energy, and water.

### Confusing reality

Most people use the terms "plant-based" and "vegan" interchangeably. There are subtle differences between plant-based and vegan diets. All vegans have plant-based diets, but not all plant-based diets are vegan. A plant-based diet follows a similar regimen as a vegan diet, though it may include eggs, dairy, and honey (as it is produced by animals). What makes matters even more complicated is how consumers will react to the rapidly growing "synthetic protein" technology using facilitated expression and precision fermentation, as well as cultivated meat. In 2022, the US Food and Drug Administration (FDA) approved "cow-free" whey protein isolate to be labeled as "vegan". These developments are no longer wishful thinking on the

part of the innovative startups, as these "animal protein vegan" products are already sold commercially in the US, Singapore, and Hong Kong, with India following soon.

Unpredictable psychologically driven consumer trends such as flexitarian behavior, veganism, and environmental concerns are bringing both complexity and more opportunities in the food space. Many consumers believe that "plant-based" sounds healthier than vegetarian or vegan. Some of the changes in dietary patterns are driven by social media, where food bloggers and influencers can parachute cool new trends into the minds of many followers.

To understand better and avoid misconceptions about the plant meat category, it should be made clear that there is a difference between plant meat analogues and a specific range of vegetarian products which are not intended to look, taste, or feel like real animal meat. These formulated products – excluding tofu – are typically made using lower protein-containing components such as whole grains, seeds, pulses, beans, tofu, mushrooms, jackfruit, and vegetables. The analytical protein content of these products is usually markedly lower than the plant meat analogues. Of course, going forward, cross-synergies will develop between the different categories.

### Biodiversity

Protein is fundamental to proper

nutrition. Hence, plant protein-formulated foods and alternative milk beverages are getting more essential for the health of humans and planet Earth alike. Besides soy and pea protein, the most interesting emerging plant proteins are fava protein, (spent) barley protein, rice protein, as well as mung bean-, rice protein, chickpea-, oat-, canola-, lupin-, and sunflower protein. Plant proteins need to not only fulfill important parameters such as yield per hectare, land availability for cultivation, water requirements, and fertilizers but also take the nutritional and protein properties into consideration:

- Flavor
- Color
- Allergenicity
- Amino acid profile
- Purification
- Hydrolyzation
- Gelation
- Emulsification
- Solubility
- Dispersibility
- Salt sensitivity

Flavor and texture have proven to be major challenges when working with plant proteins. Recently introduced natural flavoring systems are a welcome tool for developing successful protein-masking ability. In most of Asia, where food costs are the main driving factor, these natural flavorings are usually excluded because of their high price. Moreover, there are other important issues, such as protein digestibility and allergenicity. For plant-based

meat products, the way forward will likely be protein-blending, such as pea protein and rice protein, to obtain the best possible nutritional profile as well as to support biodiversity.

### Plant meat staying power

The premium-branded plant-based burgers have proven that a mainstream audience can be reached while attracting new customers and delivering incremental sales. For example, Burger King (EU) sold an average of 30 "Rebel Whoppers" (EU) per outlet from a total of about 300 burgers per outlet per day during the first few months of introduction in 2020. Since then, the sales of these soy protein-based burgers have further increased. In the US, Burger King has teamed up with Impossible Foods, and their "Impossible Whopper" is formulated using soy protein ingredients together with the color/flavor system based on synthetic leghemoglobin. For the European market, the "100% Whopper 0% Beef" is made by The Vegetarian Butcher, a Unilever company. It should be noted that if plant meat burgers are cooked on the same grill as the animal beef burger, the product should not be sold as "vegan".

After withdrawing the McPlant Burger from the US menu boards, McDonald's Europe decided to test the McPlant Burger in March 2023 with a roll-out in a few restaurants in Stuttgart, Germany. If successful, McDonald's will introduce the McPlant Burger throughout their 1500 German restaurants.

Famous restaurant chains have opted to partner with high-profile brands like Beyond Meat, Impossible Foods, Unilever (The Vegetarian Butcher), Quorn, and Nestlé's Garden Gourmet. Looking into the future, assuming that plant-based foods are routinely available everywhere, it is likely that some major restaurant chains – much like supermarkets – will choose their own-label spin-off alternative. Obviously, the main reason is to improve the cost efficiency of the bottom line.

By far, plant-based burgers remain the largest category, followed by "plant chicken" foods like KFC showing plant-based Beyond Fried Chicken on their menu board. In the US, a fast-growing category is Mexican foods, with dishes that are uniquely able to make plant-based

meat invisible in wrapped foods like non-Carne tacos.

There are also new breakfast food launches by Beyond Meat and Impossible Foods, as well as Italian ready-to-eat dishes such as vegan pizza cheese and plant-formulated sausages. Especially vegan-mozzarella pizza sales will become huge and can be considered an all-time giant food favorite to be awakened. The wait, however, is for the perfect-

performing vegan mozzarella cheese to be introduced.

### Just like real

Plant-formulated meat products are not the only ones gaining consumer popularity; also, "plant eggs" from companies such as Eat Just, which is a huge growth sector that should be taken seriously. Foods like breakfast burritos or sandwich choices, including plant-formulated bacon,

are also of interest. Zero Egg is a startup company known for making a plant-based egg alternative containing a blend of soy protein, potato protein, pea protein, and chickpeas. This blend functions like an ordinary egg as it scrambles, bakes, and fluffs like the real thing.

In the US, it is estimated that some 100 billion eggs are consumed yearly. In terms of sustainability and animal welfare, "plant eggs" have

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World's largest meat-free brand Quorn (left) is based on fungi technology.

Photo: Hoogenkamp

Veggie Delights are Australian made and owned, by Sanitarium Health Food Company who have been making plant based meals since 1900. Photo:

Hoogenkamp

arrived at the scene at the right time. The availability of these egg alternatives can be seen as a game-changer for both the food service industry and home use. The egg and egg albumen category is massive, and the potential to disrupt it with an acceptable plant-formulated solution promises great consumer interest.

For Nestlé-US, the plant-based Awesome Burger (made by Sweet Earth) is pea and wheat-based, while their Sensational Burger in Europe is soy-based. Nestlé is marketing its new plant burger in the EU as "Sensational", a product with a meatier, juicier taste and texture. Nestlé-Europe prefers to source its soy protein from regional European-grown soy. This strategy might hinder the category's future growth, as European soy crop harvests are rather limited.

However, even though current plant meat sales are lagging, the real growth in the meat-free category is still projected to increase further. For example, one of Nestlé's "beyond segments" is the analogue foods group like meatballs, chik'n nuggets, "Vuna" (tuna analogue) and salad flakes. New market explorations of plant foods will also take shape in a wide range of "ready-to-heat" and "ready-to-eat" prepared dishes from vegan mozzarella pizza, as well as a host of other Italian and Mexican foods in which animal meat can no longer command center space.

### Beef Burger vs Plant Burger

It is quite logical that the plant-based meat industry is mostly targeting the traditional beef burger market. Demand for animal-meat burgers in the US remains strong. About 62 percent of all beef consumed is in the form of a burger, while 79 percent of consumers eat burgers away from home at least monthly. In the US, there are more than 50,000 burger-themed restaurants, which make up nearly 8 percent of all restaurants.

Some plant meat companies that carry their own brand are in a bind and trapped between decelerating sales and the need to increase sales volume when unprecedented economic conditions become part of the equation. Point in case is the high inflationary pressure caused by weather-related issues and ongoing political uncertainty like the Ukrainian war, which increased costs in conjunction with consumers trading down from branded products perceived as premium.

During times of economic hardship, the shrinking consumer buying power in grocery stores and fast-food restaurants favor lower-cost protein choices. It is too early to jump to conclusions, but the deceleration of plant meat products in the US, which started in mid-2021 and continued throughout 2022 until early 2023, has halted the huge market share gains of this plant food category.

### Name calling pushback

The question is if it is wise for plant-based meat and dairy alternatives to use the traditional meat and dairy terminology. Arguably, consumers may be misled into thinking that these "imitations" are an "equal" substitute to the culturally known food heritage. If no name protection legislation is passed, the original identity and tradition stand the risk of slowly disappearing from the vocabulary.

The EU – with the exception of France – has ruled that plant-based meat products might use traditional meat descriptive names such as "plant burger" and "plant sausage". A great variety of plant-based meat products are now available with some sort of phantasy or creative names that make a reference to the traditional meat product name. As can be expected, this kind of meat product identification or branding does not sit well with the conventional meat companies, which are decrying the EU move as a competitive hindrance by an incumbent industry facing its existential threats.

As is the case with other disruptive technologies, including highly innovative precision fermentation technology, there is pushback from the legacy animal-meat industry. One of the criticisms is based on health concerns about plant-based meat substitutes. To mimic meat as closely as possible, multiple ingredients and additives are assimilated and processed using many different temperatures. These variables do not always

bode well with consumers looking for natural food options. Special interest groups support advertisements executed by public relations companies that position plant meat products such as "ultra-processed" with numerous undefinable ingredients. They also classify these foods as "fake meats" that can spur weight gain and increase blood pressure due to their high sodium levels.

Plant-based meat options, including ready-to-eat meals, are often more processed and contain more salt than traditional meat products. From the perspective of the plant-based meat industry, these criticisms signify the rapid emergence of plant-formulated foods, indicating that the plant meat industry is disrupting the status quo.

Many previous "meat-lover" consumers are now in the plant meat category. Especially young and trending consumers believe that these foods are better for the environment and more healthful. This "feel-good" factor is part of the eating pleasure, which leads to a transition food for proactive consumers who are trying to adopt a more healthful dietary regimen.



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