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# Corporate Knights named Chr. Hansen most sustainable company in the world in 2019

- ► Independent ranking conducted by Canadian media and research firm Corporate Knights since 2005
- ► Review of all publicly listed companies worldwide with >USD 1bn revenue (7,500 in total)
- ► Screening based on 21 quantitative indicators
- ► Chr. Hansen was named #1 because of the contribution of its product portfolio to the UN Global Goals and its reporting ('100% score on clean revenue')
- ► Corporate Knights' Global 100 index has outperformed MSCI All Country World Index since inception in February 2005 to December 2018 (127% vs. 118% net investment return)



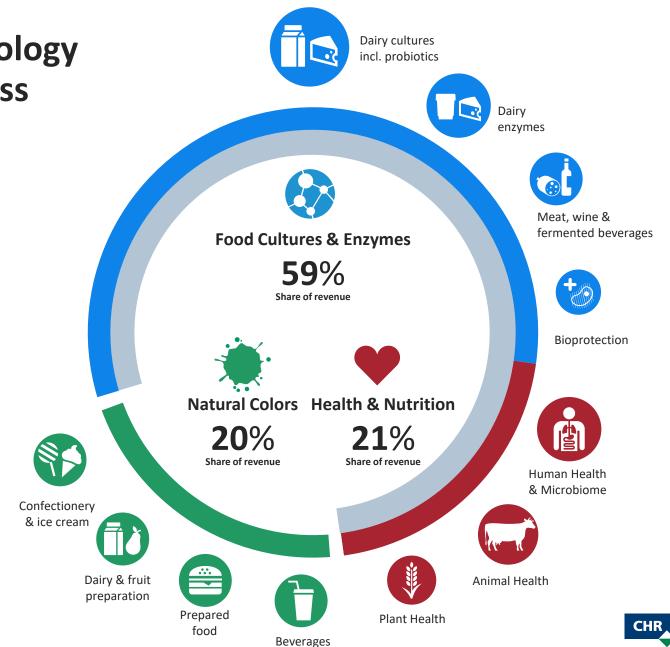
#### **AT A GLANCE**

## We are market and technology leaders in our core business



Food Cultures & Enzymes and Health & Nutrition share a common research platform, and production method. The R&D platform is a process of screening, developing and upscaling of microbes. Production is the optimization of recipes, flows and infrastructure for the fermentation of microbes.

Together: The Microbial Platform.



#### **AT A GLANCE**

## We develop natural solutions that help to reduce sugar, ensure food safety, improve health, replace artificial ingredients and much more!



**NOLA® Fit** reduces added sugar in yogurt by 2g per 100g yogurt without losing sweetness

**SAFEPRO®** cultures help to keep meat safe from *Listeria* 





Replace artificial ingredients with our e-number free labeling coloring foodstuffs range **FRUITMAX**®

**QUARTZO®** and **PRESENCE®** are probiotic plant health solutions that help sugar cane and other crops fight off attacks from nematodes





With **CHY-Max**® dairies can increase cheese output by 0.5% compared to other coagulants (i.e. 100 tons in case of a production volume of 20,000 tons)

**LGG**® has been studied in +300 clinical studies that indicate that the strain may have beneficial effects on immune and gastrointestinal functions





### Sustainability is at the core of what we do



#### **Better farming**

We help feed the growing population by promoting sustainable agriculture







#### **Good health**

We improve global health through healthier, safer and more products

Launch 6 new products with a documented health effect (2022)





#### **Less waste**

We help customers reduce food waste and improve yield and productivity



Reduce global yogurt waste by 1.2m tons (2022)





of Chr. Hansen's 2017/18 revenue contributes to the UN Global Goals

- reviewed by PWC



#### **STRATEGY**

## Our Nature's no.1 strategy: evolution since 2013 - now Sustainably





## FOCUS AREAS FOOD CULTURES & ENZYMES

Leverage the

full potential



## FOCUS AREAS HEALTH & NUTRITION



## Develop the microbial platform

## Create further value

## Drive penetration of new innovation

- Continue to prioritize core dairy business
- Develop adjuncts and adjacencies
- Drive Bioprotection lighthouse to EUR 200m by 2025
- Drive new products for Human Health (incl. Microbiome) and Animal Health
- Invest in Plant Health platform to unlock potential of EUR 100m by 2025
- Expand FruitMax® range of coloring foodstuffs

## Reinforce position in growth markets

- ► Further strengthen global market presence
- Application support in core adjacencies

- Human Health: Expansion into emerging markets and growth segments
- Strengthen route-to-market in Ag businesses
- Drive US conversion and secure APAC growth

## Generate fuel for growth

- Drive scalability in supply chain
- Digitalize core processes

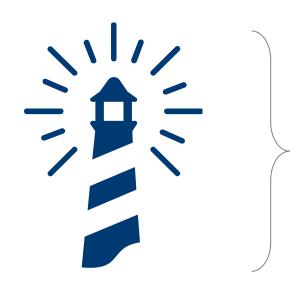
▶ Reinvest in future growth

Continue drive to restore profitability



#### **STRATEGY**

## Our three lighthouses address challenges within food safety, agriculture and public health







#### **Bioprotection**

Bacterial solutions for food safety and freshness – target of EUR 200m by 2025

Designated as lighthouse in 2016





#### **Plant Health**

Bacterial cultures for crop protection – target of EUR 100m by 2025



#### **Human Microbiome**

Next generation bacteria for Human Health

Designated as lighthouse in 2013

Designated as lighthouse in 2013

Potential revenue
of minimum
EUR 100m per year



## FOOD CULTURES & ENZYMES

## We retain our long term growth guidance with majority of growth coming from core customers and markets







**Customers/markets** 





## Upselling novel solutions and increasing wallet size with existing customers is a key focus for 2018/19

**Rejuvenate product offerings** and up-sell customers to newer, higher priced solutions

Develop **new adjunct uses** of cultures and enzymes

Selling more solutions to each existing customer on average

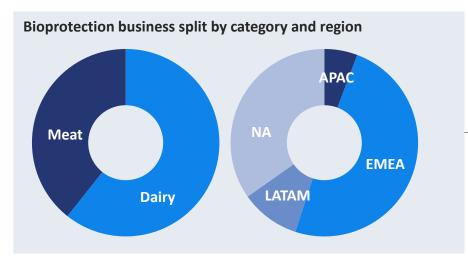
Identify paths to outpace volume growth in mature fermented milk markets (France, Russia and US)







## Our bioprotection journey



#### 2013

Chr. Hansen enters bioprotection market in dairy with launch of FreshQ® brand

Early 2000 Chr. Hansen launches

first bioprotection solutions in meat to control *Listeria* 

#### 2017/18

Launch of 2nd generation FreshQ® targeted at regions with hotter climates and less reliable cold chains

## Today: Unlocking the full potential of the business

- Regional expansion into LATAM and APAC
- Building application knowledge and client relationships in adjacent areas
- Working with authorities on regulatory framework & labelling solutions



2024/25

EUR200m sales target

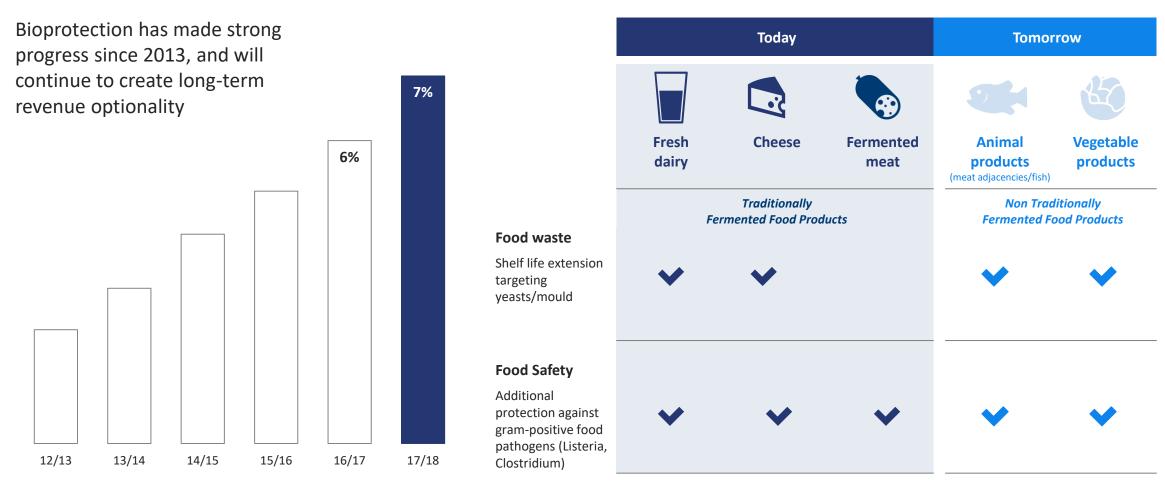


**Late 1990s** 

First bioprotection solutions emerge



## We continue to roll out the 2nd generation bioprotection in emerging markets and drive penetration across core food applications





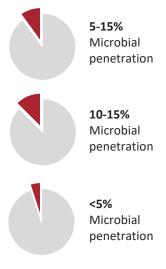


### Potential to increase penetration of microbial solutions

#### Attractive market growth driven by megatrends

#### 7%-9% 7%-9% 13%-17% Mega-**Increasing scientific Growing world Resource scarcity creates** Need to reduce antibiotic Pressure to curb trends population and evidence of health benefits productivity squeeze for growth promoter usage in chemicals usage in crop from "good bacteria" (and livestock production rapid urbanization production customers **KOL/consumer awareness)**

## Opportunities to increase penetration



Source: Euromonitor and management estimates



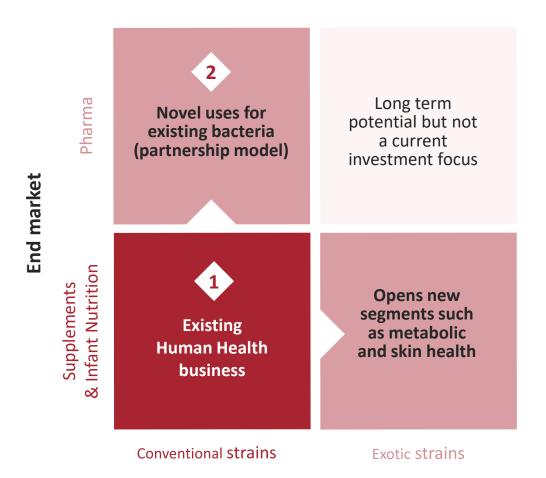








## **Human Health to focus on launch of new products**



1 Microbiome is creating new opportunities within conventional strains and existing end markets

Reduce risk of gastrointestinal complications		
Support infant gut microbiome for healthy development		
Promote intestinal integrity		
Rebalance a healthy vaginal microbiome		

Partnership with Prota Therapeutics to treat peanut allergy with LGG®













## We educate customers on the functional benefits of probiotics and the value of scientific documentation

#### Potential beneficial effects on immune and gastrointestinal function<sup>1</sup>

#### **LGG**®

- ▶ The world's best documented probiotic strain
- Used in food and dietary supplements since 1990
- ▶ Described in more than 1,000 scientific publications
- Studied in more than 300 clinical studies

#### **BB-12®**

- ▶ The world's best documented Bifidobacterium
- Used in food and dietary supplements since 1985
- ▶ Described in more than 307 scientific publications
- ▶ Studied in more than 180 clinical studies

May reduce respiratory tract challenges

May enhance the immune response

May alleviate symptoms of irritated skin

May reduce crying and fussiness in infants

May reduce the risk of an upset stomach

May enhance the immune response

May reduce respiratory tract challenges

May support bowel function

Hatakka et al. 2001, Hojsak et al. 2010a

de Vrese et al. 2005

Pärtty et al. 2013

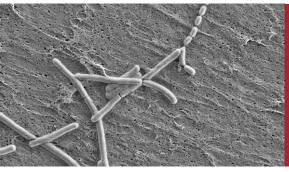
Isolauri et al. 2000

Chouraqui et al. 2004; Saavedra et al. 1994

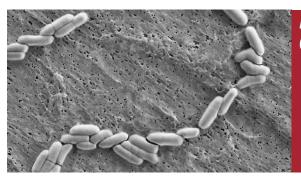
Holscher et al. 2012; Schiffrin et al. 1997

Smith et al. 2013; Taipale et al. 2011

Matsumoto et al. 2001; Pitkälä et al. 2007



Lactobacillus rhamnosus (LGG®)



Bifidobacterium (BB-12®)

Culture bank of

+30,000 strains

#### 3 out of the 4

best documented strains in our library



 $<sup>^1</sup>$  Selection of scientific studies as per April 2017 (LGG $^\circ$ ) and Feb 2016; for more details refer to Chr. Hansen website.









## Consumers and regulators are demanding natural alternatives to antibiotics in livestock production

Antibiotic resistance is one of the main threats defined by the WHO

Regulators are increasing pressure & end consumers start to demand nonantibiotic-ever meat

Probiotics for animals help improve

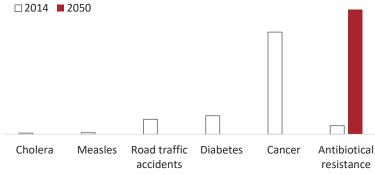
High levels of antibiotic resistance found worldwide, new data shows

News release

<sup>1</sup> Source: AMR Review (2014).

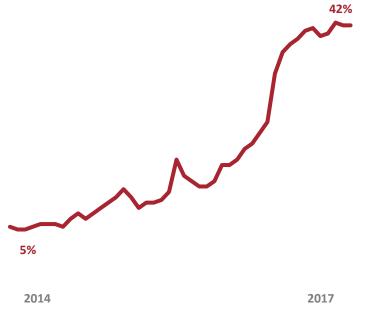
29 JANUARY 2018 | BANGKOK - WHO's first release of surveillance data on antibiotic resistance reveals high levels of resistance to a number of serious bacterial infections in both high- and low-income countries

#### Deaths attributable to major causes annually (in m)1

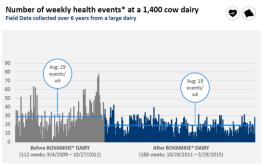




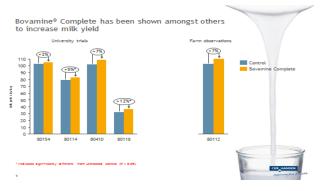
Seasonal % of Birds fed Non-Antibiotic-Ever in the US



feed efficiency and reduce need for antibiotics



**Bovamine®** decreases number of health events and increases milk yield for dairy cows





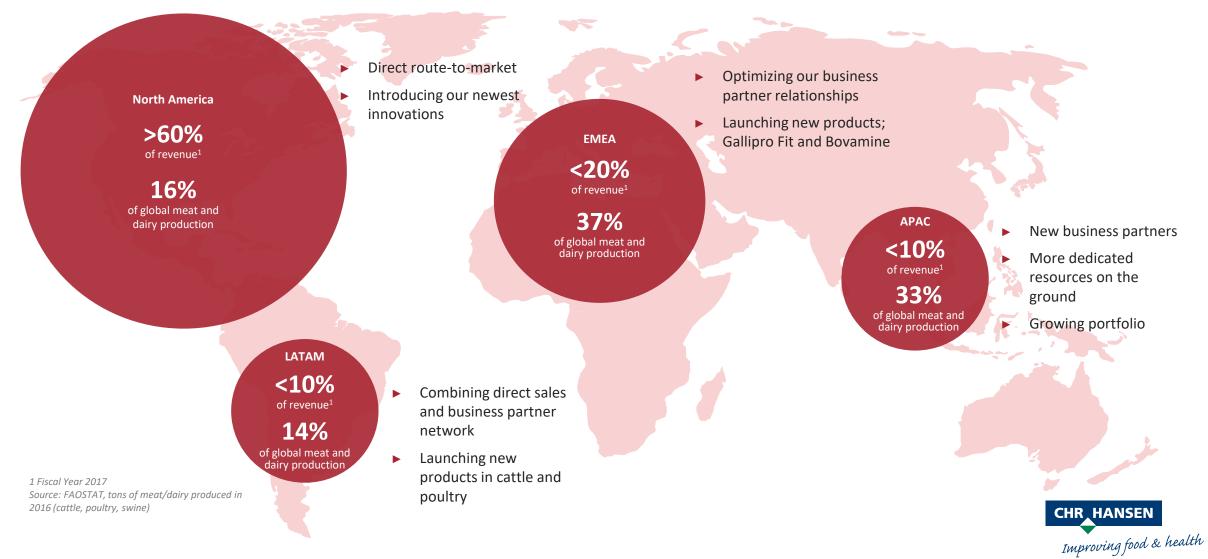








## Animal Health to further strengthen route-to-market globally











## Plant Health to unlock a potential of EUR 100m revenue by 2025

#### Big and growing market



5% penetration of microbial products in the industry

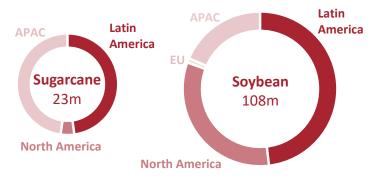


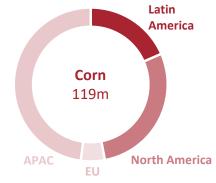
>10 % expected growth of the biopesticide industry towards 2021



2.5 % expected growth of the Crop protection industry towards 2021

#### Hectares harvested in existing vs. potential markets, 2015





#### **Ambitions of Plant Health**

- Today: On market primarily in South America (Brazil)
- 2019/20: Expansion in North America
- ▶ 2024/25: Presence in all major geographies
- Ramping up investments in capacity, discovery, and tech support



Unlocked potential by 2025







## Natural Colors presents an attractive growth opportunity

#### **Key messages**

Attractive growth potential from conversion and coloring foodstuffs

**Transformation project** completed

**Limited synergies between Natural** Colors and our microbial platform

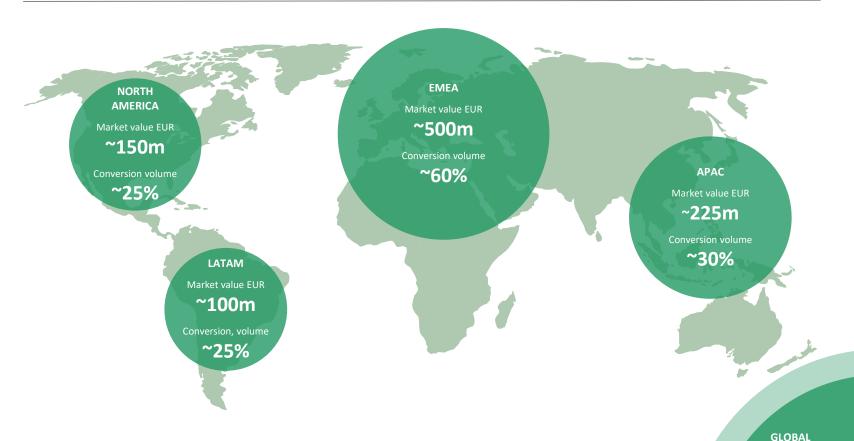
#### Main trend and projected value



Demand for cleaner, healthier and more natural products

Projected 2030 market value of EUR 2.0 - 2.5bn

#### **Current market overview**



Source: Euromonitor and management estimates.

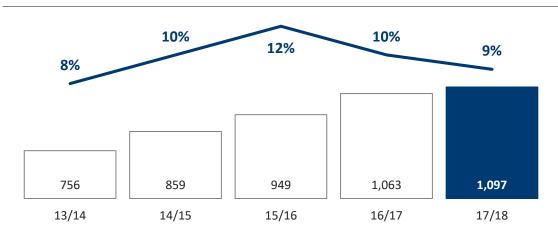
Note: Market value measured as Food & Beverages Natural Colors including Coloring Foods, and excluding Caramel colors (approximately EUR 200m)

5-7% Global market growth Market value EUR ~1,000m Conversion volume ~35%

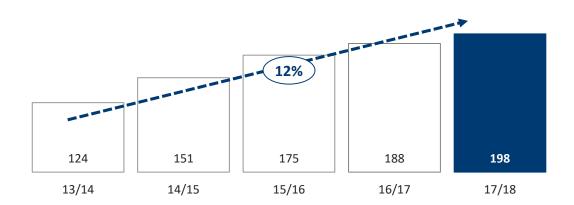
#### **FINANCIAL PERFORMANCE**

## **Great track record of financial performance**

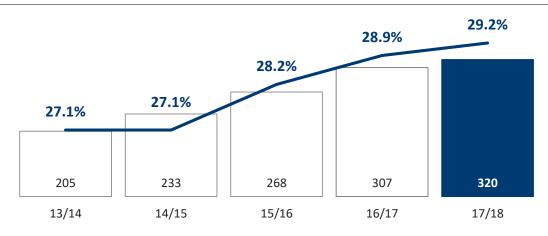
**Revenue** in EUR m / organic growth, %



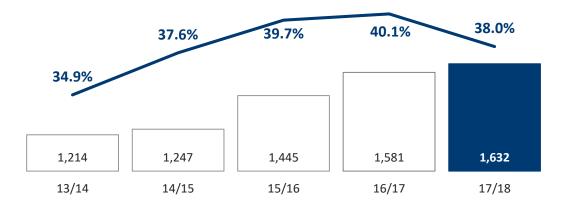
Free cash flow before special items and acquisitions in EUR m / CAGR, %



**EBIT before special items and acquisitions** in EUR m / margin, %



**Return on invested capital** in EUR m / ROIC, %





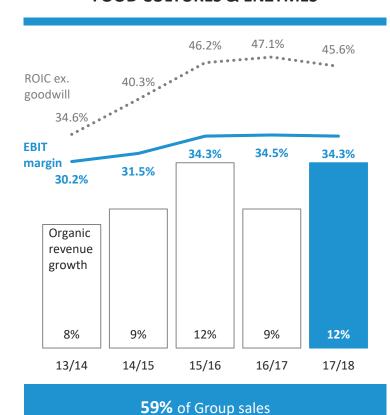
#### **FINANCIAL PERFORMANCE**

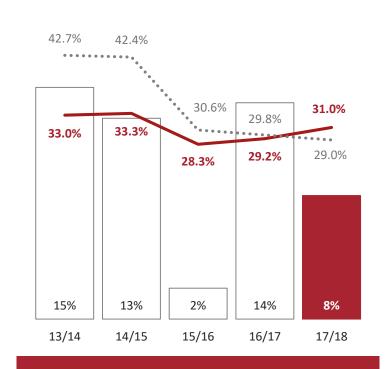
### Three complementary businesses with strong fundamentals



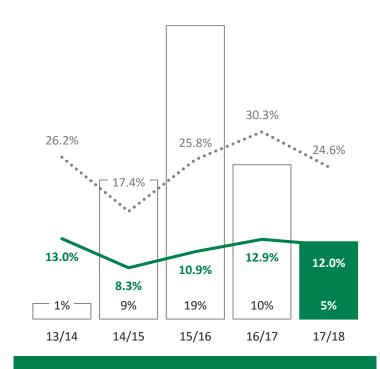








21% of Group sales



**20%** of Group sales

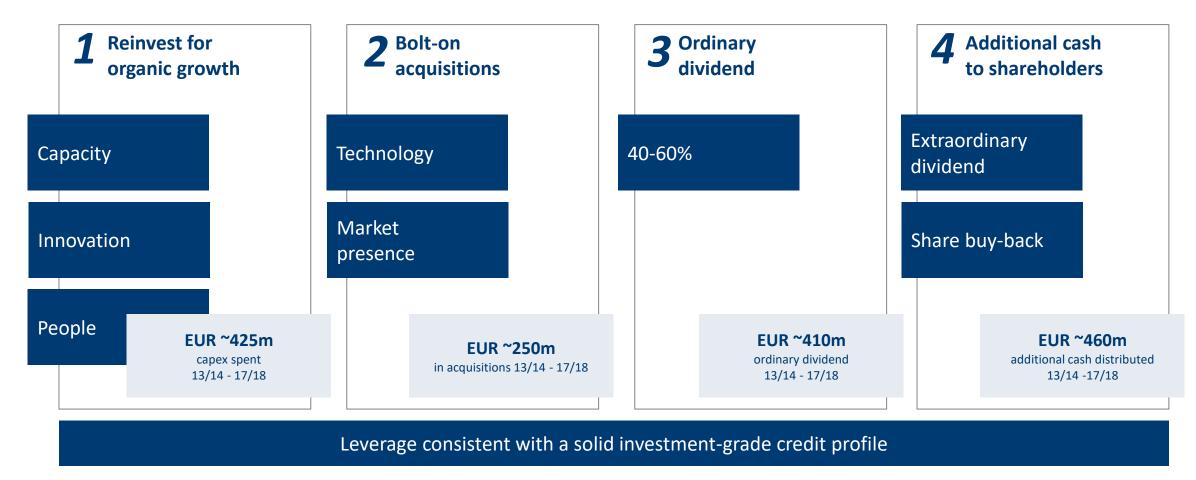
## We will continue to pursue profitable growth through 2021/22





#### **CAPITAL ALLOCATION**

## Our capital priorities are unchanged with organic growth still being the top priority

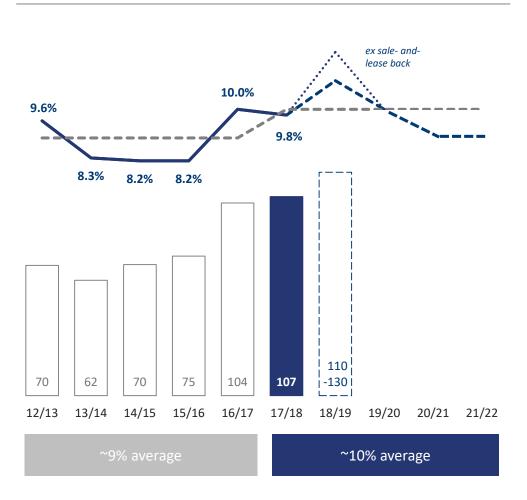




#### **INVESTMENTS**

## Peak capex in 18/19, partially to be financed with sale-and-lease-back

Capex projection in EUR m and % of revenue (illustrative)



Selection of major investment projects	Expected year of completion
Freeze dried & powder packaging 😵 🧡	19/20
بيق.	
Natural Colors US footprint & Montpellier R&D upgrade 💓	19/20
	20/24
Capacity expansion in Health & Nutrition	20/21
R&D facility <u>♣</u>	21/22
Dairy expansion 😵	Beyond 21/22
~10% of net revenue capex p.a. 2017/18	3 – 21/22







## We had a solid start to the year, in-line with our expectations

10% organic growth

Guidance 2018/19: 9-11%

**26.3%** EBIT margin b.s.i.

Q1 2017/18: 25.4%

EUR (32.5m) FCF b.s.i.a.

Q1 2017/18: EUR (18.9m)



## Focus areas for 2018/19 defined to deliver on Nature's no. 1 strategy





## FOCUS 2018/19 FOOD CULTURES & ENZYMES

Leverage the

full potential



#### FOCUS 2018/19 HEALTH & NUTRITION



## Develop the microbial platform

## Create further value

Drive penetration of new innovation

- ► Continue to drive penetration of new products, e.g. bioprotection
- Cross-sell and develop adjacent areas

- Launch new products in Human Health
- Expand Plant Health business to new countries and crops

 Portfolio expansion within coloring foodstuffs

Reinforce position in growth markets

- Strengthen attention to key accounts
- Invest in and strengthen local footprint
- Push market-specific new product development

- Continue growth momentum in all segments
- Further expand Animal Health commercial footprint in Asia-Pacific and Latin America

 Driving conversion projects in partnerships with our customers

Generate fuel for growth

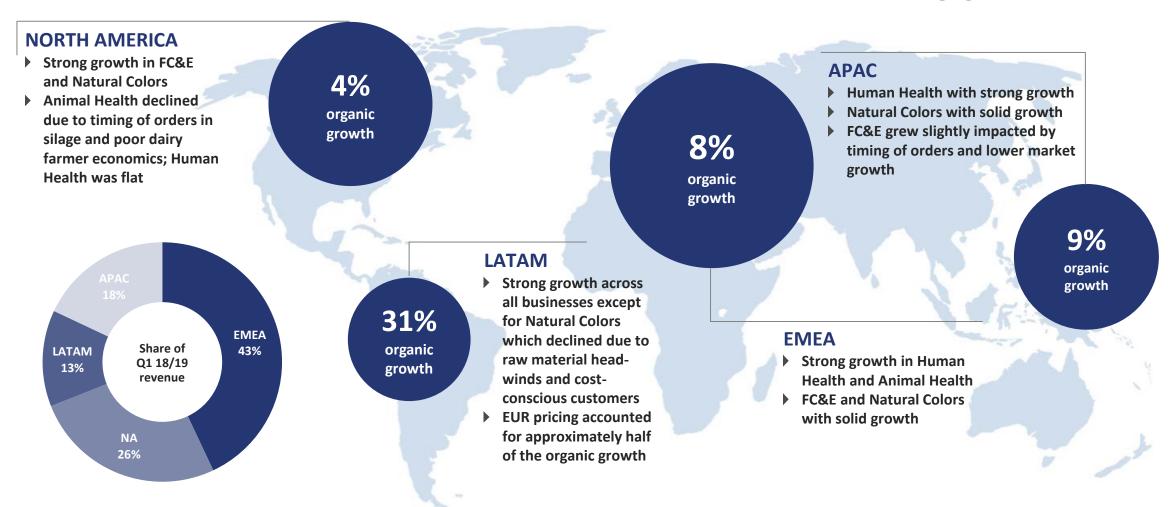
- Leverage new expansion
- Upgrade e-commerce solution
- New digital services

Scalability and efficiencies in production

 Investments in new US capacity and continuation of efficiency programs



## Momentum continued with EMEA, APAC and LATAM driving growth



€€€

**EUR pricing**: Invoicing in local currency, but based on EUR-denominated price lists i.e. if a currency depreciates against the EUR, prices in local currency will be increased automatically to protect bottom line against currency fluctuations; fully or partially implemented in most countries except USA & China.



## Strong start driven by cheese, meat and bioprotective cultures

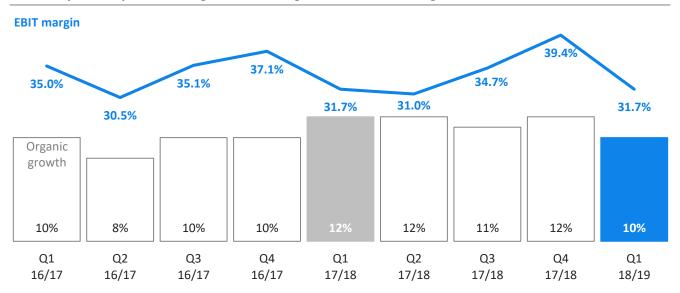
## +10% ORGANIC GROWTH Q1 18/19

- Strong growth in cheese and meat cultures followed by enzymes and fermented milk with solid growth; probiotics were flat
- ▶ Bioprotection delivered ~15% organic growth against a high comparable, driven by existing segments; penetration of 2<sup>nd</sup> generation continued to increase particularly in LATAM and APAC, albeit from a low base
- Pricing contribution driven by EUR pricing reflects strong pricing power

## 31.7% EBIT MARGIN Q1 18/19 (on par yoy)

▶ Scalability benefits in excess of 1%-point, most notably from Avedøre expansion, were offset by strategic initiatives such as digitalization and bioprotection as well as an increase in sales and application development activities

Quarterly development of organic revenue growth and EBIT margin, %



EUR million	Q1 17/18	Q1 18/19
Revenue	155.1	161.0
Organic growth	12%	10%
Volume/mix	10%	5%
EBIT margin	31.7%	31.7%
ROIC ex. goodwill	40.8%	39.0%



## Human Health back on track, Plant Health strong and margins increased

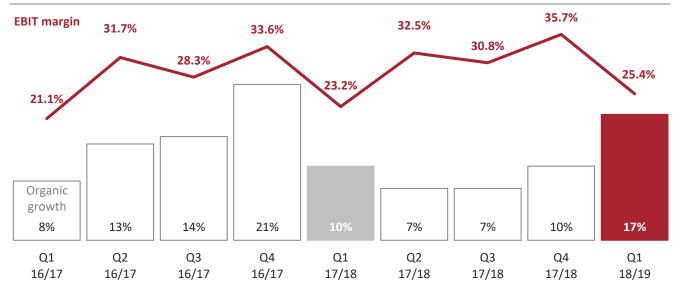
## +17% ORGANIC GROWTH Q1 18/19

- ▶ Human Health with strong growth in infant formula in all regions and continued strong momentum in dietary supplements in APAC
- ▶ Animal Health with a strong quarter in swine, whilst cattle declined due to poor dairy farmer economics in the US, and silage declined due to timing of orders
- ▶ Plant Health continued to increase strongly in LATAM

25.4% EBIT MARGIN Q1 18/19 (+2.2%-point yoy)

▶ Increase driven by high volume growth and timing of production costs, partly offset by investments in Animal Health's sales force expansion outside of North America as well as Plant Health

Quarterly development of organic revenue growth and EBIT margin, %



EUR million	Q1 17/18	
Revenue	48.3	
Organic growth	10%	
Volume/mix	10%	
EBIT margin	23.2%	
ROIC ex. goodwill	18.7%	



Q1 18/19

55.6

17%

16%

25.4%

21.7%



## Momentum from Q4 maintained, but raw material prices declining

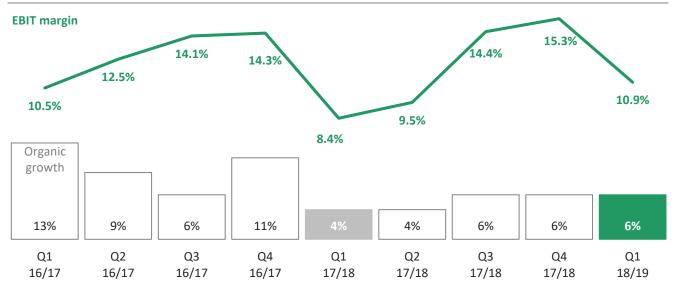
**+6%** ORGANIC GROWTH Q1 18/19

- ▶ Strong growth in coloring foodstuffs with new launches in the FRUITMAX® range
- ▶ Declining carmine and annatto prices negatively impacted organic growth

10.9% EBIT MARGIN Q1 18/19 (+2.5%-point yoy)

▶ Margin improvement driven by operating efficiencies and modest prior year comparable

Quarterly development of organic revenue growth and EBIT margin, %



EUR million	Q1 17/18	Q1 18/19
Revenue	51.1	52.8
Organic growth	4%	6%
Volume/mix	1%	5%
EBIT margin	8.4%	10.9%
ROIC ex. goodwill	15.0%	19.2%



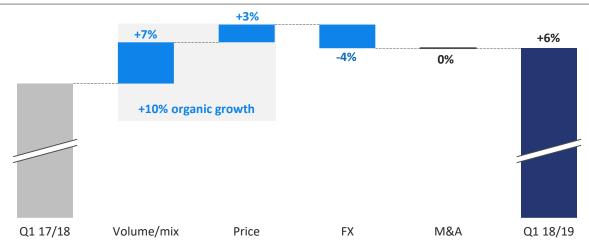
#### **INCOME STATEMENT Q1 2018/19**

## Gross margin improvement partly offset by increased S&M expenses

#### **Comments**

- ▶ Gross margin increased by 2.4%-points driven by all three business areas
- ▶ Operating expenses increased by 12% mainly due to higher sales & marketing expenses related to NN1 initiatives and more sales and application development activities in FC&E
- ▶ EBIT margin b.s.i. increased by 0.9%-points to 26.3%; currencies had a immaterial impact
- ▶ Special items of EUR 0.5m related to the acquisition and integration of Hundsbichler

#### Group revenue growth Q1 2018/19



EUR million	Q1 17/18	Q1 18/19
Revenue	254.5	269.4
Cost of sales	(120.8)	(121.5)
Gross profit	133.7	147.9
Gross margin	52.5%	54.9%
R&D expenses	(19.0)	(19.3)
% of sales	7.5%	7.2%
Sales and marketing expenses	(32.4)	(38.9)
% of sales	12.7%	14.4%
Administrative expenses	(18.0)	(19.4)
% of sales	7.1%	7.2%
Other operating income/expenses	0.4	0.5
EBIT b.s.i.	64.7	70.8
EBIT b.s.i. margin	25.4%	26.3%
Special items	-	(0.5)
EBIT	64.7	70.3
EBIT margin	25.4%	26.1%
Net financial items	(4.3)	(3.9)
EBT	60.4	66.4
Income taxes	(13.9)	(15.3)
Tax rate	23%	23%
Profit for the year	46.5	51.1



#### **CASH FLOW & BALANCE SHEET Q1 2018/19**

## Free cash flow b.s.i.a. reflects absence of tax benefits and higher capex

#### **Comments**

- ▶ Decrease in operating cash flow was driven by higher taxes paid (EUR 47.3m vs. EUR 32.7m last year due to absence of acquisition-related benefits), partly offset by increase in EBIT
- ▶ Net working capital as % of revenue increased due to higher inventories and stable trade payables
- ▶ Increase in cash flow used for operational investing activities from 9.1% to 11.1% of revenue
  - In line with communicated expansion program including investments in Avedøre (freeze-dried & powdered packaging for FC&E and H&N), Milwaukee and Montpellier (new US facility and R&D center upgrade for NCD) to be completed by 2019/20
  - ▶ Total capex for the financial year 2018/19 expected to be between EUR 110-130m
- ▶ Cash flow used for acquisitions of EUR 9m related to Hundsbichler acquisition announced on October 15 (specialty cheese rennet)

In EUR m	Q1 17/18	Q1 18/19
Cash flow		
Taxes paid	(32.7)	(47.3)
Operating activities	4.2	(3.1)
Operational investing activities	(23.2)	(29.9)
Free operating cash flow	(19.0)	(33.0)
Free cash flow b.s.i.a.	(18.9)	(32.5)
Acquisition activities	0	(9.3)
Free cash flow	(19.0)	(42.3)
Balance sheet		
Total assets	1,796.7	1.877.7
Equity	702.9	713.1
Net interest-bearing debt	646.5	714.1
Key ratios		
Net working capital	19.7%	20.8%
Capital expenditure	9.1%	11.1%
ROIC excluding goodwill	30.9%	31.4%
NIBD/EBITDA	1.8x	1.8x



#### **OUTLOOK**

## Group outlook for the year maintained

	Q1 2018/19	Outlook 2018/19 <sup>1</sup> As per Oct 15, 2018	Outlook 2018/19 <sup>1</sup> As per Jan 17, 2019	Long-term financial ambition <sup>2</sup>
Organic revenue growth	10%	9-11%	9-11%	8-10%
Food Cultures & Enzymes	10%	Above long-term ambition	Above long-term ambition	7-8%
Health & Nutrition	17%	10% or above	10% or above	n.a.
Natural Colors	6%	6-10%	6-9%	n.a.
EBIT margin b.s.i.	26.3%	<b>Around 29.5%</b>	Around 29.5%	30+%
Free cash flow b.s.i.a.	(32.5m)	Around the same level as in 17/18 <sup>3</sup>	Around the same level as in 17/18 <sup>3</sup>	+10% CAGR

<sup>&</sup>lt;sup>1</sup> Based on constant currencies and stable raw material prices, and assumes no acquisitions. The outlook is also based on the current political and economic environment, although there is a risk of increased political and economic uncertainty – e.g. the economic climate in the Middle East and Latin America, the risk of a 'hard' Brexit and trade tensions between large economies. Any deterioration in these situations might impact the outlook.

<sup>2</sup> Baseline 2016/17, updated at Capital Market Day on April 18, 2018.

<sup>&</sup>lt;sup>3</sup> Assumes lower growth in cash flow from operating activities than growth of EBIT before special items, due to a higher level of taxes to be paid in 2018/19, mainly related to the absence of acquisition-driven tax benefits realized in 2017/18. Cash flow used for operational investment activities will be at a relatively high level, and is expected to be between EUR 110-130 million. This includes multiple investments across the group, and also assumes a successful sale-and-lease-back of the company's main site in Hørsholm in Q4 2018/19.



