



DANONE
ONE PLANET. ONE HEALTH

BARCLAYS CONFERENCE

Capturing the plant based opportunity

September 4, 2019



Emmanuel Faber
Chairman and CEO



In the age of flexitarianism and the rise of plant based food
A unique vision



DANONE

ONE PLANET. ONE HEALTH

In the age of flexitarianism and the rise of plant based food

A unique business

Health-focused portfolio



89%⁽¹⁾
of volumes sold
recommended for
daily consumption

Flexitarian diets promotion



#1
in fresh dairy and
plant-based

Sustainable farming practices



Leader
in organic

Collective approach



Partnership
networks for speed,
impact and scale

Source: Euromonitor, internal estimates. (1) 89% in 2018. Refers to water, yogurt and other daily dairy products, baby milks & foods, milks and milk powders, beverages with 0% sugar and medical nutrition. Based on official public health recommendation, these categories are generally suitable for daily consumption.

OUR BRAND MODEL

OUR
BUSINESS
MODEL



OUR
TRUST
MODEL

1



The opportunity:
the age
of flexitarianism

2



Danone uniquely
positioned for the
plant-based
momentum

The urgency for sustainable food systems and diets

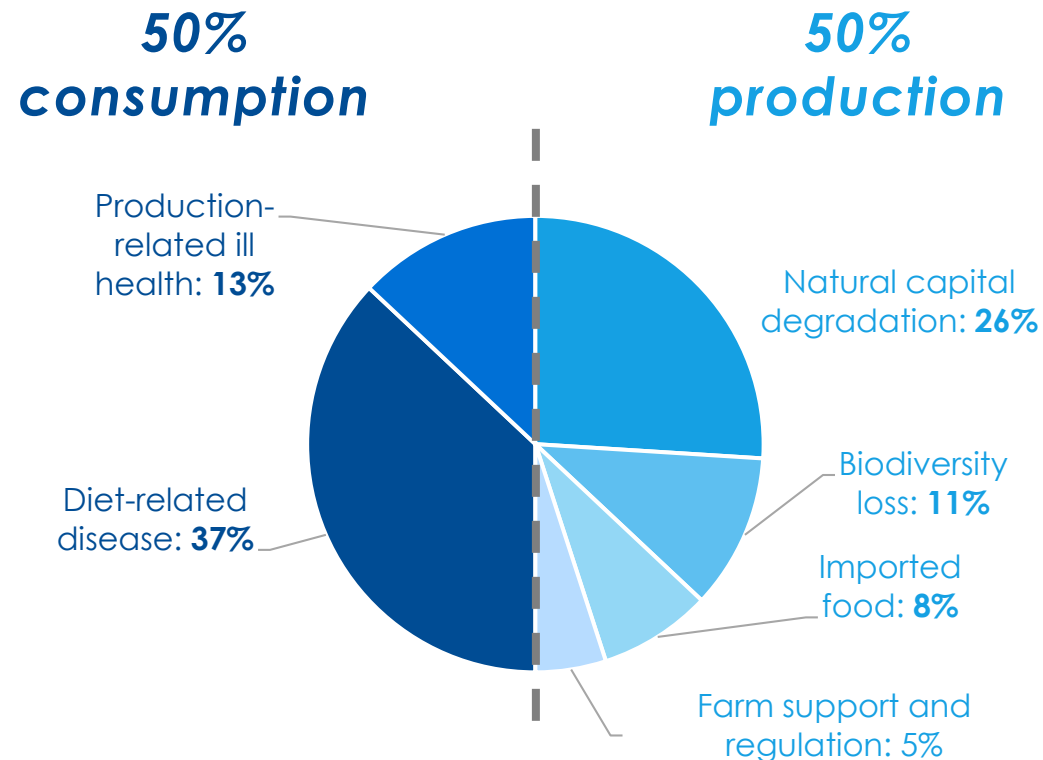
Food at the heart of many of today's world challenges



\$1 spent on food today



\$1 hidden cost incurred for society



Source : Sustainable Food Trust, « The Hidden Cost of UK Food », November 2017

A shift in eating habits and production practices is needed

Growing science evidence



UPPSALA
UNIVERSITET

Oct-2018



Jan-2019



Apr-2019



Aug-2019

Agonomy for Sustainable Development (2018) 38:59
https://doi.org/10.1007/s11395-018-0282-0
RESEARCH ARTICLE
CrossMark

Designing a future food vision for the Nordics through a participatory modeling approach

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Accepted: 22 August 2018
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Abstract
The development of future food systems will depend on normative decisions taken at different levels by policymakers and stakeholders. Scenario modeling is an adequate tool for assessing the implications of such decisions, but for an enlightening debate, it is important to make explicit and transparent how such value-based decisions affect modeling results. In a participatory approach working with five NGOs, we developed a future food vision for the Nordic countries (Denmark, Finland, Norway and Sweden) through an iterative process of defining the scenario, modeling, and revising the scenario, until a final future food vision was reached. The impacts on food production, land use, and greenhouse gas emissions, and the resulting diets in the food vision, were modeled using a mass flow model of the food system. The food vision formulated was an organic farming system where food is produced locally and livestock production is limited to “leftover streams,” i.e., by-products from food production and forage from pastures and perennial grass/clover mixtures, thus limiting food-feed competition. Consumption of meat, especially non-ruminant meat, was substantially reduced compared with current consumption in the Nordic countries (~31%). An estimated population of 37 million people could be supplied with the scenario diet, which uses 0.21 ha of arable land and causes greenhouse gas emissions of 0.48 tCO₂e per diet and year. The novelty of this paper includes advancing modeling of sustainable food systems by using an iterative process for designing future food visions based on stakeholder values, which enables results from multidisciplinary modeling (including agonomy, environmental system analysis, animal and human nutrition) to be fed back into the decision-making process, providing an empirical basis for normative decisions and a science-based future vision of sustainable food systems.

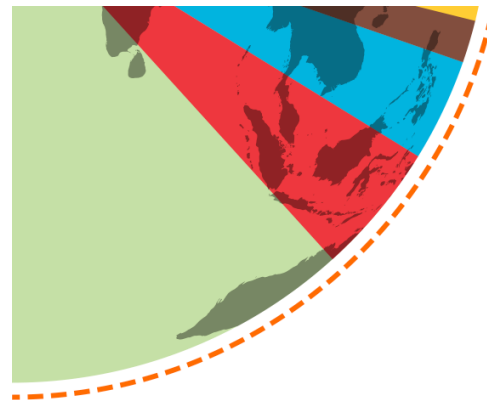
Keywords Food system · Local · Organic · Livestock · Leftovers · Food-feed competition · Default livestock · Land use · Greenhouse gas emissions · Agriculture

1 Introduction

Agriculture faces a massive dual challenge in feeding a growing and increasingly affluent global population, while at the same time reducing its negative environmental impacts. Food systems affect the environment through agricultural land

expansion, where agriculture extends into other biomes with negative impacts on biodiversity, soils and stored carbon, and through intensification, with increased water withdrawal, perturbation of nutrient cycles, and increased energy use (Foley et al. 2011). Up to 29% of global anthropogenic greenhouse gas (GHG) emissions can be attributed to food systems (Vermeulen et al. 2012), where livestock products, especially red meat, are GHG-intensive and responsible for a large part of the GHG impact of diets (Hallström et al. 2015). While the goal for future food systems is clear, i.e., to produce enough nutritious food accessible to everyone while reducing negative environmental impacts, the paths suggested to reach this goal are numerous and sometimes opposing.

Some experts call for further improvements in efficiency, to produce more from existing land through increased and more efficient use of inorganic fertilizers, pesticides, and other amendments and modern technologies, in order to increase



Report of the EAT–Lancet Commission

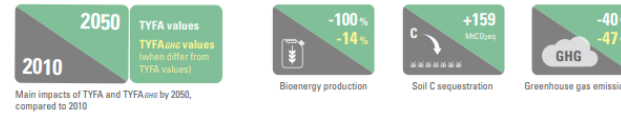
Healthy Diets From Sustainable Food Systems

Food Planet Health



TYFA AND TYFA_{GHG}

POTENTIAL FOR CLIMATE MITIGATION AND CO-BENEFITS OF AN AGROECOLOGICAL EUROPE



ipcc
INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE

Climate Change and Land

An IPCC Special Report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems

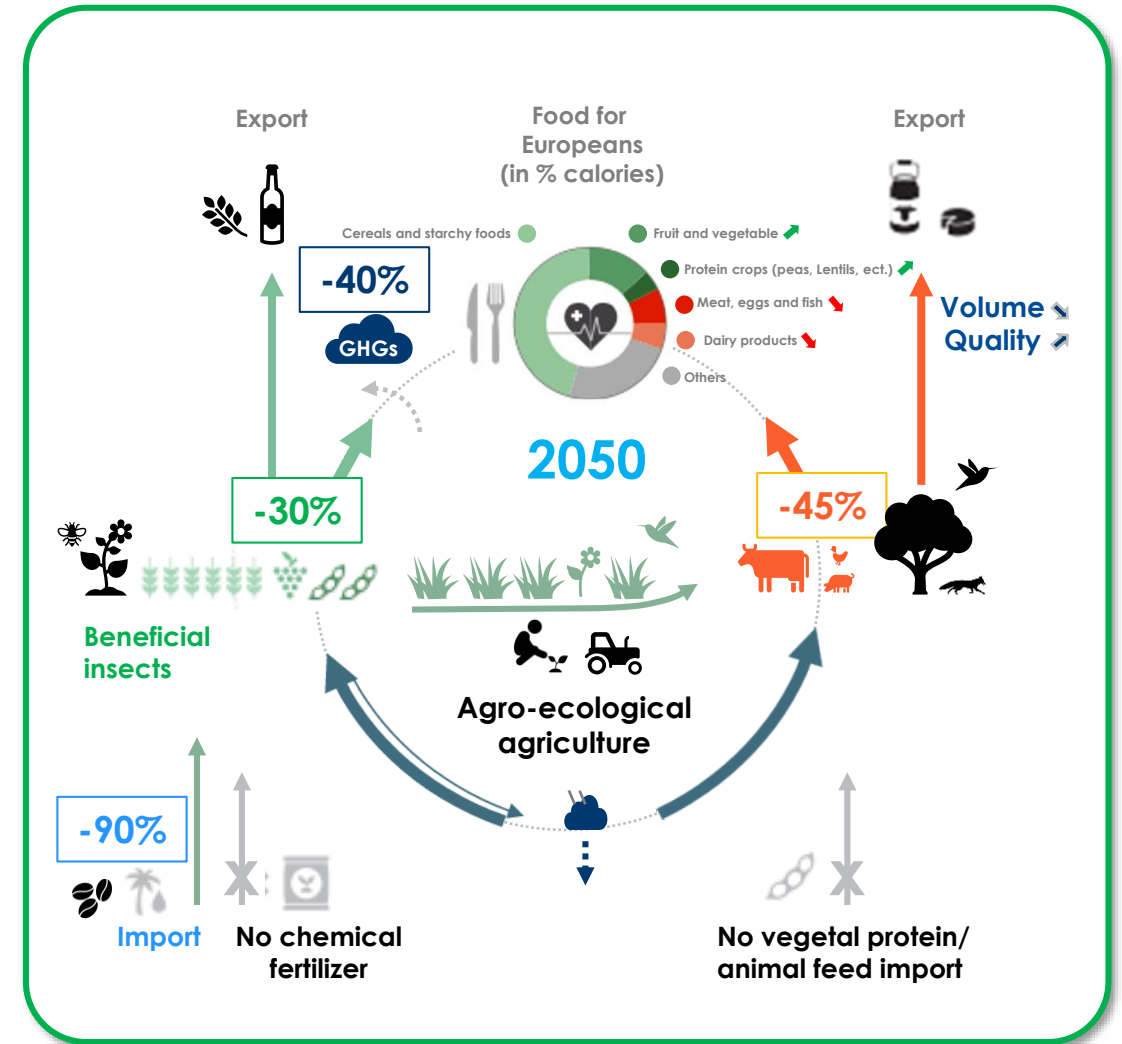
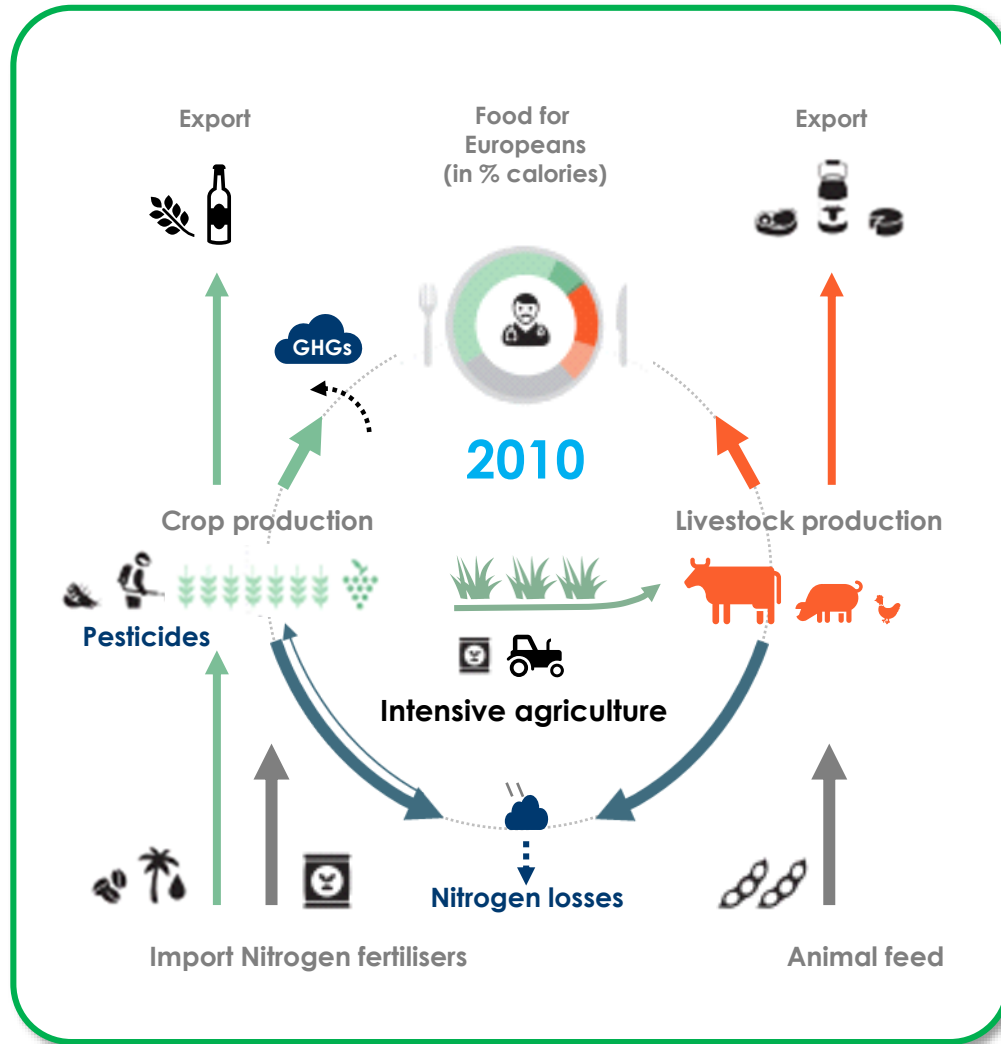
Summary for Policymakers

WG I | WG II | WG III

WHO | UNEP

Towards protein-autonomous Europe

One Planet. One Health at work at the macro level

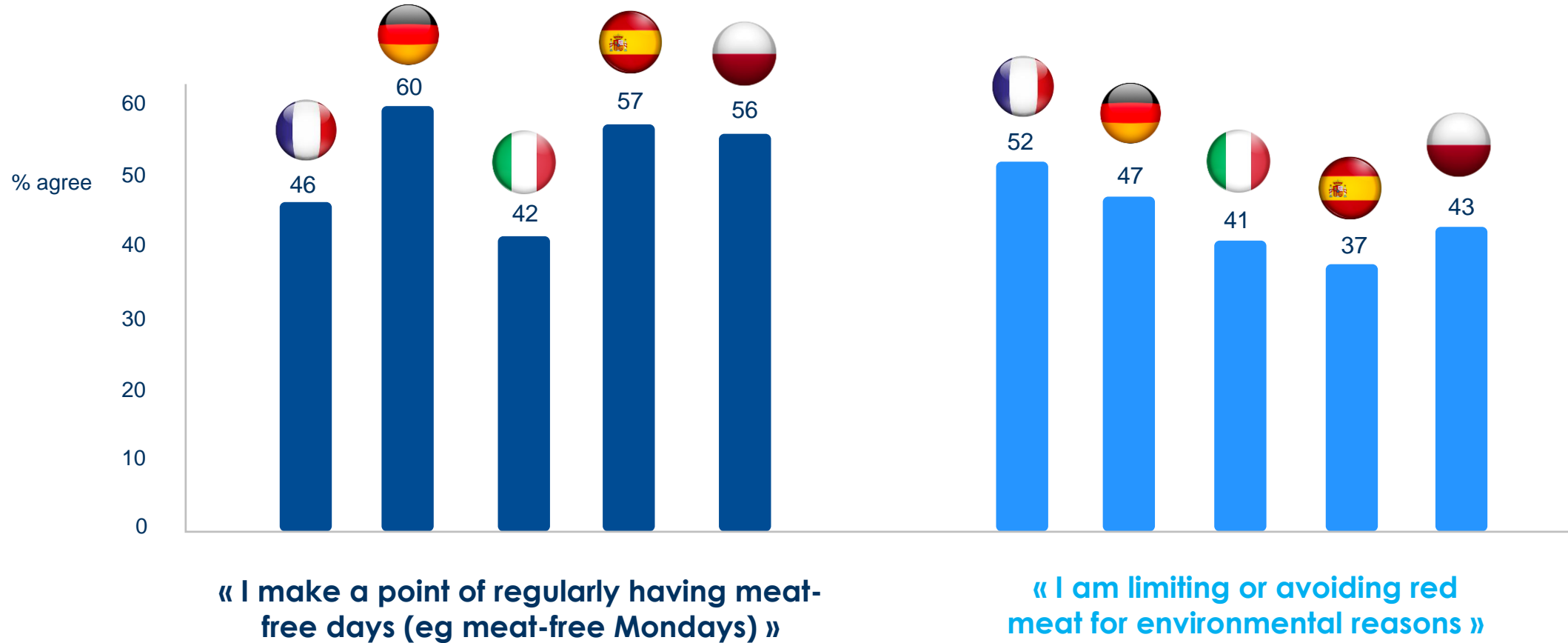


Source : Adapted from IDRR, « An agroecological Europe in 2050: multifunctional agriculture for healthy eating", Sept-2018

Consumers rethinking protein diet

One Planet. One Health at work in my plate

Personal statements about meat, seafood, poultry and meat alternatives (2018)

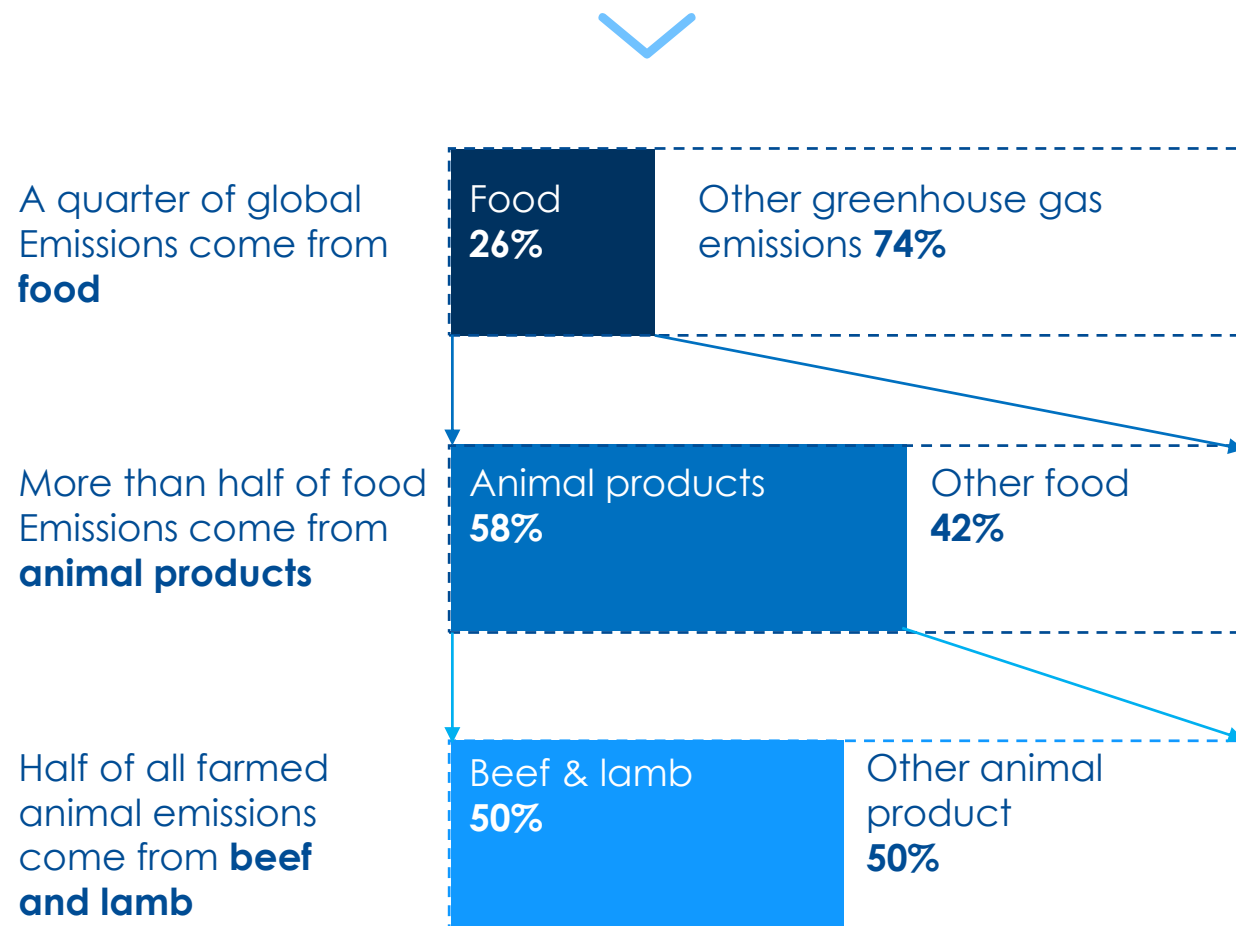


Source: Lightspeed/Mintel. Limiting/avoiding red meat: Internet users ages 16+ 1,000 per country. Meat-free days: Internet users aged 16+ who have bought meat, seafood, poultry and meat alternatives in the last 3 months – France (959), Germany (915), Italy (973), Poland (963), Spain (973)

Consumers rethinking protein diet

The role of food in climate change

Proportion of total greenhouse gas emissions from food

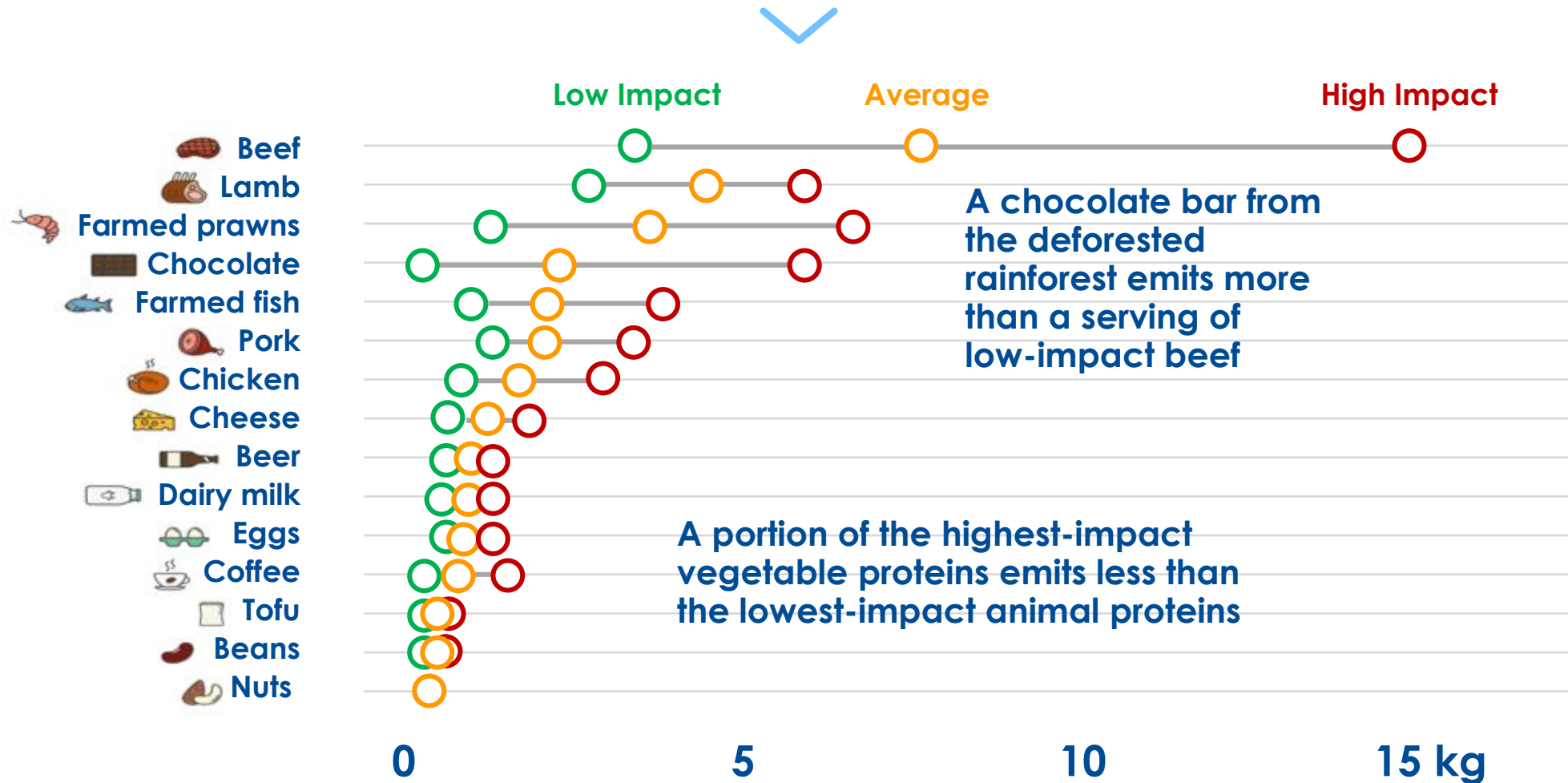


Source: Poore & Nemecek (2018), Science

Consumers rethinking protein diet

The highest-impact plant-based protein emits less than the lowest-impact animal protein

Kilograms of greenhouse gas emissions per serving

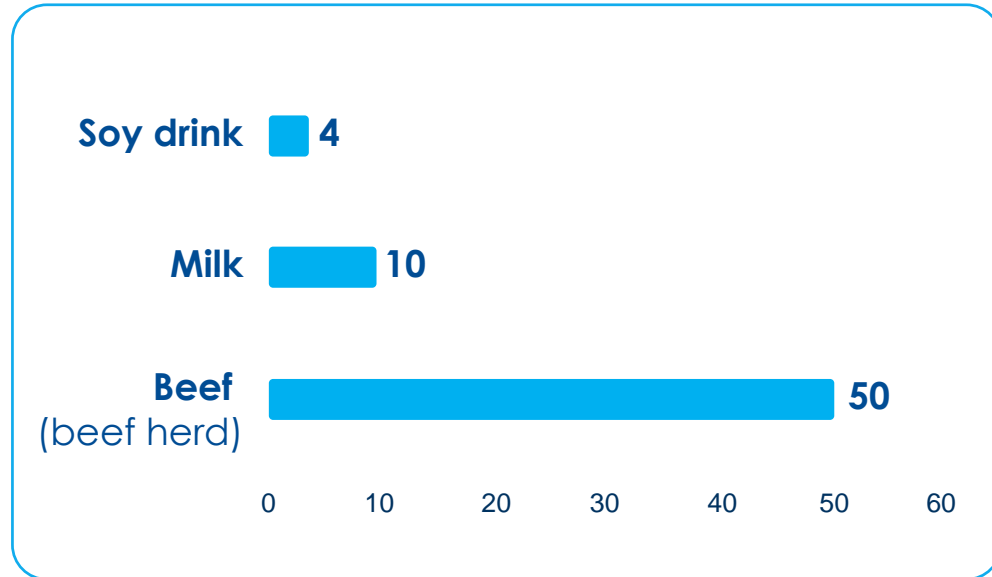


Source: BBC adapted from Poore & Nemecek (2018), Science

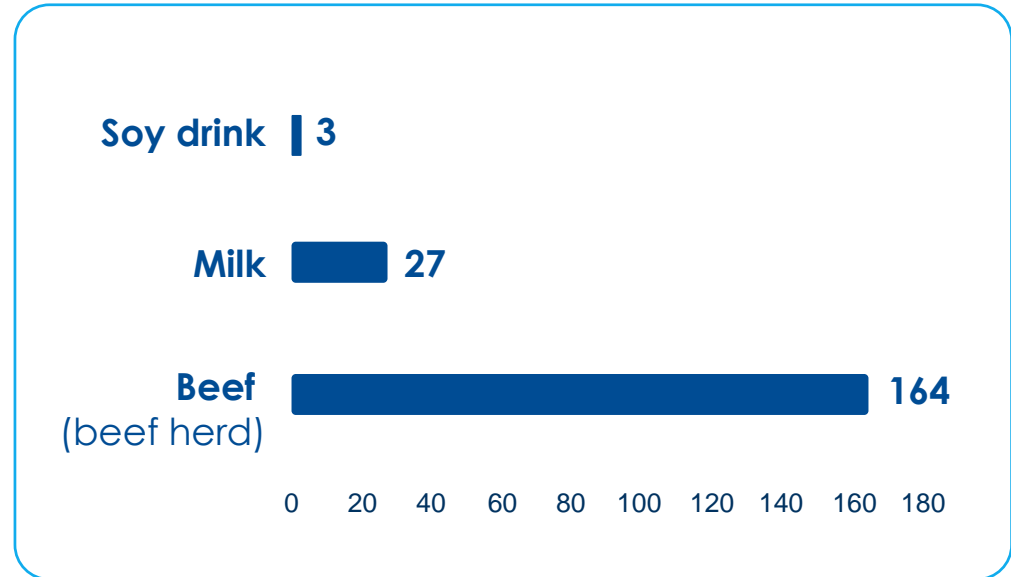
Dairy is critical for planetary diets

Dairy protein: environmental impact 5x lower than beef meat

Carbon footprint per 100g protein
(kg CO₂eq)



Land use per 100g protein
(m²/year)



Source: Adapted from Poore & Nemecek (2018), Science

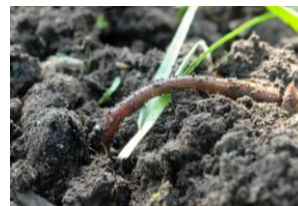
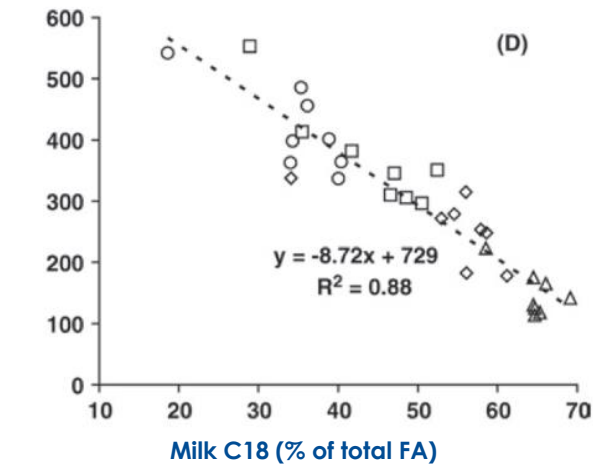
Dairy is critical for planetary diets

Critical role in flexitarian diet and soil health as meat consumption reduces

ONE PLANET

- **Value-added dairy diet** fundamental to balance meat reduction in future agricultural models
- Grazing essential to **soil health and biodiversity**

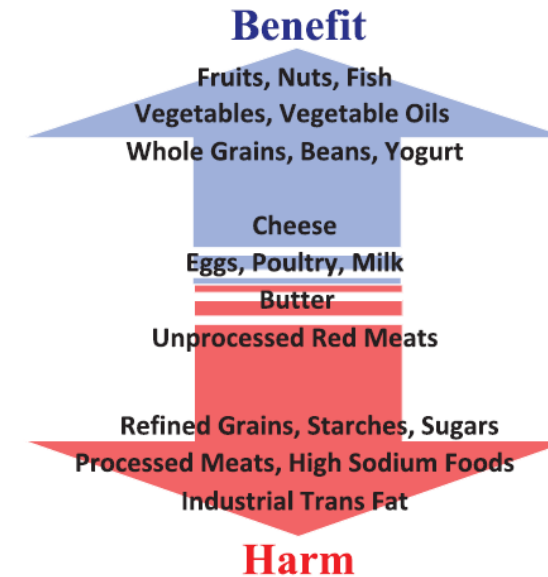
Methane output (g/d)



Source: Journal of Dairy Science, Vol 92, N°10, 2009

ONE HEALTH

- High quality, highly digestible **proteins**
- Dairy, especially yoghurt, considered as **protective food**



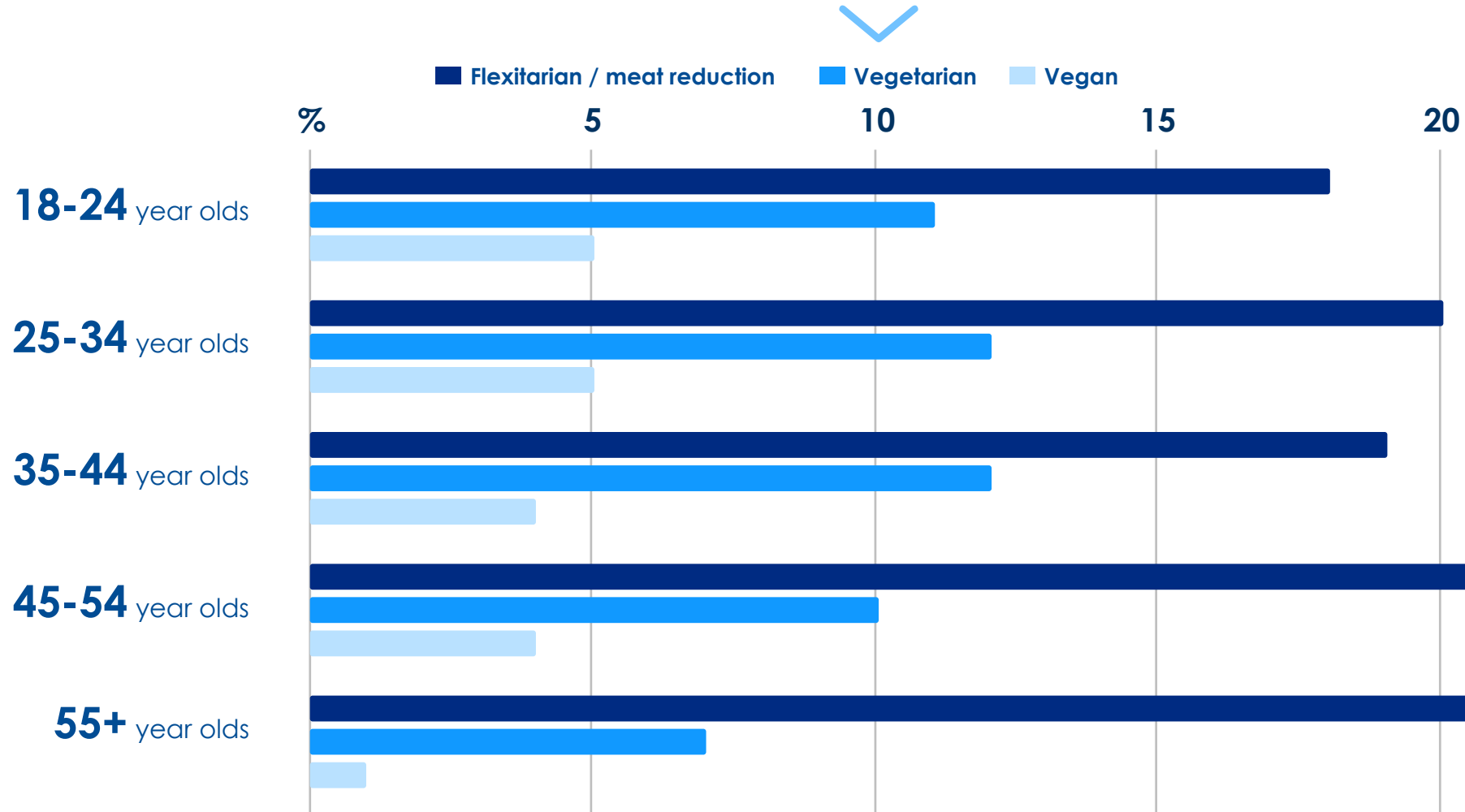
- **Fermented dairy** recommended in planetary diets

Source: Mozaffarian, Circulation 2016

Consumer rethinking protein diet

Shift to flexitarian diets across generations

One in five UK adults say they are following flexitarian diets



Source: Waitrose food and drink report 2018-19

Consumers rethinking protein diet

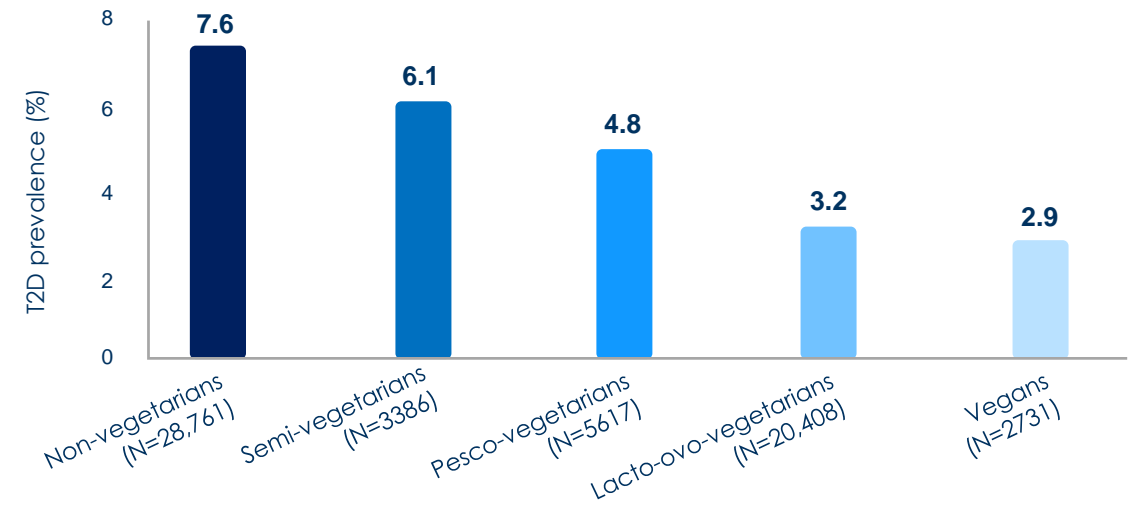
Science foundations for plant-based as a healthy diet option

Healthy balance of nutrients



- Low in saturated fat
- High in unsaturated fat
- High in fibre
- Rich in vitamins and minerals
- Nutrient density

Effect in Type-2 Diabetes prevalence

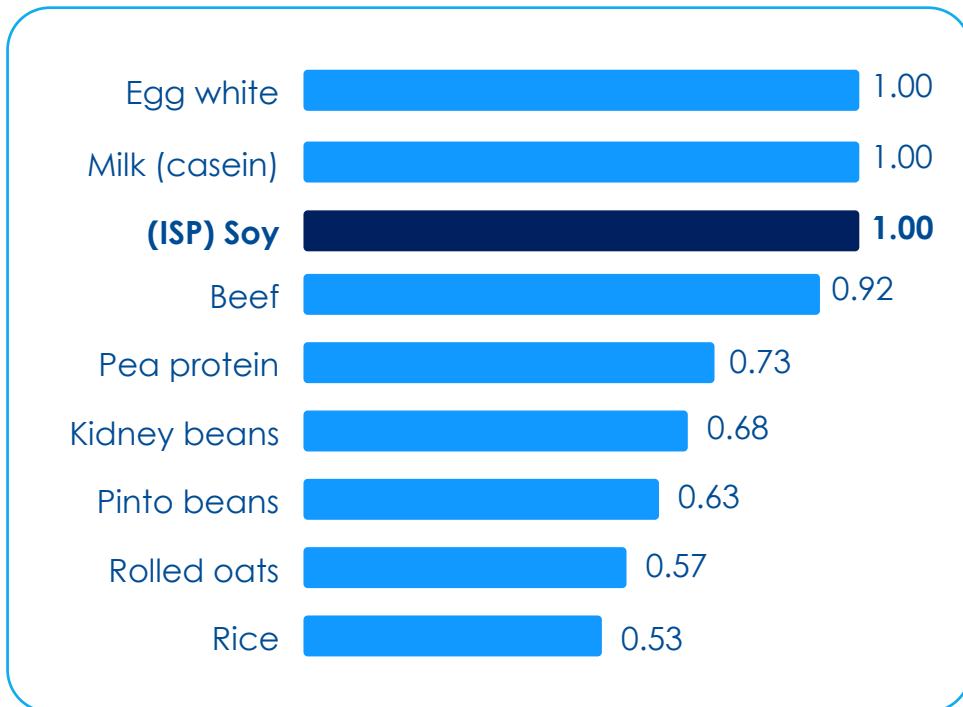


Source : Adventist Healthy Study-2

Soy protein

Among the highest nutritional values

Protein scores (PDCAAS)



- Scores better than any other proteins of plant origin
- Source of **high quality protein**
- Low in **saturated fat**
- Low in **sugars**

Source: J Agric Food Chem 59:12707-12, 2011

Soy protein

Recognized health benefits

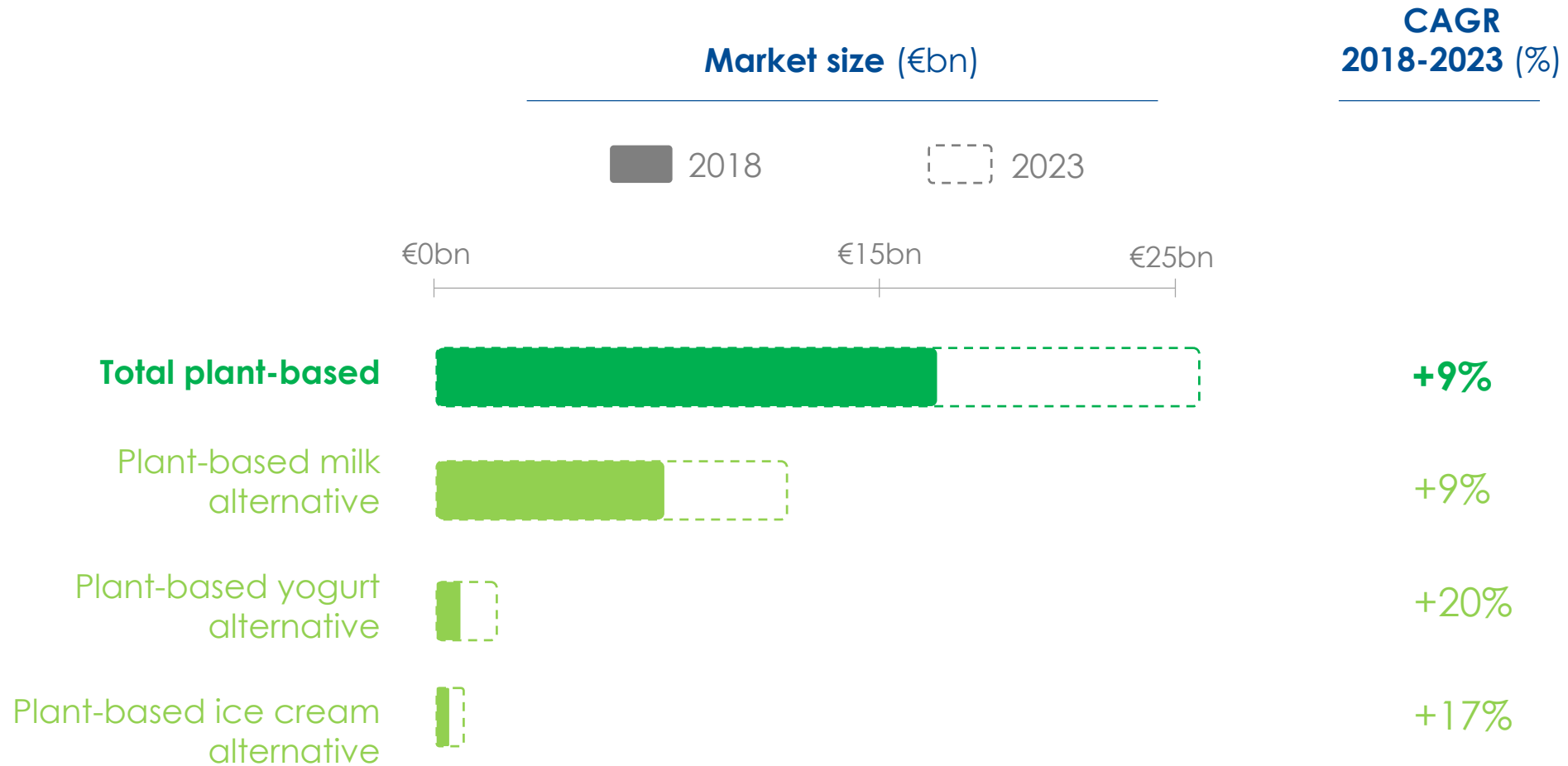


- **Cholesterol**-lowering potential
- Beneficial for **cardiovascular** health
- Lower risk of breast and prostate **cancer**
- Anti-inflammatory **muscle** impact

Source: "Soy and Health Update: Evaluation of the Clinical and Epidemiologic Literature", 24 November 2016; "No Difference Between the Effects of Supplementing With Soy Protein Versus Animal Protein on Gains in Muscle Mass and Strength in Response to Resistance Exercise" (2018); World Cancer Research Fund, "Diet, Nutrition, Physical Activity and Cancer: a Global Perspective" (2018).

Flexitarian diets becoming a prominent feature of mainstream food culture

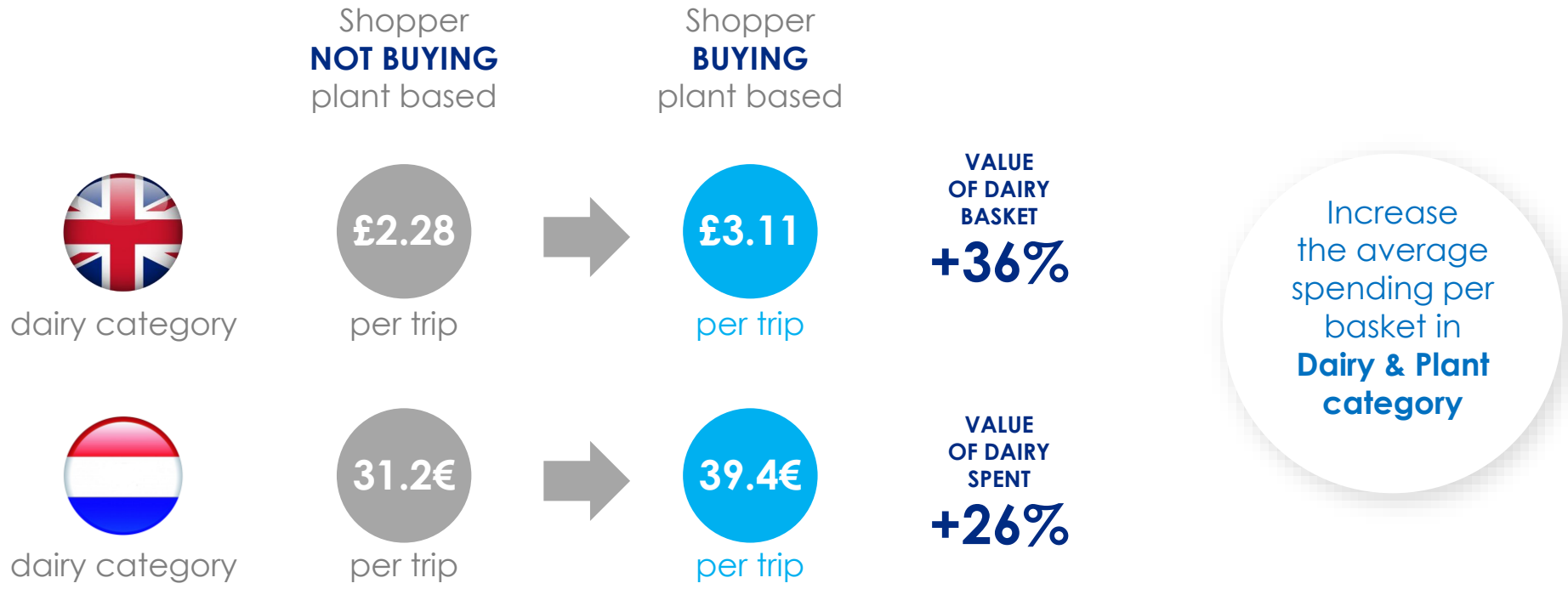
Large growth opportunities ahead



Source: Euromonitor, World excl. China; Total plant-based defined as of Free from Dairy, Ice Cream, Milk, Yogurt and Meat

Complementary plant-based and dairy proteins categories

Bringing incremental value for dairy category and retailers



Increase the average spending per basket in **Dairy & Plant category**



Source: Shopper Basket analysis in EU

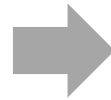
Complementary plant-based and dairy proteins categories Bringing incremental value for dairy category and retailers



grocery

\$40.5

per trip



\$70.6

per trip

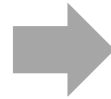
VALUE
OF GROCERY
SPENT
+74%



grocery

17.1€

per trip



40.4€

per trip

VALUE
OF GROCERY
SPENT
x2.4

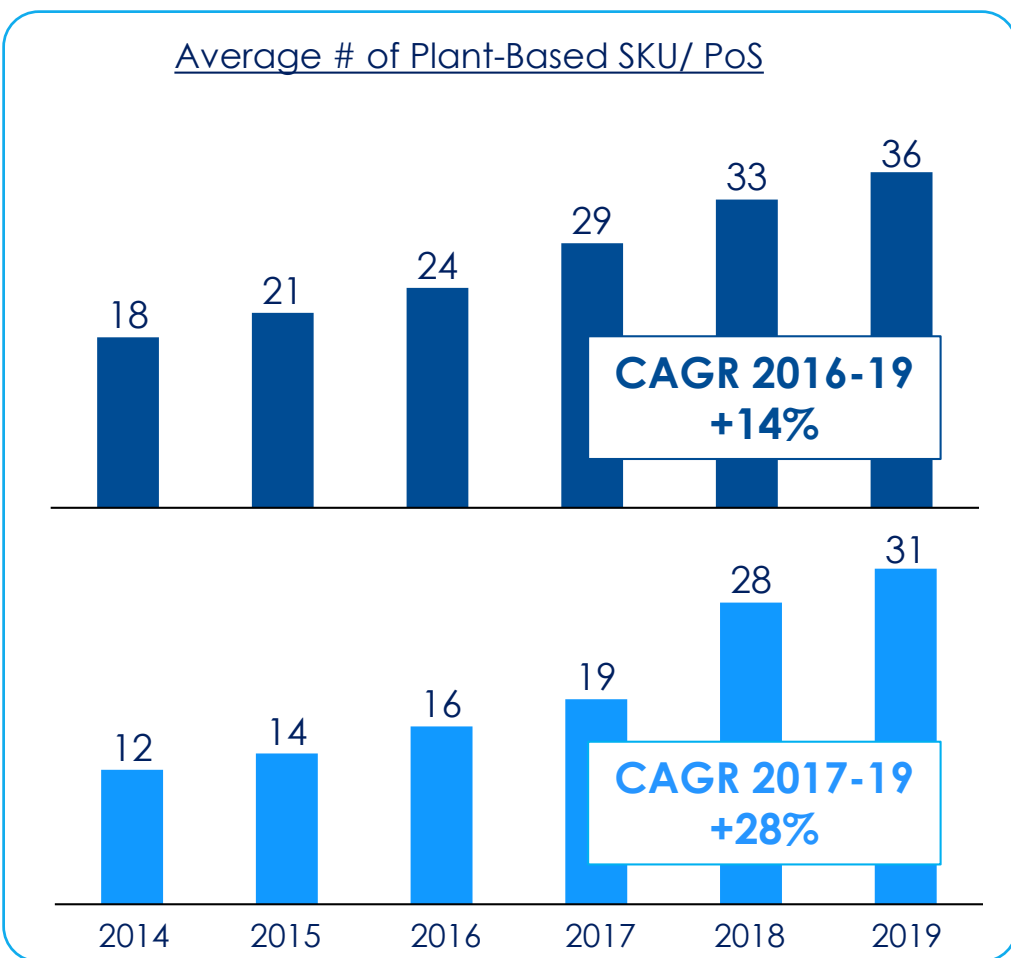
Increase
the average
spending per
basket in
Grocery

Source: Shopper Basket analysis in EU

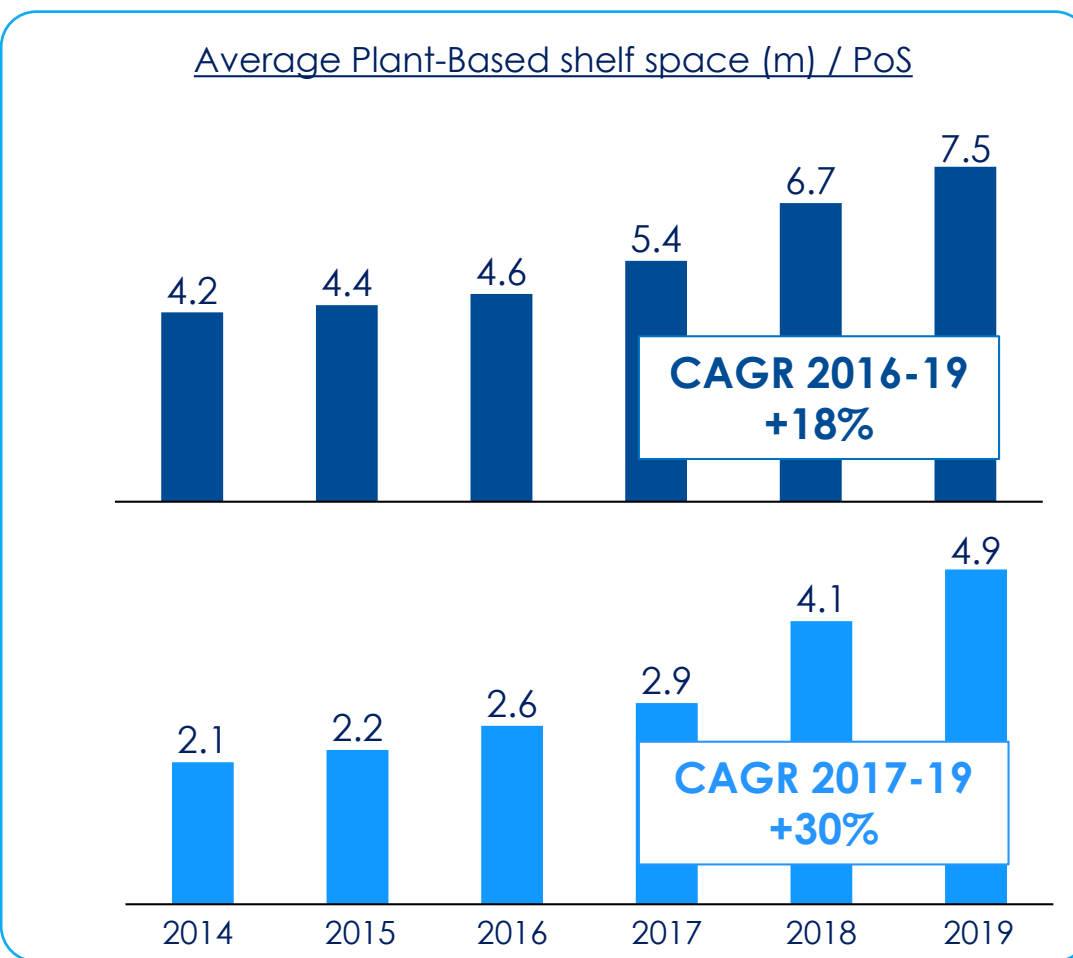
High retailers acceptance and healthy shelf space growth drives plant-based growth

Alpro contributes to half of category growth in France

Increasing offer as retailers bet on the category



Shelf space booming driving consumer awareness



Source: IRI France, 08-2019, Hyper and Supermarkets

1



The opportunity:
the age
of flexitarianism

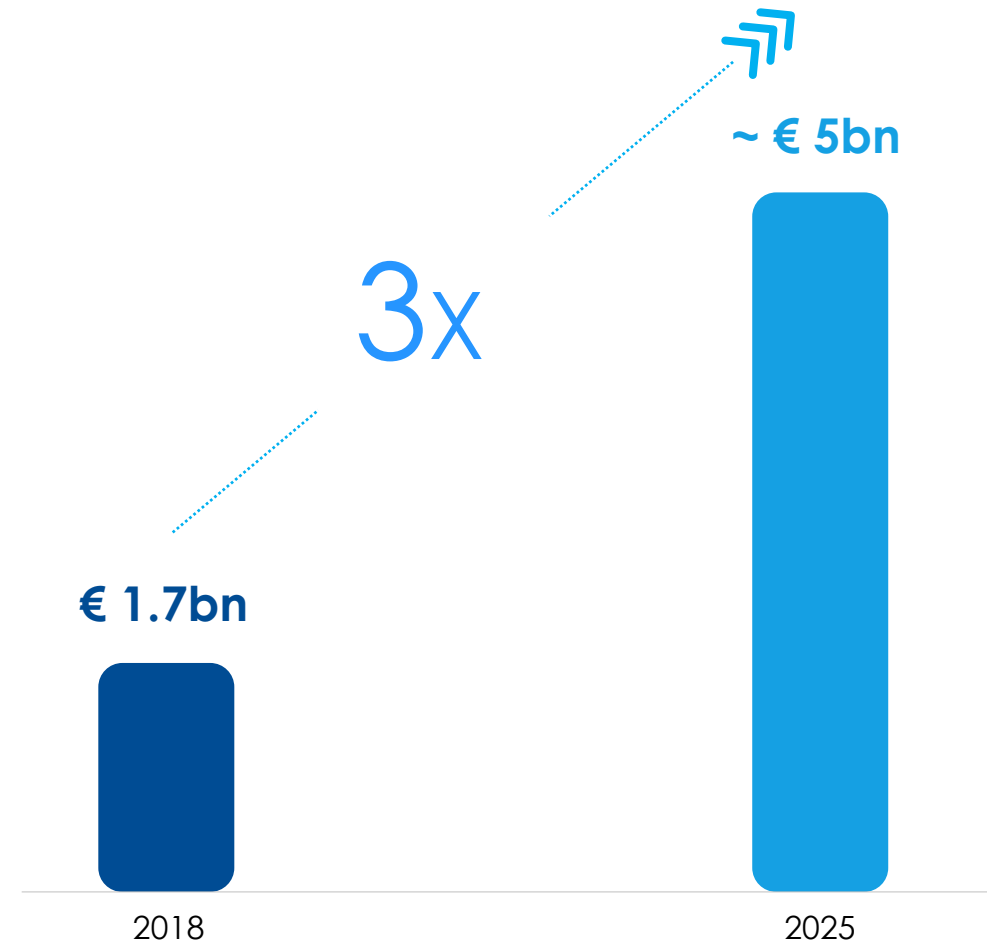
2



Danone uniquely
positioned for the
plant-based
momentum

Driving plant-based growth

Objective: triple sales by 2025



A pioneer and leader in plant-based

Following Whitewave acquisition in 2016



Source: Euromonitor, internal estimates

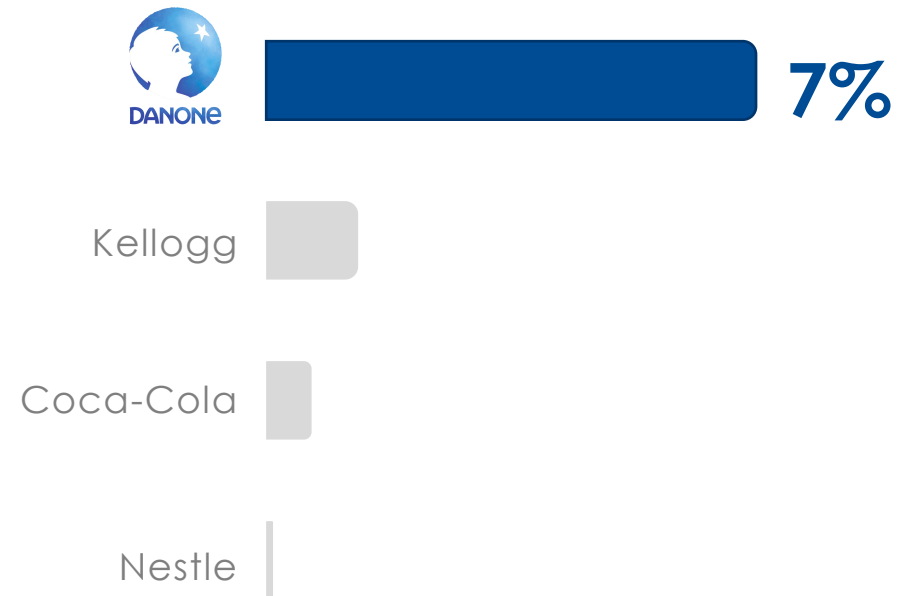
Unparalleled scale, footprint and relative exposure

2018 estimated revenues

Pure plant-based players (€m plant-based sales)



FMCG companies (% of sales from plant-based)



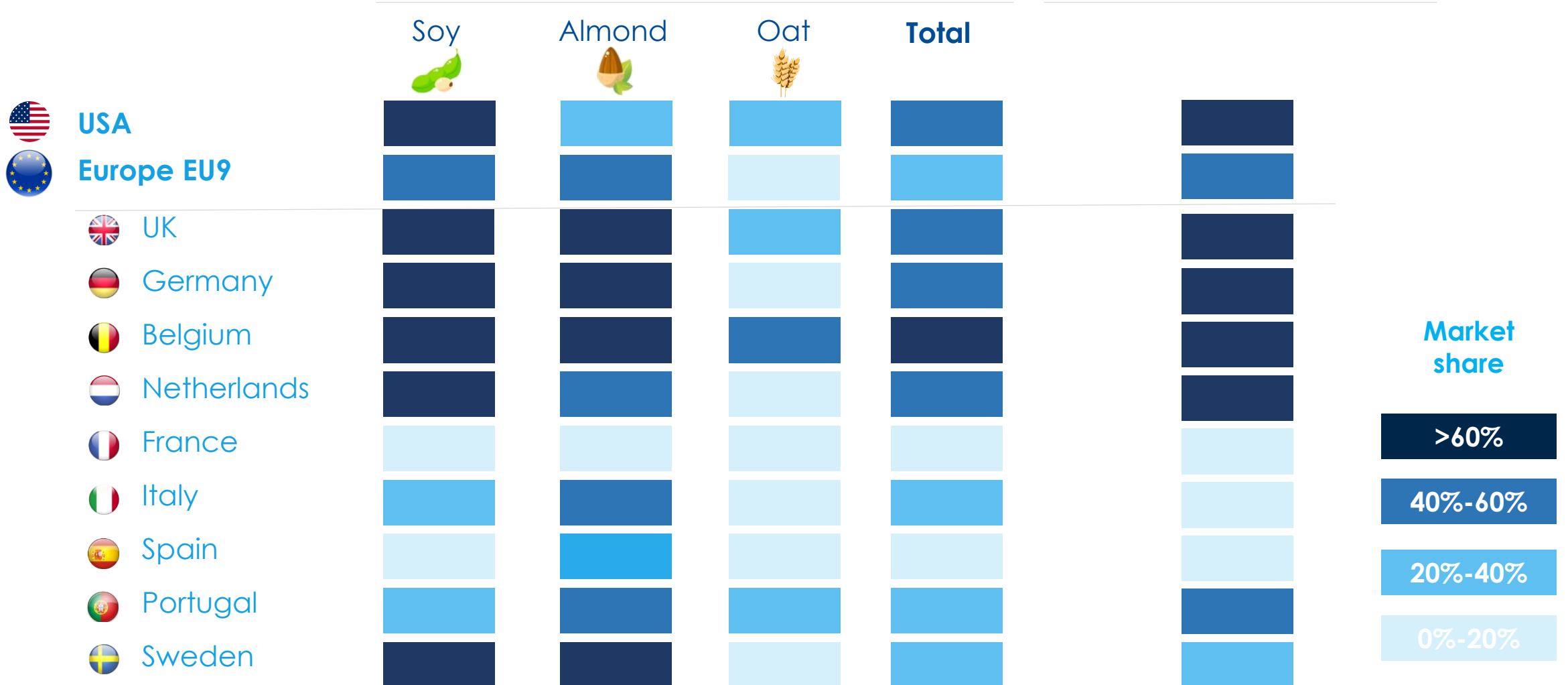
Source: Based on internal estimates and Euromonitor, retail value for FY2018, plant-based defined as of Free from Dairy, Ice Cream, Milk, Yogurt and Meat

A pioneer and leader in plant-based

Leadership positions across categories and segments

PB Milk Alternatives

PB Yogurt Alternatives

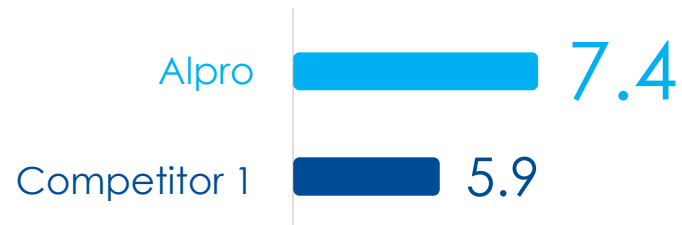


Source: Nielsen, MATTY to Q1 2019, internal estimates

Superior offer, expertise and heritage

Driving product distinctiveness through technical superiority

Organoleptic liking score



Source: Internal consumer blind test – Alpro EU 4 (Haystack), Silk US 2018

Superior offer, expertise and heritage

End-to-end process

Return on investment across the value chain

Farming
raw material
ingredients



Processing
raw materials



Base
products



Recipe
formulation



Filling &
packaging



Superior offer, expertise and heritage

Mastering a multi-ingredient playground

Mature

SOY



Growing

ALMOND



Booming

COCONUT



OAT



Emerging

CASHEW



PEA



SESAME



Early stage

CHICKPEAS



CHIA



HEMP



New category fundamentals

Creating new opportunities

Plant-based

Plant-based beverages and yogurts growing

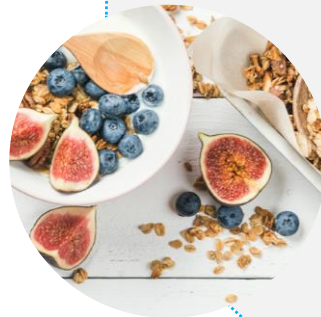
> 8%



Probiotics

Probiotic beverages and yogurts growing

> 6%



Proteins

High protein yogurt growing

> 10%



Source: Euromonitor value CAGR 2015-2017 total world. Plant-based excluding China

Investing for the next plant-based frontiers

Through partnerships and start-up portfolio



MANIFESTO
VENTURES



MANIFESTO
VENTURES

R&I partnerships

DAIRY-FREE YOGURT

CULTURED COCONUT DRINK
— PROBIOTIC —



MycoTechnology
Simply Better Taste

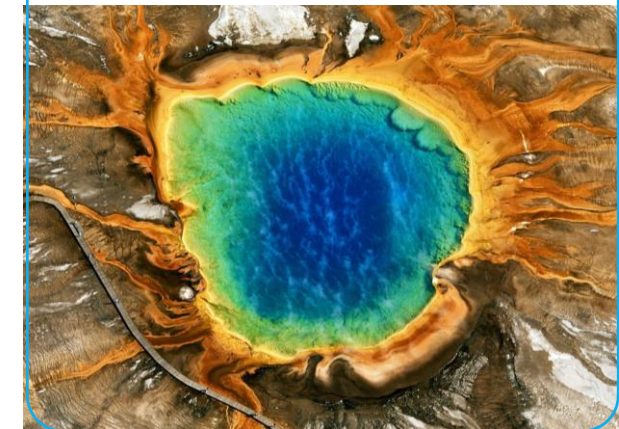
Fermented plant proteins

INNOVOPRO

Chickpea protein ingredient start-up

SUSTAINABLE BIOPRODUCTS

Creating complete food protein from new fermentation technology inspired by Yellowstone ecosystem



Native plant-based brand equity

Entitled to travel and expand into adjacent categories

Core business



Beverages



Yogurt

Adjacent categories



Ice-Cream



Coffee inspired



Culinary



Plant-based nutrition

Recruitment levers

Target new categories

Seizing plant-based coffee-inspired opportunity



Sizeable ready-to-drink coffee category

~€20bn
worldwide

Rolling out ready-to-drink coffee in 2019



Capturing growth in coffee shops

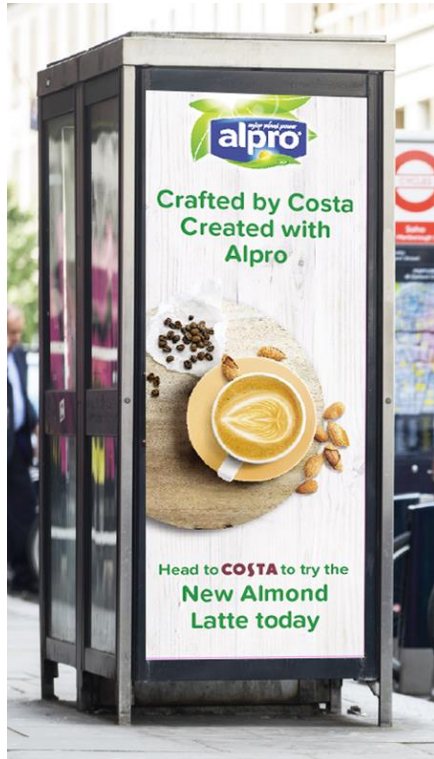


Alpro out of home plant-based barista +40% CAGR in 2016-18

Source : Euromonitor, internal estimates

Fostering out-of-home coffee mega opportunity

Drive in-store conversion with consumer proximity



Pivoting acquired brands positioning

New brand visual



Pivoting acquired brands positioning

New brand visual



Pivoting acquired brands positioning

New brand visual



Pivoting acquired brands positioning

Moving brands into the One Planet. One Health frame of vision



**Sustainable
Coconut Center**



**Industry pioneer
USA Segregated
Palm Oil by 2020**



**Pollinator
Conservation
Program**

Pivoting brands into plant-based Leveraging health heritage

Coffee



STÖK



Indulgence



OIKOS



Kids



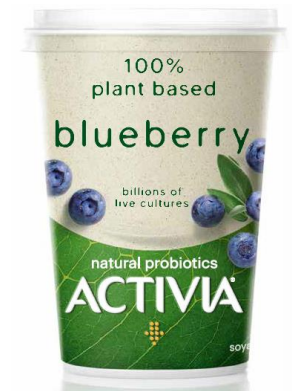
Danoninho



Probiotics



ACTIVIA

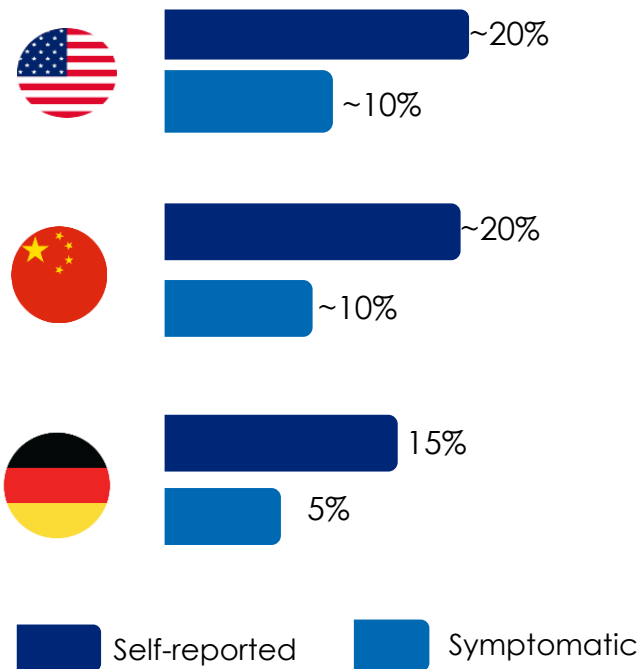


Growing food allergy prevalence

Opening growth avenue for plant-based baby food

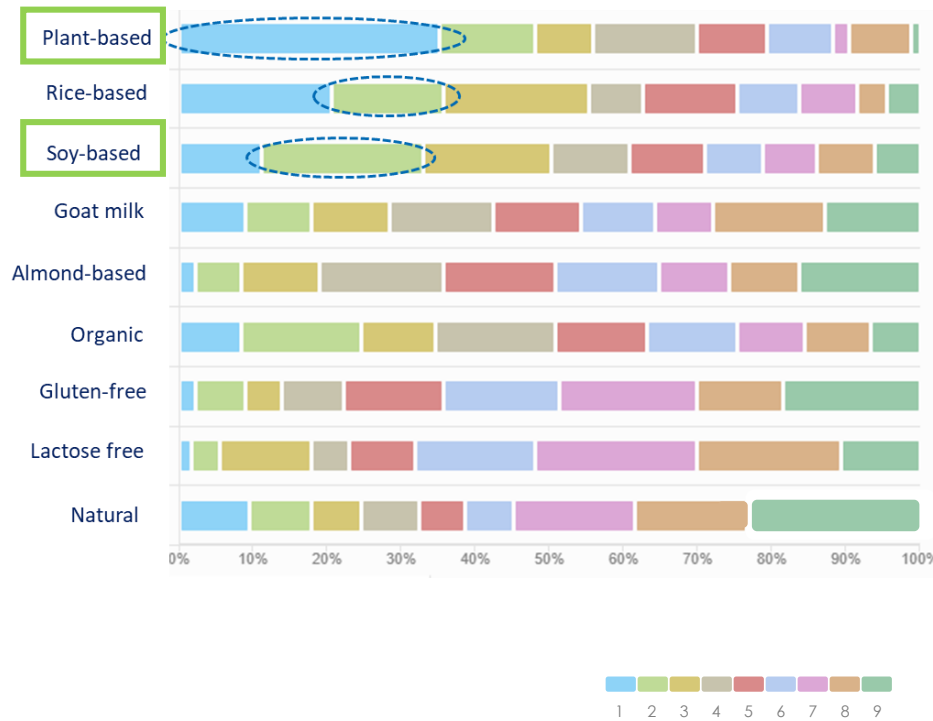
Food allergy as a global epidemic
Milk ranking among top 3 allergens

Food allergy prevalence rates



Source : Tang & Mullins, 2017

Ranking of products associated to allergy avoidance in China
Plant-based as the first choice



Source: Toluna quick survey

Danone is #1 in soy-based IMF



Source : Nielsen excluding US

Unique market reach

Tailored geographical expansion

Main-stream



Plant-based
Becoming main-stream



Maintain leadership
and market share

Fast-growing



Plant-based
catching up



Capture market share
and leadership position

Emerging

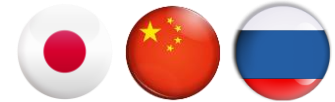


Push plant-based
category development



Reestablish plant-based
and grow market share

Transforming



Category rapidly evolving



Establish brand as
market innovator

Danone best placed to capture the plant-based opportunity

4 key competitive advantages



- 1 X-times brand leadership in core segments, science and technology
- 2 Chilled retail shelf synergies and away-from-home potential (e.g. coffee)
- 3 Danone One Planet. One Health assets support plant-based execution
- 4 Protein, probiotics, plant-based triangle
~ 75% of Danone sales

In the age of flexitarianism and the rise on plant based food
Danone best positioned to turn opportunity into value



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ONE PLANET. ONE HEALTH

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