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## OVERVIEW



### **Plant Based Investment Growth and Opportunities**

Plant based proteins are a rapidly growing sunrise industry. Satisfying meat and dairy appetites with plant protein has strong consumer appeal – it's good for your health and good for the environment.

Meat and dairy substitutes are predicted to be a \$40billion industry by 2020, with many brands now household names. Plant protein and health supplements and weight loss products also show strong demand.

Meat and dairy consumption in developed countries is now in decline, and demand for plant protein products is booming.



#### SIR WINSTON CHURCHILL

"We shall escape the absurdity of growing a whole chicken in order to eat the breast or wing, by growing these parts separately under a suitable medium. Synthetic food will ... from the outset be practically indistinguishable from natural products, and any changes will be so gradual as to escape observation"

- Sir Winston Churchill, 1931

Fortune, 2013

## Google & Alphabet

#### PLANT-BASED MEAT IS NUMBER 1 TECH TREND

"Eric Schmidt, executive chairman of Google's parent, Alphabet, has spent his entire career predicting how technology can change the world... Schmidt sees a revolution coming in using plants to replace meat. Replacing livestock with growing and harvesting plants could reduce greenhouse gas emissions and fight climate change, he argued. The meat industry, cattle producers, in particular, emit significant greenhouse gases.

The development of plant proteins that communities could use to replace meat would also lower the cost of foods in developing countries where food is sometimes scarce. Delivering a pound of meat to the grocery store (raising it, slaughtering it, shipping it) is a relatively inefficient and costly process compared with delivering a pound of many protein-based plants.

Schmidt said the world is now ready to better produce synthetic food from plants with the help of computers and data crunching. Technology can help researchers and scientists identify the best plants and plant combinations for creating certain tastes and meeting certain nutritional needs"

Fortune, 2016



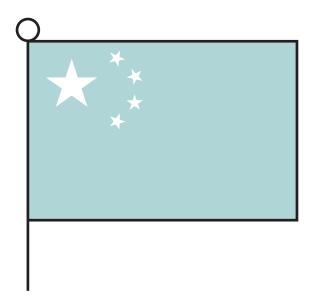
### ROBERT GOODLAND

"Robert Goodland became the first fulltime ecologist at the World Bank in 1978, from there he rose to the post of lead environmental adviser, and for more than 20 years he instituted environmental assessments of the World Bank's development projects. Goodland is best known for his assessment that at least 51% of human-induced greenhouse gas is attributable to the life cycle and supply chain of livestock products"

United Nations Environment Programme, 2014

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Worldwatch Institute



# CHINA'S PLAN TO CUT MEAT CONSUMPTION BY 50% CHEERED BY CLIMATE CAMPAIGNERS

"China now consumes 28% of the world's meat, including half of its pork... New dietary guidelines could reduce greenhouse gas emissions by 1bn tonnes by 2030, and could lessen country's problems with obesity and diabetes... New dietary guidelines drawn up by China's health ministry recommend that the nation's 1.3 billion population should consume between 40g to 75g of meat per person each day. The measures, released once every 10 years, are designed to improve public health but could also provide a significant cut to greenhouse gas emissions"

Fortune, 2013

# MEATALIES

**IMPOSSIBLE FOODS** 





#### **IMPOSSIBLE FOODS**

"You love meat. You love cheese. For thousands of years we've relied on animals to make them. Impossible Foods has found a better way. We use plants to make the best meats and cheeses you'll ever eat"

Impossible Foods, 2015





### IMPOSSIBLE FOODS RAISES \$75 MILLION

"Impossible Foods, has received \$75 million in venture capital from Khosla Ventures, Google Ventures, Mr. Li Ka-shing's Horizons Ventures and Bill Gates, for a plant based burger that bleeds!"

Wall Street Journal, 2014



### IMPOSSIBLE FOODS RAISES \$108 MILLION

"Impossible Food Inc. has raised \$108 million in a Series D round led by UBS"

Wall Street Journal, 2015

### Google

### GOOGLE'S \$300 MILLION BID FOR IMPOSSIBLE FOODS IS REJECTED

"Google has tried to buy a vegetarian burger business called Impossible Foods for up to \$300m, it has been revealed. The proposed deal was reported by technology site The Information, which cited an unnamed source as saying that the bid was rejected as too low"

Sky News, 2015

### **IMPOSSIBLE FOODS**



# MEAT ALTERNATIVES

**BEYOND MEAT** 





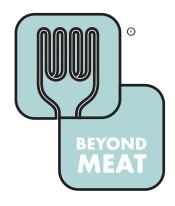
### **BEYOND MEAT RAISES \$17 MILLION IN SERIES E**

"Beyond Meat is beefing up its bank account. The El Segundo fake meat manufacturer has raised a \$17 million Series E round, according to a filing with the Securities and Exchange Commission... Its backers include prominent tech investors such as Menlo Park's Kleiner Perkins Caufield & Byers, Microsoft Corp. co-founder Bill Gates and San Francisco's Obvious Ventures... The company's top-selling Beast Burger, and other meat substitutes, are sold in over 7,000 stores, including Whole Foods, Target, Vons and Ralphs. It has also struck deals with sandwich chain Which Wich of Dallas and L.A. pizza chain Fresh Brothers"

Los Angeles Business Journal, 2015

"We are doubling the business annually" Ethan Brown, CEO of Beyond Meat

Fortune, 2015





### IT WAS A TASTE OF THE FUTURE OF FOOD

"Like most people, I don't think I can be easily fooled. But that's just what happened when I was asked to taste a chicken taco and tell whether the meat inside was real or fake...What I was experiencing was more than a clever meat substitute. It was a taste of the future of food"
Bill Gates

Gates Notes, 2013



### FORMER MCDONALD'S CEO JOINS BEYOND MEAT'S BOARD OF ADVISORS

"Beyond Meat, one of a growing number of startups trying to convince the public to swap burgers and chicken wings for plant-based alternatives, announced some pretty meaty news: Don Thompson, the former CEO of McDonald's, is joining its board of advisors"

Entrepreneur, 2015

### TYSON FOODS TAKES 5% STAKE IN BEYOND MEAT

Tyson Foods - one of the world's largest processors and marketers of chicken, beef, and pork - has taken a 5% stake in plant-based protein producer Beyond Meat. 'It meets our desire to offer consumers choices'.

FoodNavigator-USA.com



# VENTURE CAPITAL FIRM BEHIND BEYOND MEAT INVESTS IN BIG PROBLEMS NEEDING SOLUTIONS

"Frankly, we've never said we're interested in food," said Randy Komisar, a partner at Kleiner Perkins Caulfield Byers, a venture capital firm that has backed Google and Facebook — and Beyond Meat. "What we're interested in is big problems needing solutions, because they represent big potential markets and strong opportunities for building great returns"

New York Times, 2014



### **BIZ STONE**

"We want to get into the multi billion dollar meat industry with a plant based meat"

-Biz Stone, Twitter Founder

Huffington Post, 2012



# MEATALISES

**QUORN** 





### QUORN TURNOVER A RECORD £141 MILLION

"Consumers' shift to sustainable eating has led to a 20% increase in Quorn's sales in the past two years, which resulted in double-digit growth and a record turnover of £141M" said Tim Finnigan, head of research and development at Quorn"

Food Manufacture, 2015



### **QUORN TURNOVER** £150 MILLION

"Quorn ended 2014 with turnover of £150.3m, up £9m on the previous year. A £30m investment has seen a third fermenter built at its Billingham production plant where it makes around 22,000 tonnes of Mycoprotein per year, the core ingredient of Quorn products.

A global marketing push with a budget of £40m, including a TV advertising campaign starring Mo Farah and a push into Sweden and Germany, now sees Quorn exported to 16 international markets around the world. Such is the demand for its high-in-protein, low-in-fat products in the US that the company wants to grow by 30% a year stateside with the aim of building an American operation three times its current size by 2020.

Kevin Brennan, CEO of Quorn Foods, said: There is a growing trend towards meat reduction around the world and as more consumers turn to alternative sources of protein, Quorn has seen a growth in sales globally"

Gazette Live, 2015



### **QUORN IS BRITAINS**35TH BIGGEST BRAND

"Market researcher Nielsen ranks Quorn as Britain's 35th biggest brand – overtaking family favourites such as Heinz tomato ketchup"

The Telegraph, 2014



### QUORN TO INVEST £30 MILLION AND ADD 400 NEW JOBS

"Quorn Foods has announced plans to create around 400 new jobs, as it invests £30m to increase its production capacity at its Billingham site in Nelson Avenue. Production will increase by more than a third under the expansion"

Hartlepool Mail, 2015



### QUORN UP FOR SALE IN £500 MILLION DEAL

"Quorn Foods: Meat-free food manufacturer up for sale in £500 million deal, following a 30% surge in US sales. It comes as the meat-free food manufacturer, prepares to increase production by 50% later this month. According to reports, the new owner of Birds Eye and Findus, Nomad Foods, is planning a takeover bid, but could face competition from Toronto based McCain Foods, the world's largest producer of frozen chips"



### QUORN SOLD FOR £550 MILLION

"The meat substitute company Quorn Foods, advertised in the UK by Olympic Gold winner Mo Farrah, has been sold to Monde Nissin of the Philippines for £550m (\$831m)"

BBC, 2015



### **QUORN EXPORTS TO 19 COUNTRIES**

"Quorn CEO Kevin Brennan said "Vegan is an exciting area for us. We have worked for a long time to get really great vegan products." Commenting on Quorn's annual results, Brennan said the company had enjoyed strong growth off the back of its first forays into Germany in 2014, with like-for-like sales there up 49.5%. "We were testing the German market for a year and it has gone well enough to go for national distribution."

"Germany could well be one of the top three or four markets in the world for us, after the US and UK, within five years. Meat-free is worth €130M (£97.4M) there and is growing at about 30%. We think it should continue to grow. There are 7.3M vegetarians there – the largest vegetarian market in Europe."

Exports now represent 19% of Quorn's revenue and the firm currently supplies 15 countries.

The company saw continued global opportunities to boost sales in foodservice as well as retail channels. The business posted 10% UK likefor-like sales growth on January 22, with total global sales up 7%, to reach a record £150M, off the back of attracting 1.86M new customers. Brennan disclosed big plans to grow sales of Quorn to more than \$1bn in the next 10 years"

Food Manufacture, 2015

# MEATALIES

**WIESENHOF** 





# WEISENHOF'S, GERMANY'S LARGEST POULTRY PRODUCER, NEW VEGAN SAUSAGE TO ACCOUNT FOR 30% OF TURNOVER BY 2016

"Wiesenhof, Germanys largest poultry producer, has launched a vegan sausage line and the German meat giant; Rügenwalder Mühle has developed a full vegan product line, including vegan meatballs

CEO, of Rügenwalder Mühle, Christian Rauffus told German Der Spiegel, "Our brand is well-positioned, but the meat industry is not. Vegetarian products are merely a logical step to us." Rauffus has even called sausages the cigarette of the future

The move has already proven to be a success: four of the company's ten best-selling products are vegetarian products and it expects 30% of its 2020 turnover to come from vegetarian products. If the current growth is maintained, the company should reach that forecast next year already"

Retail Detail, 2015

# MEATALIES

**GARDEIN** 





### GARDEIN NOW WORTH \$100 MILLION, AND GROWING 35% YOY

"The meat-free brand [Gardein] is now worth \$100m, just five years after launching in the US as a retail brand, and is still growing at 35% year-on-year. Not so long ago, alternative dairy products such as soy and almond milk were considered niche... Look at them now... Meat alternatives are also going mainstream. More than a third of Americans (36%) buy meat alternatives now, according to Mintel, and I think this category could easily double in the next 10-15 years... We're in 20,000 stores now including many mass-market players. Every retailer is different but Kroger is expanding [the space it allocates to meat-alternatives], Walmart is and so is Whole Foods Market" - Gardein CEO Yves Potvin

Food Navigator USA, 2014



### GARDEIN SOLD FOR \$175M CANADIAN DOLLARS

"TSG Consumer Partners said it has agreed to sell Canadian food company Gardein Protein International Inc. to Blackstone Group-backed frozen food company Pinnacle Foods Inc. for 175 million Canadian dollars. The company said Gardein is expected to generate net sales of about C\$65 million this year"

Reuters, 2014

# MEATALIERNATIVES

**AMY'S KITCHEN** 





### **AMY'S KITCHEN 2008 TURNOVER \$240 MILLION**

"Based in Petaluma, Calif., Amy's leads the nation in prepared organic food sales and boasted 2008 revenues of \$240 million. With Andy, now 61, as CEO and Rachel, 55, as head of marketing, the 1,600-employee company sells 140 vegetarian products, such as frozen black-bean tamales, in chains that include Kroger, Safeway, and Whole Foods"

CNN Money, 2009

1997: sales are about \$25 million

2001: sales are more than \$100 million

2005: sales are about \$200 million

Reference for Business

2008: revenues of \$240 million

CNN Money, 2009

2012: Amy's Kitchen earned \$300 million in sales in 2012 and is estimated to bring in \$500 million in sales in 2015

L2Inc., 2015

### "WE EXPECT TO BE A BILLION-DOLLAR COMPANY IN FIVE YEARS"

Andy Berliner, Founder of Amy's Kitchen

Food Navigator USA, 2014

### AMY'S KITCHEN TO INVEST \$100 MILLION IN NEW MANUFACTURING PLANT

"Amy's Kitchen, a producer of natural and organic convenience foods and frozen specialty foods, will invest nearly \$100 million to establish a 500,000 square foot manufacturing facility in Goshen, New York. The construction of the organic food manufacturing plant is expected to create nearly 700 new jobs in the Hudson Valley"

Arena Development, 2014

### AMY'S KITCHEN TO OPEN NEW DRIVE-THRU RESTAURANT

"Amy's Kitchen Is Starting a Vegetarian Drive-Thru...
Amy's Kitchen wants to be more than just a frozen food company. In late June, it will launch its first drive-thru restaurant in Rohnert Park, Cal. to provide the same freshly prepared vegetarian foods the company is known for, but fast"

Time Magazine, 2015

# MEATALIERNATIVES

LAB GROWN MEAT





SuperMeat is revolutionizing the meat industry by ushering in the biggest change to the way people consume food since the dawn of the Industrial Age.

Together with top researchers and scientists, SuperMeat is developing cultured meat to replace the meat consumed on a daily basis worldwide.

"We were looking for the best way to end animal suffering, but also be realistic about meat eating habits. Together with Prof. Yaakov Nahmias, an award winning biomedical engineer at the Hebrew University of Jerusalem, we've been developing a system for producing cultured meat. That means growing REAL meat, non-GMO, no antibiotics, in machines at supermarkets all over the world".



### SUPERMEAT = CLEAN MEAT

### WHAT IS SUPERMEAT?

Supermeat is a cultured meat, real meat grown outside the animal's body, from animal cells. This process is completed in Supermeat which mimics the natural physiology of the animal.

### WHY SUPERMEAT?

#### For the environment:

- 78%-96% lower GHG emissions.
- 99% lower land use.
- 82%-96% lower water use.

#### For the animals:

- 60 billion chikens worldwide are slaughtered annually for food.
- 70 billion land animals are slaughtered annually for food worldwide.
- 1 trillion sea animals are killed annually for food worldwide.

### For public health:

- No use of antibiotics.
- Increased hygiene in meat production.
- Prevention of pandemics.
- Controlled procedure.

#### For preventing food crises:

- World population is expected to reach 10 billion people by 2050.
- Meat consumption is projected to increase by 70% until 2050.

## MEAT ALTERNATIVES MARKET SIZE

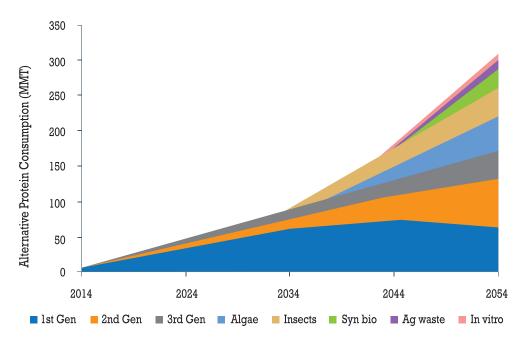
**GLOBAL** 



### ALTERNATIVE PROTEINS TO CLAIM THIRD OF MARKET BY 2054

"Alternative Proteins to Claim a Third of the Market by 2054. Shifts in supply and demand of protein for human consumption will drive the rise of alternative proteins to 307 million MT by 2054, initiating significant changes in the food and agriculture landscape... Global protein consumption will reach 943 million metric tons (MMT) by 2054, rising at a 1.7% CAGR from the current 473 MMT. Alternative protein sources will pick up the slack of slowing meat and seafood growth, and could claim as much as 33% of total protein consumption by 2054" "Novel protein sources beyond meat and fish are finding opportunities for growth within the once static protein industry... consumer preference, concerns over the planet's ability to produce sufficient meat, impact of livestock agriculture on the environment, and mounting scientific advances are driving the changing protein demand" Camilla Stice, Lux Research Analyst

#### THE ALTERNATIVE PROTEIN LANDSCAPE DIVERSIFIES IN COMING DECADES



"Soy will dominate the alternative protein space over the next 10 years. Consumption of soy, the first-generation alternative protein, has risen at a CAGR of 5.1%, versus 2.5% and 1.6% for meat and seafood, respectively, over the past decade. Soy consumption will continue to rise strongly over the next decade, reaching 31 MMT and capturing more than 80% of the alternative protein market by 2024. Second-generation plant proteins – proteins extracted from well-established plant sources like pea, rice, and canola – will only be a small slice of the overall alternative protein market by 2024 but will grow at a tremendous rate, poised for greater market adoption in the coming decades"

Lux Research, 2015

### MEAT SUBSTITUTES WORTH \$5 BILLION BY 2020, CAGR 6.4%

"Meat Substitutes Market worth 5.17 Billion USD by 2020... The increasing awareness about health and wellness, the growing meat-free products market, the increasing health concerns for pets, and increasing environmental issues have played a major part in providing the necessary boost to the global meat substitutes market. The market is projected to reach USD 5.17 Billion by 2020 at a CAGR of 6.4% from 2015"

Lux Research, 2015

### NEW VEGETARIAN FOOD PRODUCTS DOUBLE BETWEEN 2009 AND 2013

"Number of global vegetarian food and drink product launches doubles between 2009 and 2013... 12% of global food and drink products launched in 2013 carried a vegetarian claim, up from 6% in 2009. Further to this, 2% of global food and drink launches carried a vegan claim in 2013, up from 1% in 2009"

Mintel, 2014

### SOY PROTEIN WORTH 6.3 BILLION IN 2012 IS GROWING AT A CAGR 6.3%

"The global market for soy protein ingredients in terms of revenue was estimated to be worth \$6,399.9 million in 2012 and is expected to reach \$9,214.4 million by 2018, growing at a CAGR of 6.3% from 2013 to 2018"

Market and Markets

**USA** 

## US MEAT ALTERNATIVES HIT \$553 MILLION, UP 8%

"The hunger for fake meat, or meatless meat, is getting bigger. So much so that the latest sales numbers of plant-based meat alternatives reached \$553 million in 2012, representing a growth spurt of 8% from 2010"

Fortune, 2015

UK

### 40% OF UK HAS PURCHASED VEGETARIAN FOODS

"Almost 40% Brits have bought vegetarian or meat-free food"

The Telegraph, 2008

## DAIRY ALTERNATIVES

WHITEWAVE FOODS





### WHITEWAVE REACHED \$3.14 BILLION IN TURNOVER FOR 2014

"WhiteWave owns Silk, So Delicious, Earthbound Farm and Alpro and recorded US\$3.4 billion in 2014 revenue"

Vancouver Sun, 2015

### PLANT BASED MILKS ACCOUNT FOR 7.5% OF US RETAIL MILK SALES

"While the meteoric growth of plant-based beverages such as almond milk is well-documented, WhiteWave Foods has identified \$2.7bn worth of business in other plant-based categories in the US retail market, including yogurt, creamers, and frozen desserts, which it says are currently underdeveloped... WhiteWave Foods CEO Gregg Engles said plant-based beverages now accounted for an astonishing 7.5% of dollar sales in the US retail 'milk' market, while plant-based products only accounted for 1.8% of the creamers market, 0.6% of the ice cream market, and 0.7% of the yogurt market... As for plant-based beverages, he said: "Over the past five years the plant-based category has seen steady increases in household penetration [31% in 2015 vs 18% in 2010], but many opportunities still exist to expand the category, including converting milk households to new innovations like Silk cashew milk"

7.5%

Food Navigator USA, 2015

### QUARTERLY SALES UP 36% TO \$838 MILLION

"WhiteWave Foods - which sells plant-based products under the Silk brand in the US and the Alpro and Provamel brands in Europe - also makes products under the Horizon Organic, TruMoo, Land O Lakes and Earthbound Farm brands. Net sales for the quarter ended June 30 were up 36% to \$838m. Operating income rose 53% to \$88m... WhiteWave Foods to buy SO Delicious Dairy Free in \$195m deal to expand its plant-based foods empire... Best known for its non-GMO Project verified plant-based beverages, creamers, cultured products and frozen desserts, Oregonbased So Delicious generated net sales of \$115m in the year ended June 30, 2014... SO Delicious is also recognized as the #1 plant-based frozen dessert brand in the United States... [The deal] builds on our platform of Silk and Alpro branded products by expanding plant-based capabilities and providing new category opportunities...

SO Delicious Dairy Free has notched up a compound annual growth rate of 30%+ over the past five years, and the brand is now worth close to \$200m at retail"

\$838M

Food Navigator USA, 2014



### WHITEWAVE AQUIRE VEGA FOR \$550 MILLION

"WhiteWave Foods Co.... agreed to buy nutrition food company Vega for about \$550 million in cash... Vancouver-based Vega, founded in 2004, sells plant-based powdered shakes and snack bars. It had sales of about \$100 million in the past 12 months"

Bloomberg, 2015



### SILK SOY MILK SALES UP 45% IN LAST QUARTER

"Even as the average American drinks less dairy, thirst for plant-based alternatives such as almond milk is growing. Silk, the best-selling brand in the US... posted a 45% increase in sales last quarter... The latest data from Nielsen show a very similar gain in dollar sales of all almond milks in the US, which increased more than 46% in the 12 months ended July 26. Almond milk is now an almost \$738 million business, and the nutty drink has replaced soy as America's preferred plant-based milk. Soymilk sales were only \$341.1 million for that period, and have been declining for years"

Bloomberg, 2014



### WHITEWAVE OWNED ALPRO INVEST £28 MILLION IN NEW PRODUCT LINES

"Alpro the US food and drink manufacturer has invested £28 Million and brought 50 new jobs to new product lines in Northamptonshire. New products are bringing in about 30% more turnover and demand for soya foods was also increasing, the firm, already employing 100 people, said"

BBC, 2015

#### **SALES UP TO 2,343%**

Sales of Alpro Unsweetened Almond Milk have gone up by 2,343 per cent since 2015

The London Economics, 2016

### DANONE (BN) TO ACQUIREWHITEWAVE FOODS (WWAV) FOR OVER \$12 BILLION

"Danone SA, the French dairy giant whose yogurt brands are a common sight on supermarket shelves around the world, announced Thursday it is acquiring WhiteWave Foods Co., the Denver, Colorado, producer of organic foods and plant-based milks. The all-cash deal values the U.S. company at \$56.25 per share, for a total enterprise value of about \$12.5 billion. The deal "doubles the size of Danone's U.S. business" and will create "synergies of #300 million by 2020," the French company said in a statement. The price offered for shares of WhiteWave Foods is a 24 percent premium to the company's 30-day average closing price"

International Business Times, 2016



### DAIRY ALTERNATIVES

**BEN AND JERRY'S** 





#### BEN AND JERRY'S LAUNCHES VEGAN LINE

"Ben & Jerry's is ditching the cow for its latest line of ice cream. The South Burlington, Vt.- based company known for its outrageous flavours launched four vegan ice creams Wednesday. The ice creams, technically called "frozen dessert" because ice cream has to have a certain amount of milk fat, are made from an almond milk base and will roll out to grocery stores over the next four to six weeks"

USA Today, 2016

### DAIRY ALTERNATIVES

KITE HILL FOODS & DAIYA



### UNCOMMON GROWTH TRAJECTORY

"Matthew Sade, CEO of Hayward, CA-based Lyrical Foods (d.b.a. Kite Hill)... recently headed up marketing for meat-alternative firm Impossible Foods... [Said] We don't disclose revenues, but I'm very familiar with early stage food and beverage companies and let's just say that we're on a growth trajectory that is very uncommon... We want to change the entire dairy landscape, and we're building a whole platform of plant-based products that will completely change how people view categories from entrees to cheesecake. Artisan cheese will be a very small part of what this company will become in the next couple of years"

Food Navigator USA, 2015



#### DAIYA PLANT BASED CHEESE NOW IN 20K STORES AND GENERATING DOUBLE DIGIT GROWTH

"In 2009, when Daiya Foods first started selling cheese alternatives, the addressable market (based on what was selling at the time) was an uninspiring \$10m, a figure most investors and CPG brands won't even get out of bed for. Fast-forward six years, however, and the size of the prize has grown exponentially, say founders Greg Blake and Andre Kroecher... But can plant-based cheese and yogurts realistically hope to capture a similar share (almost 10%) of the dairy cheese and yogurt market that plant-based 'milks' such as almond milk have managed to secure over the past decade?

Why not, says Daiya Foods... now sells products... in 20,000+ stores across North America, Europe Australia and New Zealand, and is generating double-digit growth in accounts from Safeway and Kroger to Whole Foods'



Food Navigator USA, 2015

### DAIRY ALTERNATIVES MARKET SIZE



GLOBAL

#### DAIRY ALTERNATIVES MARKET TO REACH \$19.5 BILLION BY 2020

"The global dairy alternative market is expected to increase at a rate of 15.5% each year until 2020 when it will hit \$19.5bn, according to a report from MarketsandMarkets. In addition, the report says global consumption of dairy alternatives is projected to grow 15.2% per year over the next five years"

Beverage Daily, 2015

UK

#### DAIRY ALTERNATIVES UP 155% IN UK

"There is a growing trend towards dairy alternatives in the UK, with volume sales of cow-milk alternatives such as soya, rice and buffalo milk up 155% between 2011 and 2013, according to a Mintel report"

Food Navigator, 2014

### 40% OF UK HAS PURCHASED VEGETARIAN FOODS

"A staggering one in five UK households now chooses to buy non-dairy, plant-based products such as soya, rice, oat, almond or coconut milk as a lifestyle choice or for medical reasons. The size of the non-dairy market jumped from 36 million litres in 2011 to 92 million litres in 2013"

The Telegraph, 2008

#### FREE FROM FOODS TO REACH £519 MILLION BY 2016

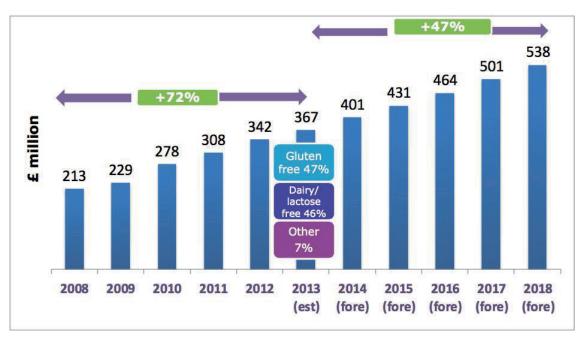
Britain's free-from food sector is witnessing meteoric growth as more consumers report intolerance to certain foods, according to a new report about to be published by market research company Mintel. Retail sales are set to soar from £303M a year to £519M by 2016. While the number of new free-from products continues to rise, the dairy-free sector overtook the gluten-free sector in bakery for the first time last year, said David Jago, global research director for Mintel. "Dairy-free is likely to continue to grow faster," he said. Gluten and wheat-free baked goods were worth about £135M, while dairy and lactose-free products were now valued at around £143M.

Food Manufacture, 2011

#### **UK MARKET STILL HAS GROWTH TO COME**



Sales growth of free-from foods in the UK slowing but still impressive



Source: Mintel

**USA** 

#### MILK ALTERNATIVES CONTROL 8% OF TOTAL MILK SALES IN US, WORTH \$2 BILLION

"Milk alternatives control just 8% of overall milk sales in the United States, but for the past few years, they've represented the fastest-growing part of the dairy market, according to Mintel, Inc., a Chicago-based research firm. Sales of milk alternatives rose to nearly \$2 billion in 2013, up 30% since 2011"

Washington Post, 2014

#### **UNCOMMON GROWTH TRAJECTORY**

"Almond milk accounts for two thirds of sales in plant-based milk category...

The US plant-based milk category grew 20% in the last quarter driven by continued growth in almond milk - sales of which were up more than 50% year-on-year"

Food Navigator USA, 2014

#### **36% OF US BUYERS PREFER ALTERNATIVES**

"36% of US consumers either prefer milk alternatives and use meat alternatives"

Food Navigator USA, 2015

#### AT CURRENT GROWTH ALMOND MILK WILL BE WORTH 19% OF TOTAL US MILK SALES

"If current trends continue, almond milk will account for an astonishing 19% (dollar share) of the US retail dairy and dairy alternative beverages market in 2019"

Food Navigator USA, 2015

#### **PLANT BASED MILKS IN 30% OF US HOMES**

"US household penetration of plant-based beverages has doubled in five years to more than 30%, with almond milk now accounting for almost 70% of sales and new nut-based milks such as cashew gaining momentum, says WhiteWave Foods"

Food Navigator USA, 2015

**CHINA** 

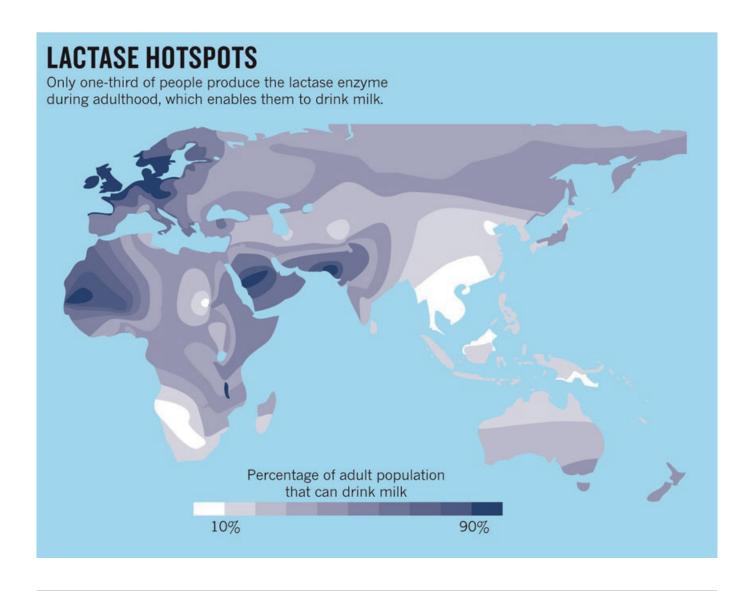
#### PLANT BASED MILK MARKET WORTH \$2 BILLION IN CHINA

"The plant-based beverage market in China is worth more than \$2bn"

Food Navigator USA, 2015

# LACTOSE INTOLERANCE BY COUNTRY





### 75% OF THE WORLD IS LACTOSE INTOLERANT

"About 75% of the world's population, including 25% of those in the US, lose their lactase enzymes after weaning"

Physicians Committee for Responsible Medicine

### 90% OF ASIANS ARE LACTOSE INTOLERANT

"Up to 90% of South Asians may be lactose intolerant"

Sutter Health, Palo Alto Medical Foundation

### 15% OF UK IS LACTOSE INTOLERANT

"Up to 15% of the UK population is thought to be lactose intolerant"

Lactose Intolerant

### MAYONNAISE ALTERNATIVES

HAMPTON CREEK FOODS



#### HAMPTON CREEK RAISES \$23 MILLION FROM LI KA-SHING

"Hampton Creek, The Start-up That's Making Eggs Obsolete, Just Got \$23 Million In Funding Led By The Richest Man In Asia... The company announced that it is taking \$23 million in a series B round led by Li Ka-Shing's Horizon Ventures. Li is Asia's richest man, with a net

Business Insider, 2014

worth of \$29.2 billion"



#### **HAMPTON CREEK RAISES \$90 MILLION**

"San Francisco-based Hampton Creek raised \$90 million in a strategic Series C financing round, the food technology start-up said today. This latest investment brings the company's total funding to \$120 million. Hampton Creek, which is best known for its egg-free condiment Just Mayo, is trying to index the world's plants in an effort to come up with plant-based food products that are better for the environment and its customers' health. Horizons Ventures and Khosla Ventures, which have both previously invested in the company, led the round. New investors included Facebook co-founder Eduardo Saverin and Salesforce founder and CEO Marc Benioff"

Business Insider, 2014





#### LI KA-SHING

"Everyone wants a clean and sustainable world, and we love that Hampton Creek is committed to that goal, egg by egg" - Li Ka-Shing, Richest Man in Asia

Business Insider, 2014

#### HAMPTON CREEK THREATENED BY AMERICAN EGG BOARD

"Eggless mayo brand 'Just Mayo,' made by Hampton Creek, has been threatened by the American Egg Board, and the CEO is speaking out.

CEO Josh Tetrick said: "The American Egg Board is actually run by the USDA... They actually paid someone to call Whole Foods to attempt to block the initial distribution of the product, trying to influence policy."

Tetrick said the Obama Administration is probing the Egg Board over the controversy.

"They realized... that we are not just a tiny company in San Francisco, but we are making a huge dent in making food better and they see how fast we are growing... they see that we are using plants, not because we are obsessed with plants and crops out there, but we enjoy working with farmers to reduce the cost of food, to use less water and that's somewhat a threat to their business model but Senator Mike Lee from Utah has already spoken out against. This is a free market economy and may the best product win, "he said.

According to Tetrick his vegan business is "one of the fastest growing food companies on the planet." "It's not just Whole Foods, but it's at Walmart, it's at Dollar Tree, it's with Compass Group, the biggest food company in the world... and you remember the point of the company, make it easier for regular people to eat better and that's why we are everywhere and I think that's why some incumbents, not all of them... are feeling a little bit threatened by our product," he said.

### When asked whether it's a \$100 million a year company yet he said: "The value of the company is considerably more than that"





#### HAMPTON CREEK THREATENED BY AMERICAN EGG BOARD

"The CEO of the American Egg Board has stepped down earlier than planned, following the release of emails indicating she tried to stop the sale of a vegan mayonnaise at Whole Foods"

ABC News, 2015

#### 7-ELEVEN USE HAMPTON CREEK FOODS' JUST MAYO IN ALL PRODUCTS

"7-Eleven quietly switched to vegan mayo, the world's biggest convenience store just went vegan with its sandwich spread, but you wouldn't know it. 7-Eleven switch to Just Mayo; 7-Eleven will still sell other jars of mayo, but will be using the eggless mayo in food it prepares. This change would save over 81 million gallons of water, preserve over 4 million square feet of land, and prevent 191 million grams of CO2 emission. For the body, 1.5 billion milligrams of sodium, 304 million milligram of cholesterol, and 30 million grams of saturated fat would be avoided annually"

ELEVEN

Fortune Magazine, 2015

#### **JUST MAYO REVENUES UP 350% IN 2015**

"Revenues at plant-based foods maker Hampton Creek surged 350% in 2015 as the company expanded its product range and strengthened partnerships in retail and foodservice, said CEO Josh Tetrick, who also grew the headcount at the San Francisco-based company from 60 to 110 employees last year"

Food Navigator, 2016

### MAYONNAISE ALTERNATIVES

UNILEVER & EGG REPLACEMENTS





### HELLMANN'S GIVES VEGAN A GO AFTER SUING EGGLESS SPREAD MAKER

After suing a vegan mayo maker for false advertising, Hellmann's parent company Unilever is launching its own eggless spread. The company said Tuesday that its first eggless version of Hellmann's will hit shelves later this month under the label "Carefully Crafted Dressing and Sandwich Spread"

North Jersey, 2016



#### UNILEVER ANNOUNCE \$17.8 MILLION REPOSITIONING CAMPAIGN

"Flora, Unilever UK's spreads brand, has announced a \$17.8m (£12.5m) brand repositioning campaign, Powered by Plants, and a new dairy-free variant, Flora Freedom"

Dairy Reporter, 2016

#### VEGANEGG IN 15K LOCATIONS, SOLD OUT IN 2 WEEKS

"VeganEgg - a novel 100% plant-based whole egg replacer utilizing algae as its core ingredient - has taken off like a rocketship, says brand owner Follow Your Heart, which is ramping up production for a wider roll-out in 2016... We projected our initial run would last three months; we sold out in two weeks... available in around 15,000 locations"

Food Navigator USA, 2015

# VECETARIAN FAST FOOD

NATIVE FOODS & VEGGIEGRILL FRESHII & IKEA & DOMINOS PIZZA





#### **NATIVE FOODS RAISE** \$25 MILLION AND PLANS TO EXPAND **TO 200 LOCATIONS**

"Native Foods has raised \$25 million from private equity to date, currently has 16 restaurants in San Diego, Los Angeles, Orange County, Chicago, and Denver; it plans to expand to 200+ locations over the next 5 years"

Restaurant Business Online



#### **VEGGIE GRILL RAISE** \$20 MILLION IN ROUND D

"Santa Monica based VeggieGrill chain, specialises in plant based comfort food, raised a 4th round funding of \$20m from Brentwood Associates for business expansion. VeggieGrill currently has increased its number of outlets from 16 to 25 as of July 4, 2014. 70% of VeggieGrill's customers are non-vegetarians"

PR Newswire



"Vegan chilli is now on the scene at Freshii locations! We're talking more than 75 cities and 15 countries worldwide"

"Domino's Israel sold over half a million vegan pizzas in the past year"





#### **IKEA LAUNCH VEGAN MEATBALLS**

"IKEA, almost as well known for its Swedish meatballs as its assemble-it-yourself furniture, is about to give its hungry but socially conscious shoppers a vegetarian option: Veggie Balls. More specifically, vegan Veggie Balls, made with no animal products whatsoever"

USA Today, 2015

### VECETARIAN SUPERMARKETS

**VEGANZ** 



#### VEGANZ TURNOVER NOW €10 MILLION

"Veganz, a German Vegan Supermarket chain, has plans to expand across Europe and the US.

Yearly turnover

2011 - €592,694

2012 - €1,540,678

2013 - €5,263,631

2014 - €9,718,912

Within the last three years Veganz reached 117,609,160 million people, which is statistically the equivalent as having invested €9,728,297 in media products, to gain the same amount of attention"

Fox Business, 2015



#### WORLD'S FIRST VEGAN SUPERMARKET CHAIN TO OPEN IN PORTLAND

"Veganz, the first and world's largest vegan grocery store chain, will set up shop in the famously crunchy city later this year. Along with a supermarket, Veganz also plans to open a shoe and clothing store and restaurant in Portland"

Eco Watch, 2016

## VECETARIAN VECANS CROWTH



GLOBAL

#### 12% OF NEW FOOD LAUNCHES VEGETARIAN, IN 2013

"According to research firm Mintel, vegetarian products accounted for 12% of new foods worldwide in 2013, up from 6% in 2009"

Marketing, 2015

**USA** 

### 22.8 MILLION US ADULTS MAINLY VEGETARIAN (2008)

"3.2% of US adults, or 7.3 million people, follow a vegetarian-based diet. Approximately 0.5%, or 1 million, of those are vegans, who consume no animal products at all. In addition, 10% of US adults, or 22.8 million people, say they largely follow a vegetarian-inclined diet... The 2008 study also indicates that of the non-vegetarians surveyed 5.2%, or 11.9 million people, are "definitely interested" in following a vegetarian-based diet in the future"

PR Newswire, 2008

### ONE THIRD OF AMERICANS EAT VEGETARIAN OCCASIONALLY

4% of US consumers are strictly vegetarian... and about half of those are vegan... One third of Americans now say they are trying to eat vegetarian meals at least occasionally. With movements like Meatless Monday growing in popularity, people are working more veggie-based meals into their rotation... Retail sales of vegan products rose 6.3% in the past year"

New Hope 360, 2015

#### 47% OF AMERICANS ARE FLEXITARIAN

"Enter the new world of folks who enjoy eating meat — but want less of it. Some 47% of Americans are trying to reduce meat consumption. That's the flexitarian (flexible vegetarian) trend that the MorningStar Farms division of Kellogg has latched onto"

USA Today, 2011

UK

#### VEGAN FOOD SALES ARE UP BY 1,500 PER CENT IN THE PAST YEAR OF 2016

Vegetarian meat alternatives are also up by thousands of percentage points, as is sales of snacks such as Smoked Tofu and Cauldron Falafel. In the run-up to Christmas treats such as Alpro Vanilla Soya Custard (+1,142 per cent), Rakusen's Non-Dairy Chocolate Digestives (+1,643 per cent) and Booja Booja Hunky Punky Chocolate Ice Cream (+2,756 per cent) are also on the way up.

The London Economic

#### 12% OF UKVEGETARIAN

"Today in Britain, the vegetarian diet is firmly on the map with 12% of UK adults following a vegetarian or vegan diet, rising to 20% of 16 to 24's"

Mintel, 2014

#### 5K NEW VEGETARIANS A WEEK IN UK

"The British Vegetarian Society reports that currently an average of 5,000 people a week become vegetarians in Britain. In Germany the equivalent figure is 4,000 people a week but, with around 7 million vegetarians, Germany currently has the highest number"

Organic Market Info, 2013

#### **EUROPE**

### VEGETARIANS ACCOUNT FOR 9% TO 10% OF ITALIAN AND GERMAN POPULATIONS

"The proportion of Europeans who identify as vegetarian has increased too, with rates varying from about 1% to 2% in some countries, to about 9% to 10% in Italy and Germany"

Food Navigator, 2014

#### 40% OF DUTCH PEOPLE ARE FLEXITARIANS

"A new dietary pattern has cropped up. Dubbed flexitarianism, it refers to meat reduction rather than fully-fledged vegetarianism. Germany and the Netherlands lead the way in this 'flexitarian' way of eating [with] three-quarters of Dutch consumers say they have at least one meat-free day per week, and 40% eat no meat at least three days a week

Food Navigator, 2014

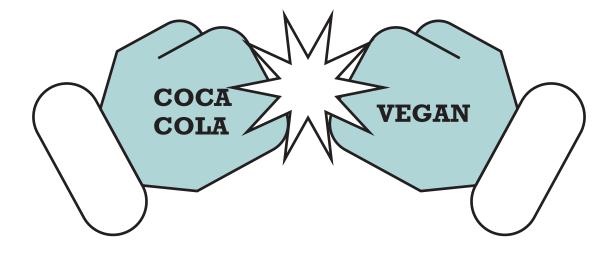
### 52% OF GERMANS CONSCIOUSLY AVOID EATING MEAT

"A Forsa survey came to the conclusion that 42 million part-time vegetarians now live in Germany. This means that the majority of Germans (52 %) consciously avoid eating meat on three or more days a week"

Organic Market Info, 2013

### VECANS CROWTH





### COCA COLA COMPETE WITH VEGAN ON SOCIAL MEDIA

"Social media analysis shows incredible volume for vegan related references to the point where vegan and Coca-Cola are competing for space for who is getting the most social media messages and marketing. Research analysis shows vegan and vegetarian related content were mentioned 4.3 million times in 90 days, compared to 4.1 million references to Coca-Cola in the same time period"

Food Navigator USA, 2015

### MEAT IN DECLINE



#### **EUROPE**

#### RED MEAT CONSUMPTION FALLS 15% OVER 10 YEARS

"Annual per capita red meat consumption in the US fell 15% to 101 pounds in the past 10 years, according to the US Department of Agriculture. It's down by a third since the early 1970s, when per capita consumption was pushing 150 pounds per year. And the downward consumption trend could soon accelerate, with major negative implications for the meat industry"

Global Meat News, 2015

#### 41% OF AMERICANS ATE LESS MEAT IN PASTYEAR

"26% of Americans said they are less meat in the last 12 months, but other research places this number as high as 41%"

Food Navigator USA, 2015

#### US MEAT CONSUMPTION DOWN 9% SINCE 2004

"Meat consumption is dropping across Europe and now in the US, the US Department of Agriculture reports meat eating in the US is on the decline, three decades after health concerns first started denting demand for beef. After peaking at 184 pounds per person annually in 2004, Americans now eat an estimated 167 pounds today"

Earth Policy Institute, 2012

#### US MEAT CONSUMPTION DECADE LONG DECREASE

"Meat consumption in the US has been on the decline for nearly a decade. Volume sales through these outlets (supermarkets, drug stores, and mass merchandisers) in millions of pounds have gone down overall from 2008 to 2012 with decreases in all but two of the meat categories and in one of the two poultry categories"

Foodnavigator USA, 2013

UK

#### **BRITISH SAUSAGES DECLINE BY 26.4%**

"British sales of sausages have dropped by over a quarter since 2008. The volume of sausages sold has fallen by 26.4% (1250 million kg); health fears about pork have also been cited as a cause for this drop. In June, the superbug MRSA was been found in sausages and minced pork being sold in British supermarkets"

The Telegraph, 2015

#### **GERMANY**

#### GERMAN MEAT CONSUMPTION DOWN

"Meat consumption in Germany is declining steadily, and that's true of last year as well, when statistically every German citizen ate only 59.6 kilos of meat, which is 1.4 kilos less than the year before"

Organic Market Info, 2013

### CHINA'S PLAN TO CUT MEAT CONSUMPTION BY 50% CHEERED BY CLIMATE CAMPAIGNERS

"New dietary guidelines could reduce greenhouse gas emissions by 1bn tonnes by 2030, and could lessen country's problems with obesity and diabetes... New dietary guidelines drawn up by China's health ministry recommend that the nation's 1.3 billion population should consume between 40g to 75g of meat per person each day. The measures, released once every 10 years, are designed to improve public health but could also provide a significant cut to greenhouse gas emissions"

Guardian, 2016

#### IFCN SAYS 40% FEWER DAIRY FARMS IN WESTERN EUROPE BY 2026

IFCN has defined future dairy farms as a current farm that will be still producing in 10 years. It says that in the next 10 years, the number of farms will be reduced by more than 40% in Western Europe.

**IFCN** 



#### MEAT INDUSTRY COULD DITCH FACTORY FARMING AS INVESTORS START TO PULL FUNDS

The meat industry could abandon factory farming methods in the face of rising investor wariness over the rearing methods, experts said.

#### **FAIRR**

The move away from factory farming has already gained traction, with investors collectively managing more than \$1 trillion joining the Farm Animal Investment Risk and Return (FAIRR) initiative, including Aviva Investors, Strathclyde Pension fund, Robeco and Triodos Investment Management.

FoodNavigator-USA.com



