



Knowledge grows

## Yara International ASA

Thor Giæver, SVP Investor Relations

BofAML conference

London, 5 December 2017



# Our planet faces massive challenges – Yara is part of the solution

9.7 billion  
people



+ 50 %

Increased food production



-40 to -70%

Reduced greenhouse gas  
emissions\*



## Our Mission

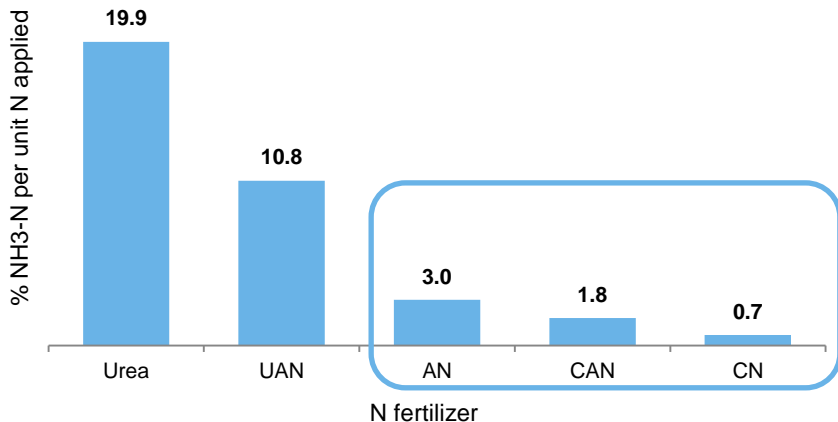
*Responsibly feed the world and protect the planet.*

## Our Values

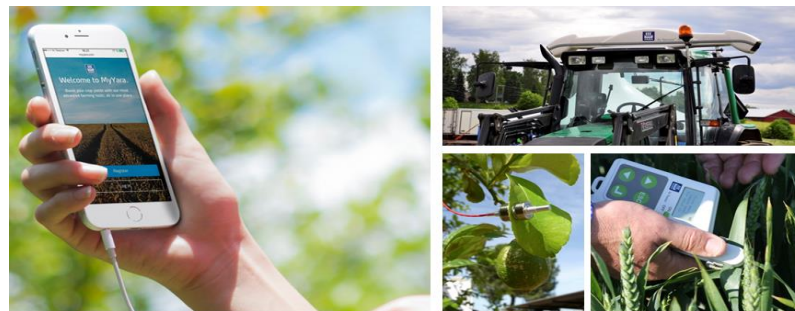
*Ambition, Curiosity, Collaboration and Accountability*

# Yara drives sustainable agriculture with the right nitrogen fertilizer products and precision farming tools

## Lower volatilization losses\* with Yara's premium fertilizers



## Precision farming tools promote sustainable agriculture



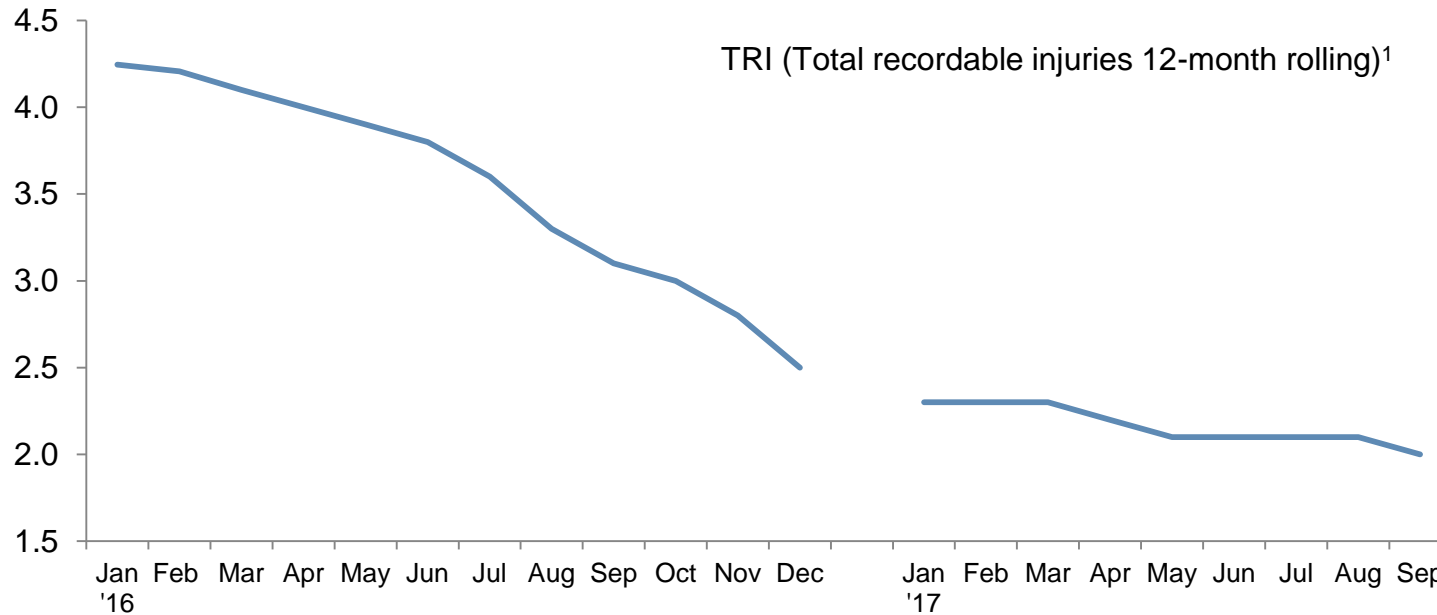
- Precision farming promotes best agricultural practices
- Yara's N-sensor, N-tester and water sensor help optimize application rates and water use
- Yara's solutions help farmers comply with environmental legislation while supporting their competitiveness

Agriculture is responsible for about a quarter of global greenhouse gas emissions. Yara contributes to lower emissions through promoting premium fertilizers and sustainable farming

Reference: EMEP/EEA emission inventory guidebook 2013

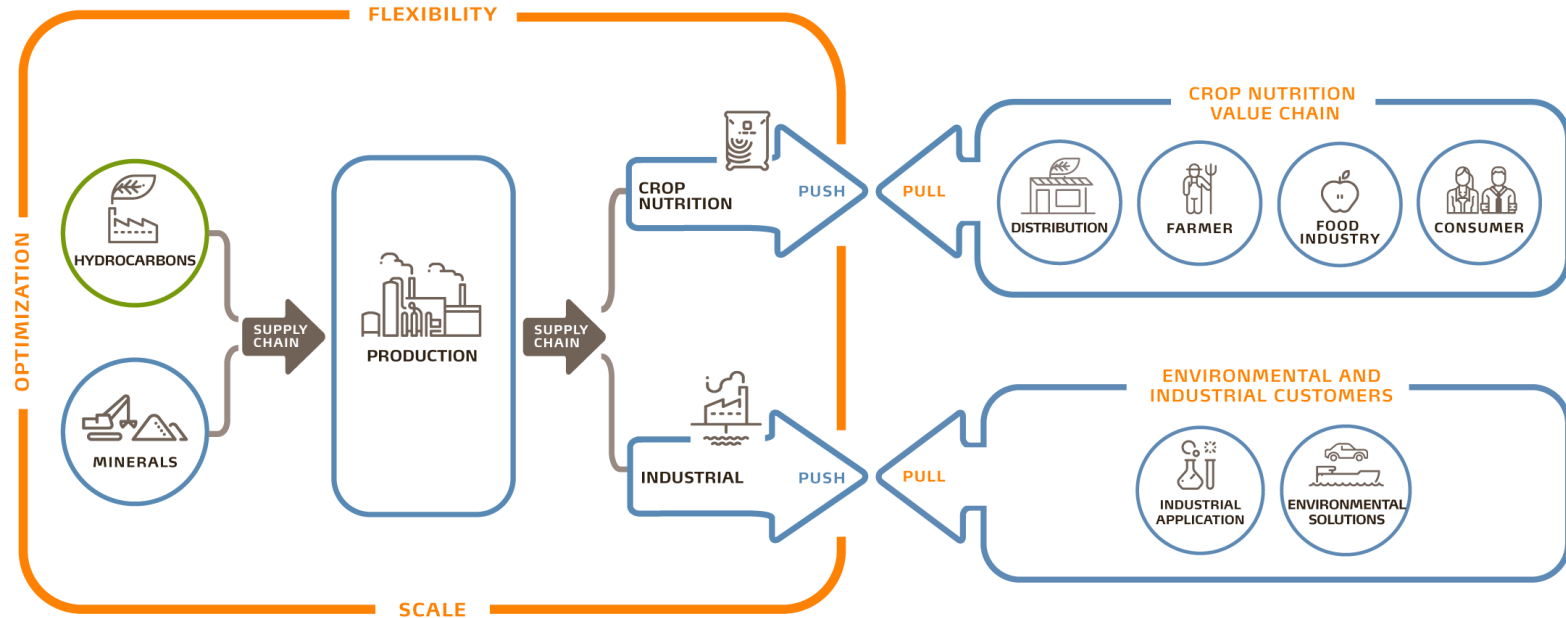
\*Nitrogen is changed to ammonia gas (NH<sub>3</sub>) and lost into the atmosphere

# Safe operations is our first priority



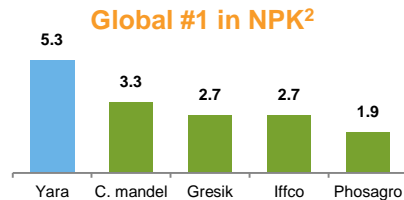
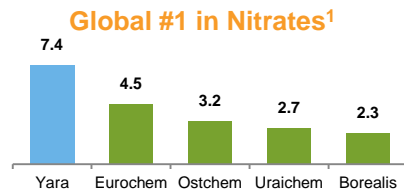
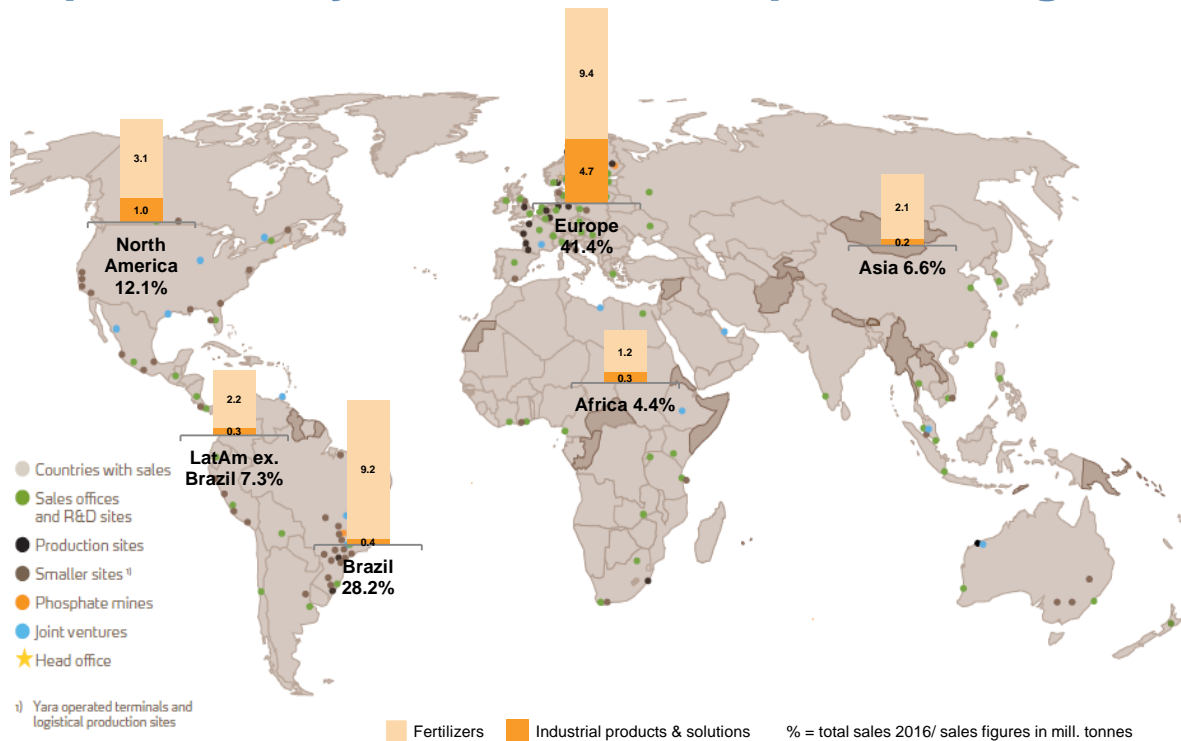
1) TRI: Total recordable injuries, lost time (absence from work), restricted work and medical treatment cases per one million work hours.

# Integrated business model creates value through scale, flexibility and value chain presence

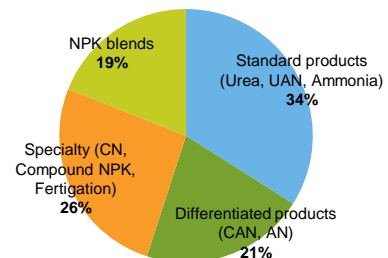




# Yara's leading global position and differentiated product portfolio represent key sources of competitive edge

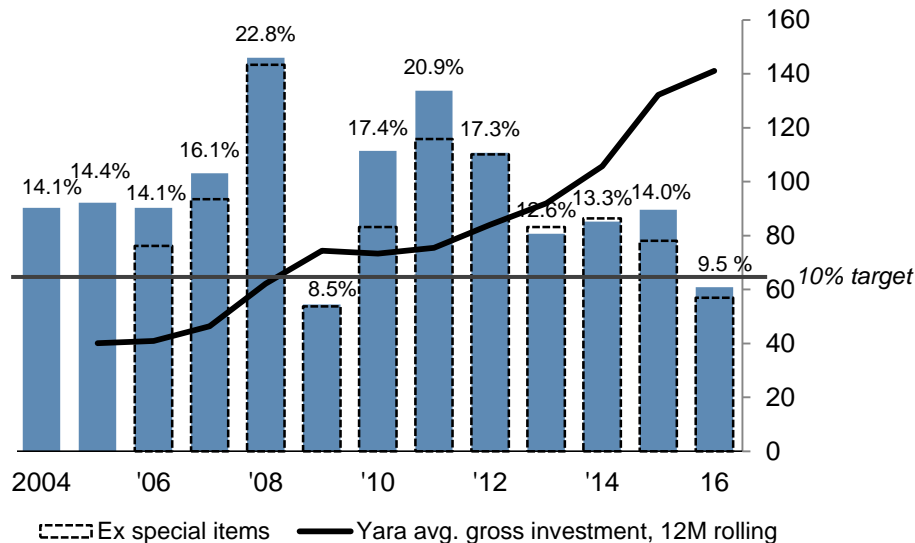


## Fertilizer product portfolio<sup>3</sup>



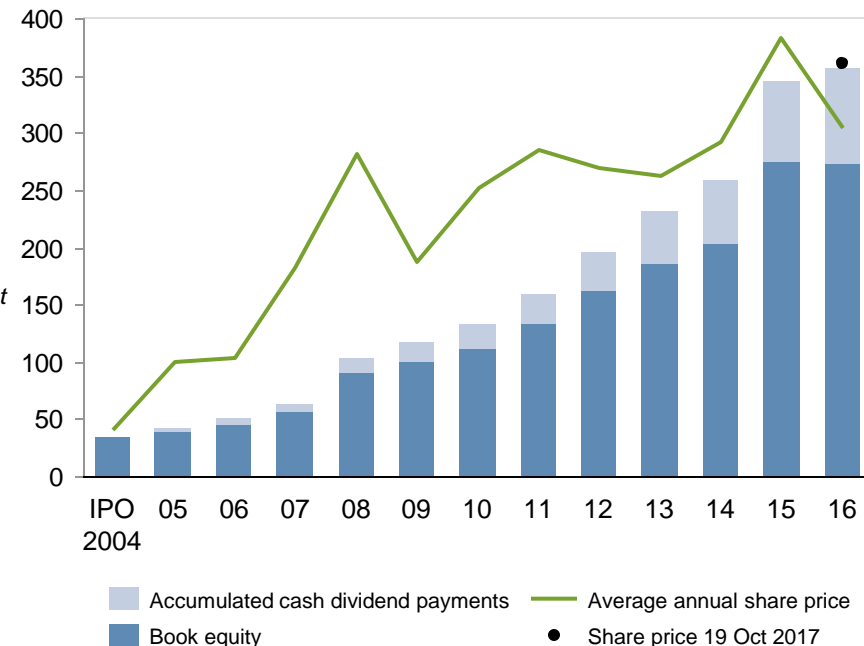
# Strong growth and profitability through the cycle

Average cash return on gross investment (CROGI) well above the Yara CROGI target of 10%



Average annual shareholder return of 23%<sup>1</sup>

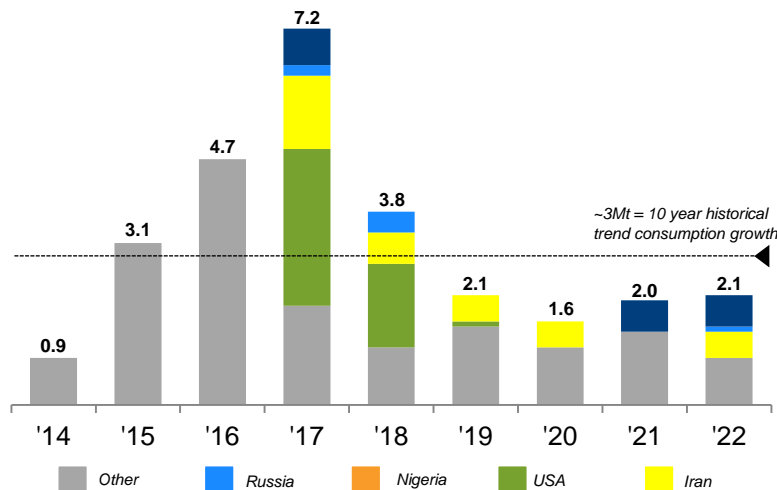
NOK/share



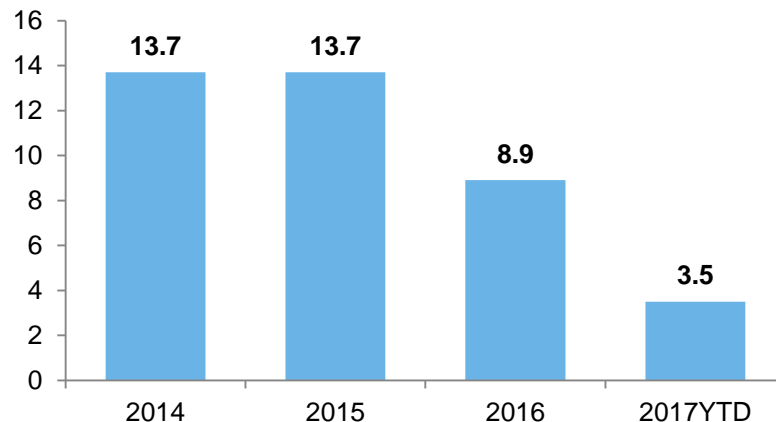
1) Share price appreciation (end 2016) plus dividend payments

# Urea oversupply outside China is offset by lower Chinese exports

## Capacity additions, excluding China (Mt urea)



## Urea exports from China (Mt urea)

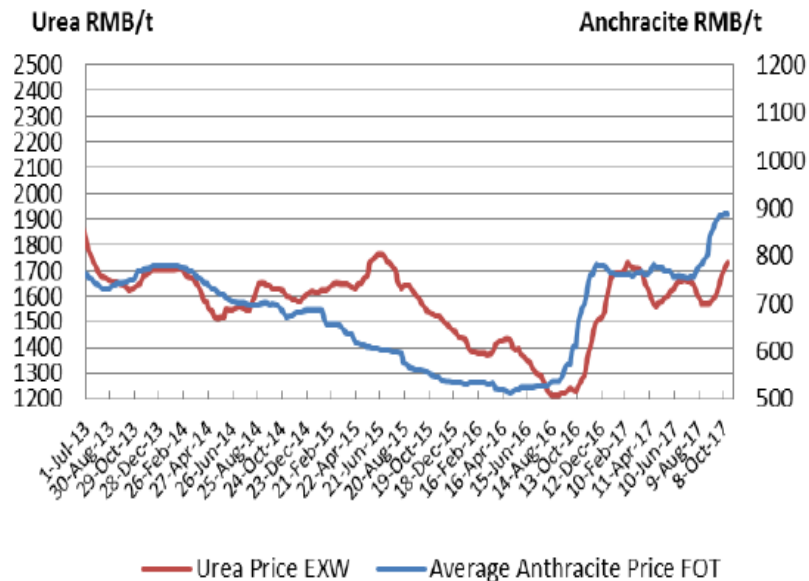


- Market is currently dominated by oversupply outside China, however lower China exports balance the urea market
- Urea market price is set by Chinese swing producers

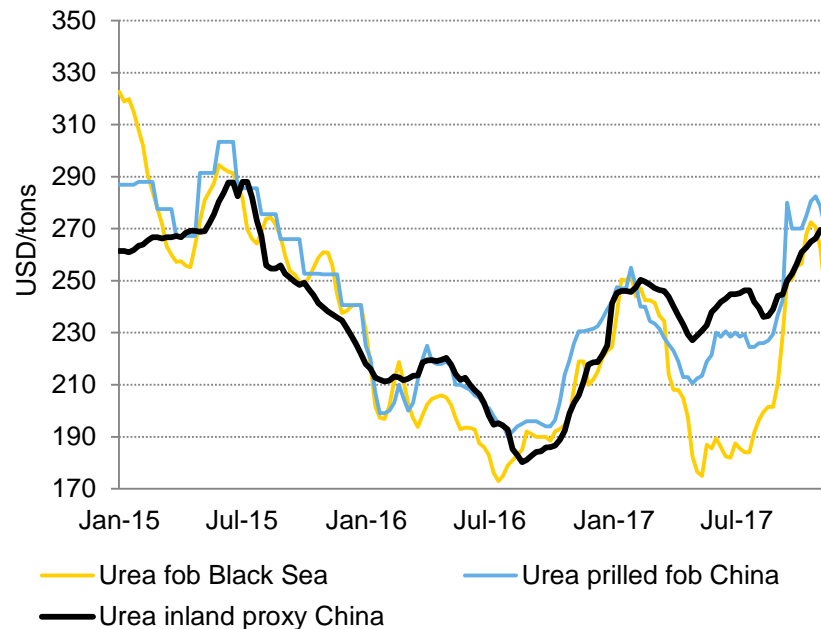


# Increased coal prices in China have driven nitrogen prices higher

## China anthracite and urea prices (RMB/mt)<sup>1</sup>

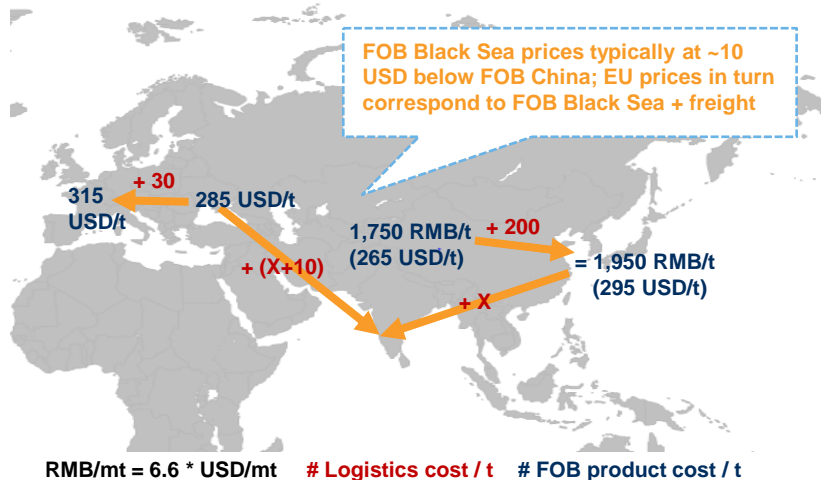


## Increasing urea prices



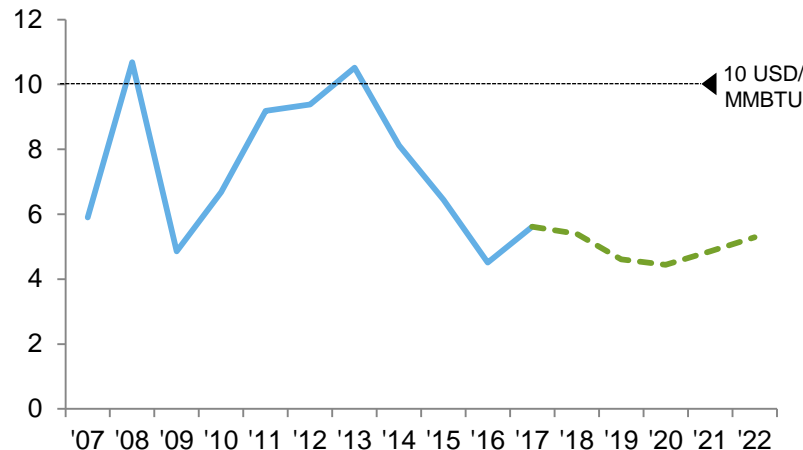
# Western Europe producers have clear cost advantage over China

## Urea pricing derived from a Chinese export price



- China as the swing producer defines the Urea market prices for Western Europe

## European gas cost<sup>2</sup>



- Production based on European natural gas has a cost advantage over China up to a gas price of 10 USD /MMBTU<sup>1</sup>

# Yara has expected commodity nitrogen oversupply, and has focused its growth pipeline on premium & industrial products

## Growth focused on premium & industrial

### Expand premium products sales and supply

Uusikaupunki NPK (3Q 2016)  
Porsgrunn/Glomfjord CN/NPK (4Q 2017)  
Sluiskil urea+S (4Q 2017)  
Rio Grande NPK/NPK blends (2H 2020)

### Expand commodity scale based on attractive full-cost growth opportunities

Freeport ammonia JV (1Q 2018)  
Babralla urea acquisition (4Q 2017)

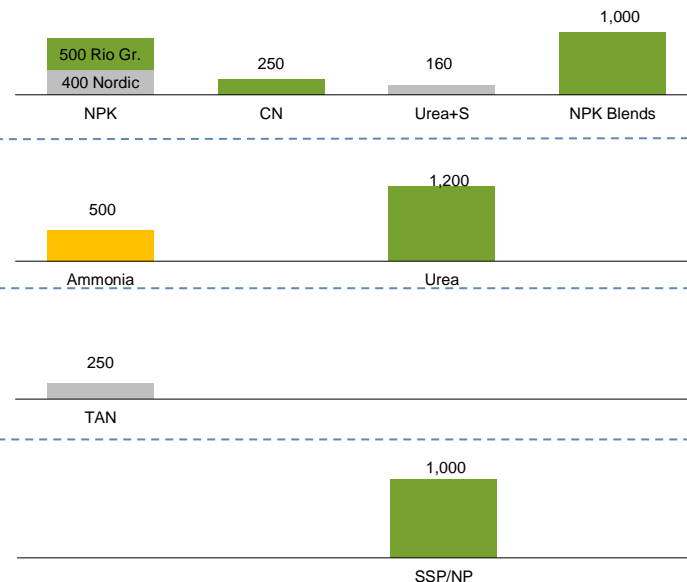
### Act on attractive opportunities to grow industrial sales and supply

Pilbara – TAN (1H 2017)  
Köping – TAN (2Q 2018)

### Structurally secure P and K supply

Galvani / Salitre  
(mining: 1Q18, chemical 1H19)

## Pipeline tonnes by product (kt)<sup>1</sup>



Exposure to commodity nitrogen prices:



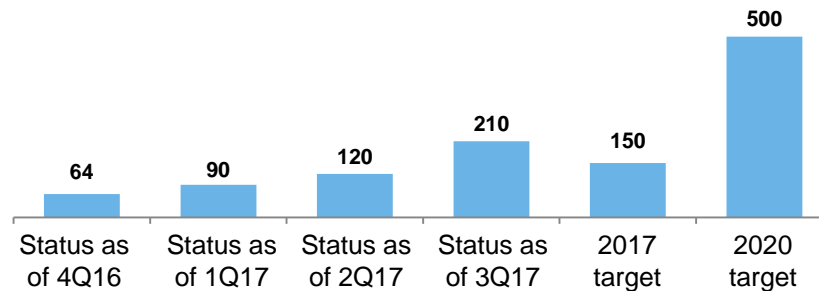
<sup>1</sup> Including Yara's share of volume in non-consolidated investees. Fully consolidated entities presented at 100% basis

# Yara Improvement Program targets minimum USD 500 million sustained annual EBITDA improvement by 2020

## USD 500m Improvement Program Progress



## Annualized EBITDA improvement, USDm<sup>1</sup>



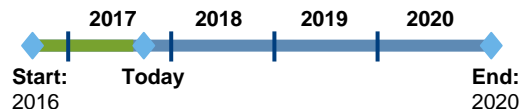
### Improvement categories:

- **Volume:** increasing production in existing plants by improving reliability
- **Consumption factor:** reducing spend, primarily on energy, through better reliability and new technology
- **Variable unit cost:** leverage global scale, advanced category management and collaborative procurement approaches
- **Fixed cost:** improve support function standardization and realize scale benefits

1) Versus 2015 baseline, at 2015 prices

# Yara Improvement Program ahead of schedule

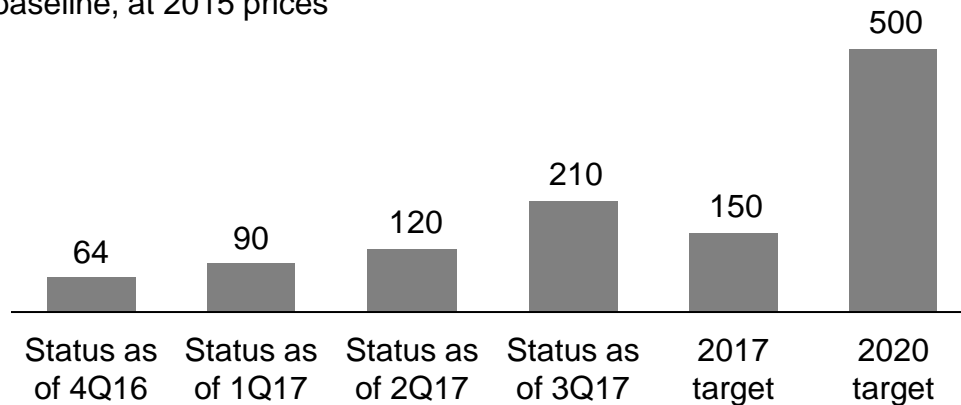
## Program progress



- Program still progressing according to plan, with benefits ahead of target
- Yara Productivity System continues to be rolled out. Production reliability strong compared to same period last year
- Procurement Excellence progressing into Wave 2 and delivering ahead of plan

## Financial benefits

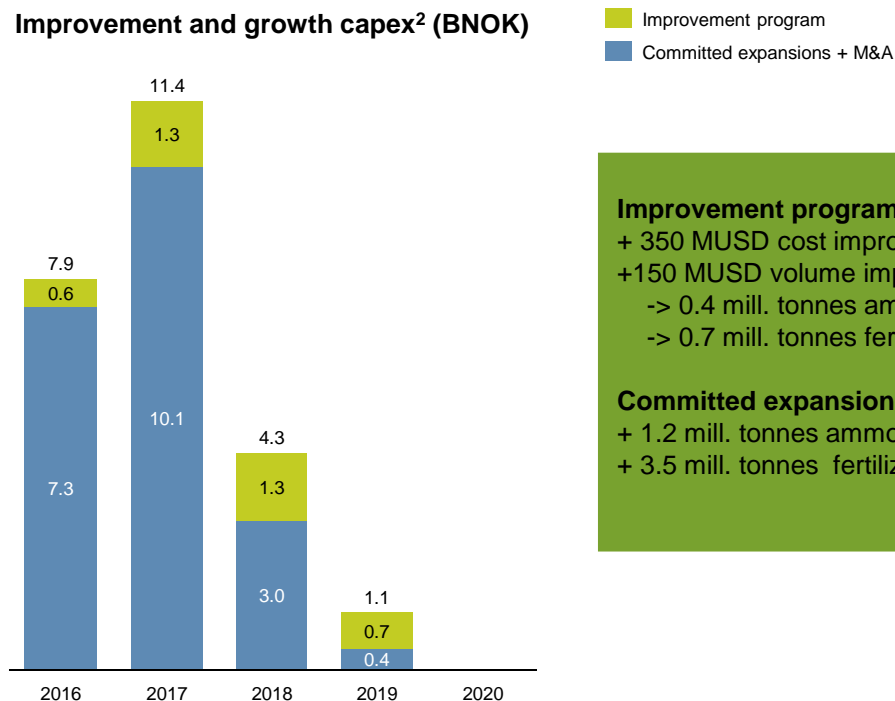
Annualized EBITDA improvement, USD million, vs. 2015 baseline, at 2015 prices



- A total of USD 97 million one-off cash improvement realized, primarily working capital release
- Accumulated one-off program costs: opex USD 47 million and capex USD 147 million

# Major improvement and growth investments in 2017; main earnings improvement from 2018 onwards<sup>1</sup>

Improvement and growth capex<sup>2</sup> (BNOK)



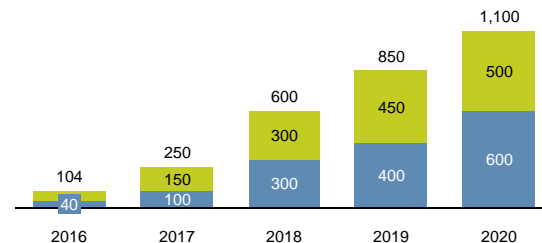
## Improvement program:

+ 350 MUSD cost improvement  
 +150 MUSD volume improvement:  
 -> 0.4 mill. tonnes ammonia  
 -> 0.7 mill. tonnes fertilizer

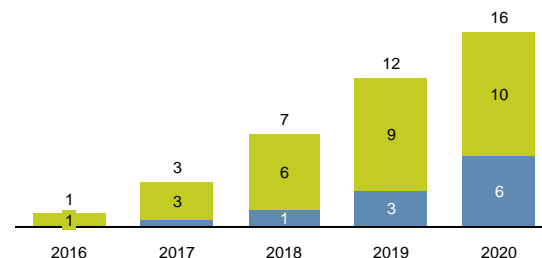
## Committed expansions + M&A:

+ 1.2 mill. tonnes ammonia  
 + 3.5 mill. tonnes fertilizer

EBITDA improvement<sup>3</sup> (MUSD)



Earnings improvement<sup>3</sup> (NOK per share)



<sup>1</sup> Currency assumptions for 2017 onwards: USD/NOK 7.90, EUR/NOK: 9.32, USD/BRL: 3.15

<sup>2</sup> Excluding maintenance capex on existing assets – see page 21. Yara's share of capex. Fully consolidated entities presented at 100% basis

<sup>3</sup> Measured at 2015 conditions. Main average market prices: Ammonia fob Yuzhny 390 USD/t, Urea fob Yuzhny 275 USD/t, DAP fob Morocco 495 USD/t



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# Additional information

IR – December 2017



# Global leadership by growing knowledge for 112 years

## About the company:

- Headquarters in Norway
- President and CEO: Svein Tore Holsether
- Present in more than 60 countries, sales to ~160 countries
- Close to 15,000 employees
- Established as Norsk Hydro in 1905, demerged and listed on Oslo Børs as Yara International ASA in 2004

## Stable ownership structure:

- Norwegian State 36.2%
- Norwegian National Insurance Scheme Fund 5.3%
- Other Norway 14%
- Outside Norway 44.5%





## Key metrics 2016 / YTD 2017:

- Operating revenues: 95.2 BNOK / 69.8 BNOK
- EBITDA: 15.6 BNOK / 8.6 BNOK
- CROGI: 9.5% / 6.5%
- Total deliveries (in million tonnes):
  - Fertilizers: 27.2 / 20.8
  - Industrial products: 6.9 / 5.3
  - Ammonia trade: 2.0 / 1.5

## Strong and stable credit position:

- S&P: BBB (stable), BBB+ between 2005 and 2007
- Moody's: Baa2 (stable), unchanged since 2004
- Clear commitment to BBB/Baa2 rating
- Financial ratios as of 3Q 2017:
  - Debt/equity: 0.22
  - Net debt/L12M EBITDA: 1.55x

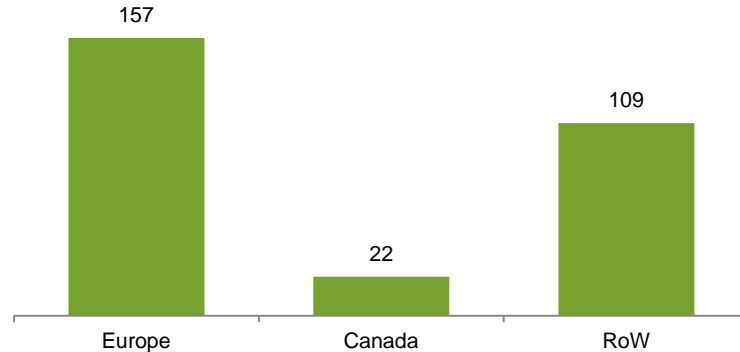
# Three operating segments supported by a global supply chain function cover the value chain

	Production	Crop Nutrition	Industrial
			
<b>Description</b>	Runs large-scale production of nitrogen-based products, the starting point for our crop nutrition and industrial solutions	Provides worldwide sales, marketing and distribution of a range of crop nutrition products and programs	Develops and markets environmental solutions and products for industrial applications
<b>Credit highlight</b>	Production has plants and mines globally, providing scale and flexibility	Crop Nutrition creates resilience in earnings with distribution and agronomic competence	Industrial segment reduces cyclicity and seasonality
<b>2016 Revenues<sup>1</sup></b>	8.5 BNOK (1.0 BUSD) 9%	72.7 BNOK (8.9 BUSD) 75%	16.0 BNOK (2.0 BUSD) 16%
<b>2016 EBITDA<sup>2</sup></b>	6.7 BNOK (0.8 BUSD) 44%	5.5 BNOK (0.7 BUSD) 36%	2.9 BNOK (0.4 BUSD) 19%
<b>Supply Chain</b>	 <ul style="list-style-type: none"> <li>Global function responsible for optimization of energy, raw materials and third party sourcing</li> <li>Sourcing and trade of 3,864 kilotons of ammonia and purchases of 293mm MMBtu of energy, 3,408 kilotons of potassium and 969 kilotons of phosphate rock</li> </ul>		

# Supply Chain delivers industry-leading economies of scale

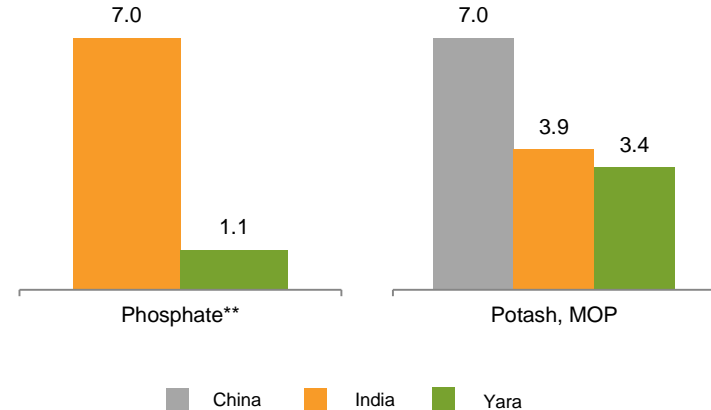
## Biggest industrial buyer of natural gas in Europe

2016 gas consumption, Million MMBtu\*



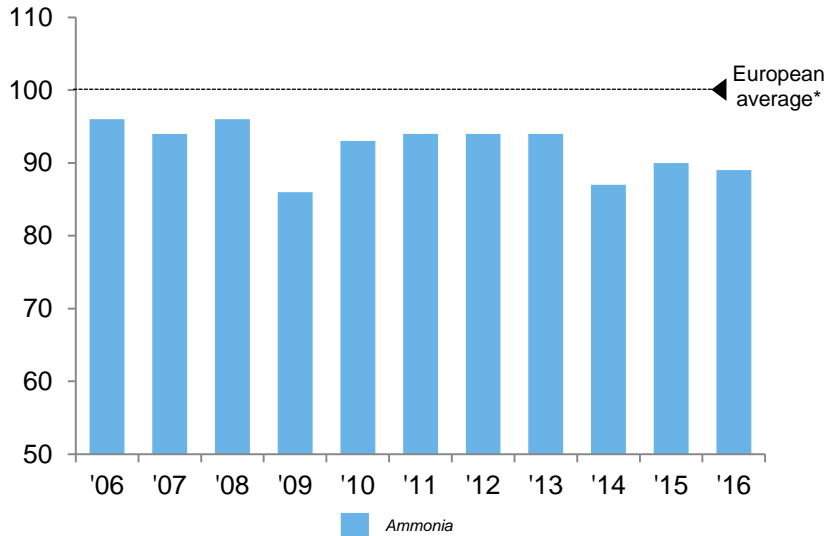
## Third single biggest buyer of P&K globally

2016 P&K purchases (mt)



# Yara has strong cost and market positions globally

## Leading cost position in Europe



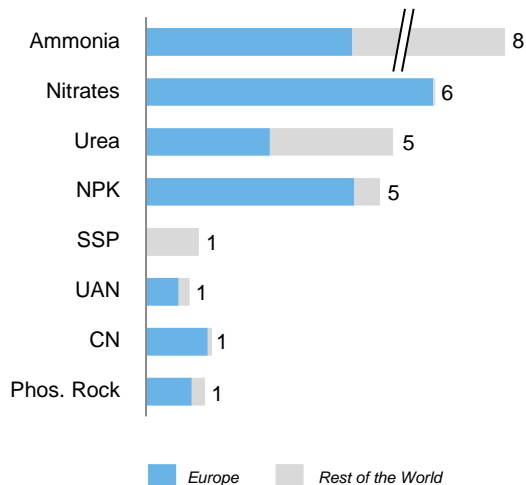
## Strong competitive-positions outside Europe

- **North America:** World class low-cost production assets in core agriculture market
- **Brazil:** Unrivalled distribution network with 28 sites in 11 states. Limited commodity margin exposure due to (1) strong premium product positions and (2) third-party sourcing for blend business
- **Asia:** Export market for Yara premium products for more than 100 years. Strong knowledge margin and brand awareness.

# Production scale advantage and variable cost flexibility due to asset set-up and product mix

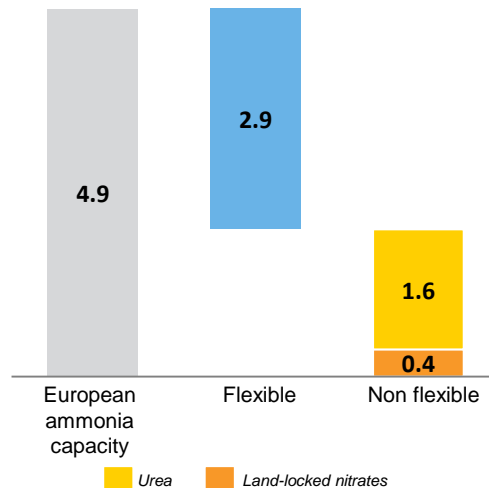
## Diversified product portfolio<sup>1</sup>

Mill tons 2016FY



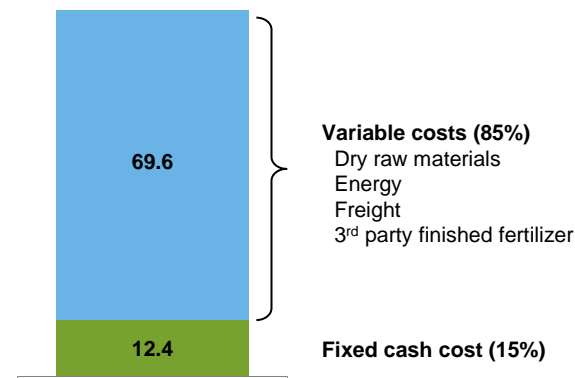
## High ammonia flexibility

Mill tons 2016FY











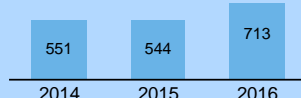
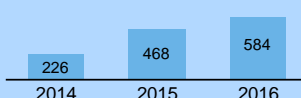
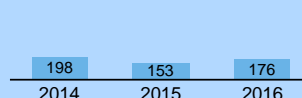
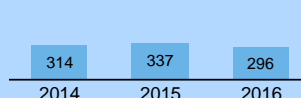
## Yara's operating cash costs are mainly variable

NOK billions, 2016FY



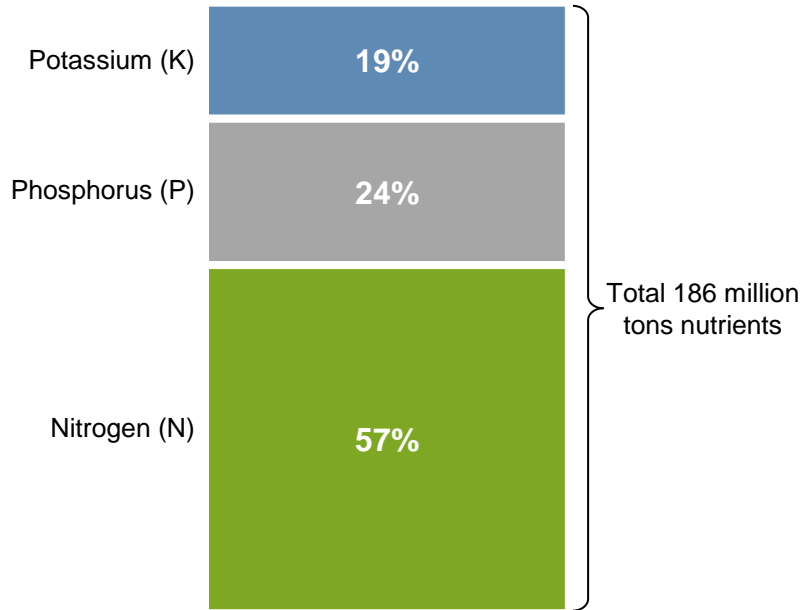
~90% of nitrate and NPK production can operate independently of ammonia production

# Industrial segment delivers growth and offsets fertilizer cyclicity and seasonality

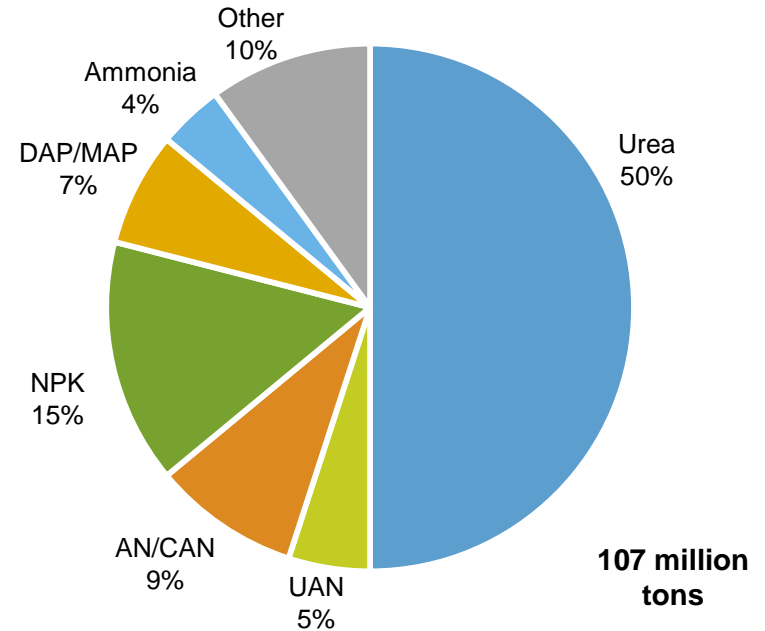
	Base Chemicals	Environmental Solutions	Mining Applications	Industrial Applications <sup>1</sup>																																
																																				
Key product and service offering	Chemical applications for food, automotive, space, pharmaceutical and construction industries	NO <sub>x</sub> and SO <sub>x</sub> abatement of emissions from heavy duty vehicles and industry	Technical nitrates and solutions for mining and construction industries	CN and associated solutions for industrial applications Feed urea and phosphates for Animal nutrition																																
Strategic fit	Optimization of Upstream assets	Utilize logistics advantage and infrastructure footprint	Utilize technology, logistics and infrastructure advantage	Monetize products into higher value markets																																
Geographical market	 Europe	 Global	 Global	 Global																																
Market drivers	GDP growth	Legislations, GDP growth	GDP growth, mining industry	GDP growth, standard of living																																
EBITDA 2014-2016 (MNOK)	 <table><tr><th>Year</th><th>EBITDA (MNOK)</th></tr><tr><td>2014</td><td>551</td></tr><tr><td>2015</td><td>544</td></tr><tr><td>2016</td><td>713</td></tr></table>	Year	EBITDA (MNOK)	2014	551	2015	544	2016	713	 <table><tr><th>Year</th><th>EBITDA (MNOK)</th></tr><tr><td>2014</td><td>226</td></tr><tr><td>2015</td><td>468</td></tr><tr><td>2016</td><td>584</td></tr></table>	Year	EBITDA (MNOK)	2014	226	2015	468	2016	584	 <table><tr><th>Year</th><th>EBITDA (MNOK)</th></tr><tr><td>2014</td><td>198</td></tr><tr><td>2015</td><td>153</td></tr><tr><td>2016</td><td>176</td></tr></table>	Year	EBITDA (MNOK)	2014	198	2015	153	2016	176	 <table><tr><th>Year</th><th>EBITDA (MNOK)</th></tr><tr><td>2014</td><td>314</td></tr><tr><td>2015</td><td>337</td></tr><tr><td>2016</td><td>296</td></tr></table>	Year	EBITDA (MNOK)	2014	314	2015	337	2016	296
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# Yara has a strong position in value-added fertilizer, while urea is the main reference product for nitrogen pricing

## Nitrogen – The most important nutrient<sup>1</sup>

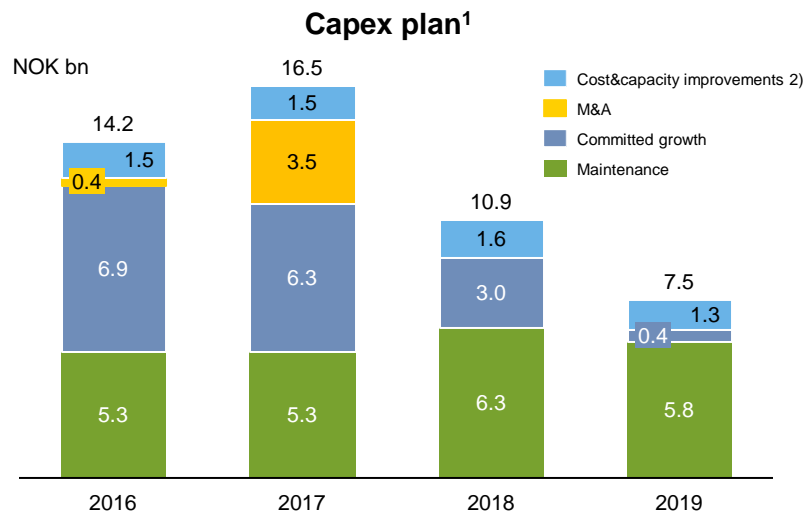


## Urea is the key commodity N-product<sup>2</sup>



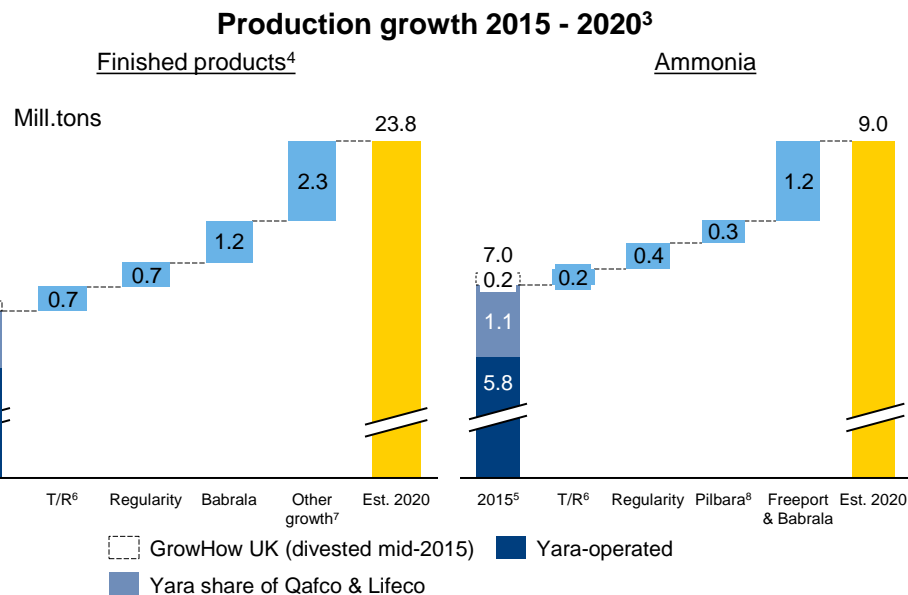


# Growth and capex pipeline



Committed growth (NOK bn):

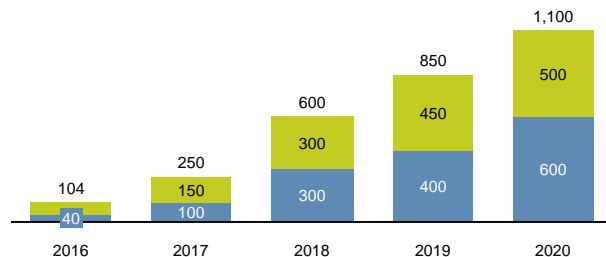
Porsgrunn	1.2	0.7	-	
Köping	0.4	0.5	0.1	
Sluiskil	0.7	0.7	0.0	
BASF JV	1.6	0.9	0.5	
Rio Grande	0.1	1.2	0.7	0.4
Salitre	0.8	2.0	1.6	
Other projects	2.1	0.3	0.1	
<b>Total</b>	<b>6.9</b>	<b>6.3</b>	<b>3.0</b>	<b>0.4</b>



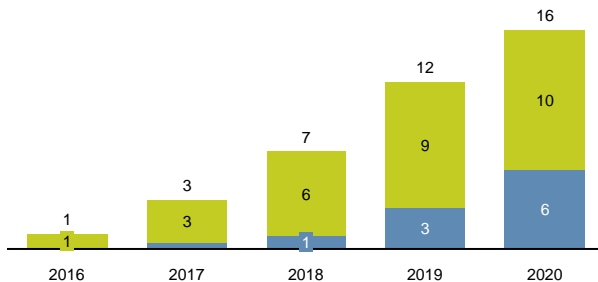
- 1) Yara's share of capex. Fully consolidated entities presented at 100% basis.
- 2) Includes Yara Improvement program Capex and other improvements
- 3) Rio Grande expansion also adds 1 million tonnes NPK blends by 2020
- 4) Finished fertilizer and industrial products, excl. bulk blends
- 5) Including Yara share of production in non-consolidated investees
- 6) Adjustment to normalized / 2016 turnaround level
- 7) Committed projects only. TAN Pilbara: 160 kt, Porsgrunn: 235kt, Glomfjord: 105kt, Uusikapunki: 250kt, Köping: 90kt, Sluiskil: net 160kt, Galvani (Salitre ~ 0.8 mill.tonnes, reaching 1.1 mill.tonnes in 2022), Rio Grande: 500kt
- 8) Including 100% ownership in Pilbara NH<sub>3</sub> plant

# Improvement and growth investments; earnings and sensitivities<sup>1</sup>

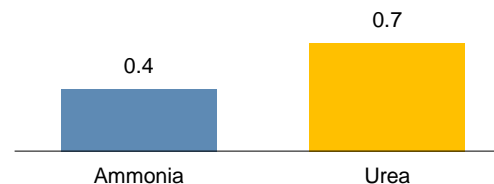
EBITDA improvement<sup>2</sup> (MUSD)



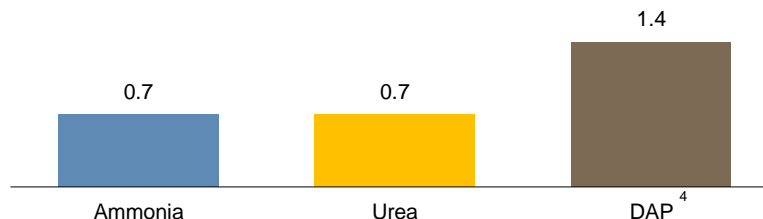
Earnings improvement<sup>2</sup> (NOK per share)



Improvement program: Impact<sup>3</sup> of +100 USD/t price change (NOK/share)



Growth: Impact<sup>3</sup> of +100 USD/t price change (NOK/share)



<sup>1</sup> Currencies for all amounts from 2017: USD/NOK 7.90, EUR/NOK: 9.32, USD/BRL: 3.15

<sup>2</sup> Measured at 2015 conditions. Main average market prices: Ammonia fob Yuzhny 390 USD/t, Urea fob Yuzhny 275 USD/t, DAP fob Morocco 495 USD/t.

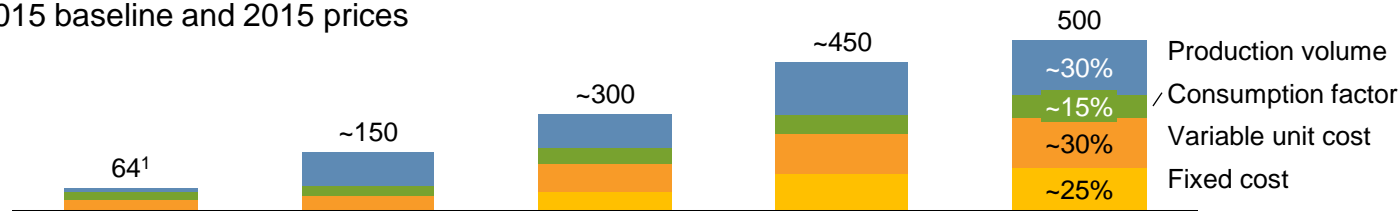
<sup>3</sup> Improvement: 2020 numbers. Growth: At full capacity (2019 for urea and ammonia, 2020 for DAP).

<sup>4</sup> Phosphate-driven price change, equivalent to 138 USD/t phosphate rock (72 bpl)

# Yara Improvement Program targets sustained improvement of minimum \$500MM EBITDA, plus cash benefits

USD\$MM, vs. 2015 baseline and 2015 prices

**Sustained EBITDA improvement**



**Sustained capex improvement**

Sustained capex improvement: Target under development

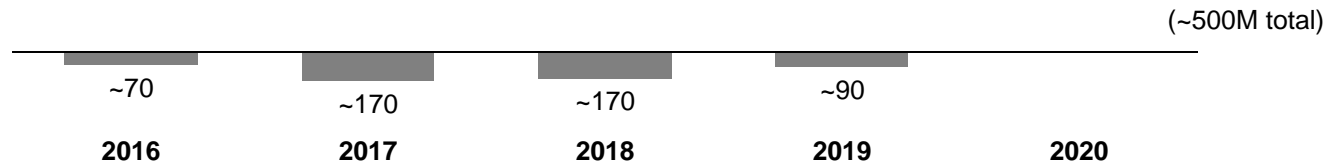
**One-off working capital release**



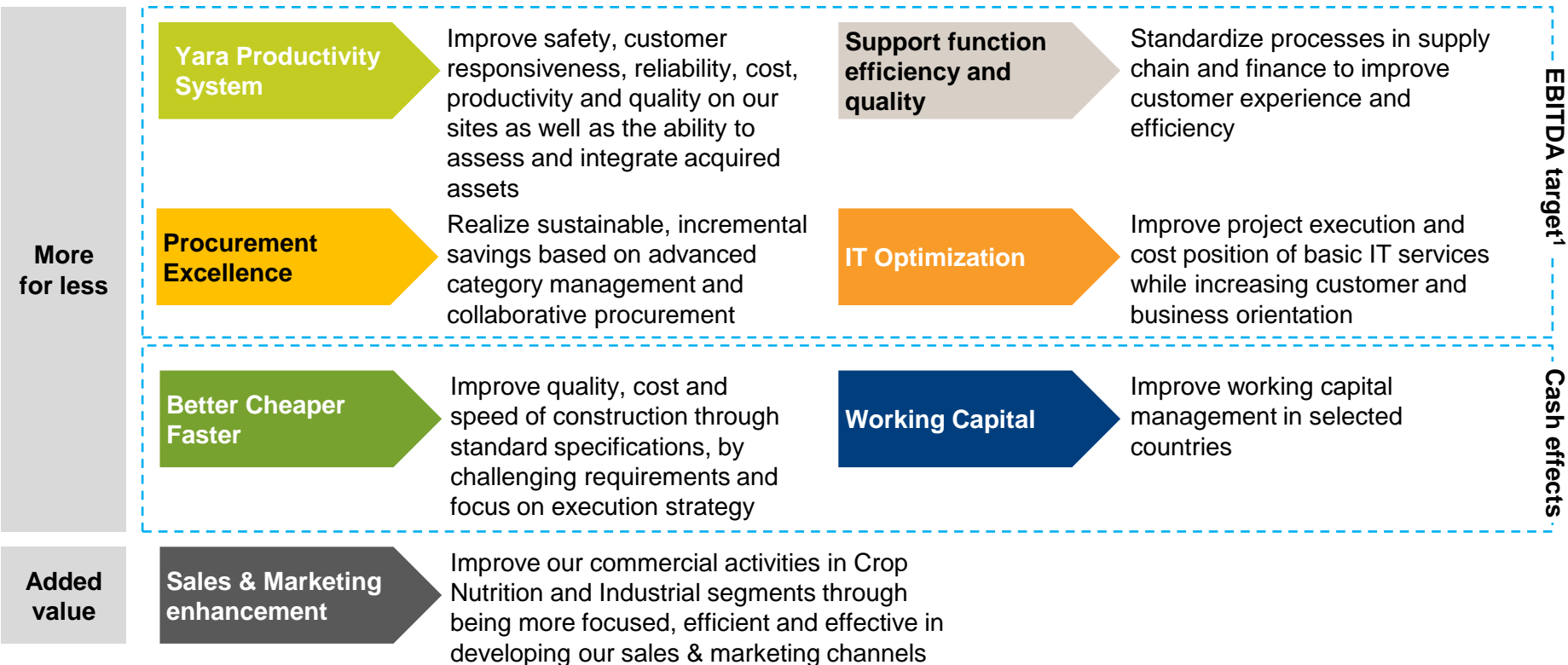
**One-off cost**



**One-off capex**



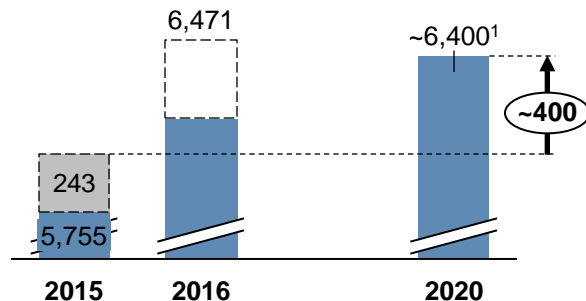
# The improvement program is organized into concrete projects across the company



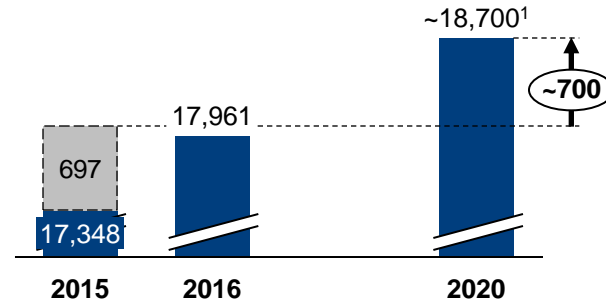
# Volume and energy consumption improvement targets

## Production volume

**Ammonia production,**  
thousand tonnes

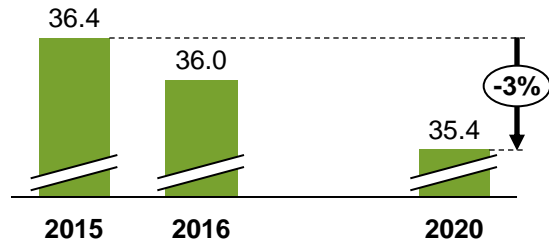


**Finished fertilizers production,**  
thousand tonnes



## Consumption factor

**Energy consumption,**  
Mmbtu (HHV<sup>2</sup>) per tonne Ammonia  
(weighted average)



- Ammonia production (excl. pipeline growth)
- Finished fertilizers production
- Adjustment to normalized / 2016 turnaround level
- Pilbara acquisition effect (last 49%)
- Improvement program target

**Note:** Volume and energy targets are not final; they are subject to change as additional plant assessment deep-dives are completed

# Yara Productivity System in practice

■ Base production (excluding effect of planned maintenance stops)

Total production at site, thousand tonnes



Uusikaupunki

292

262

332<sup>1</sup>

+14%



Sluiskil

1,476

1,444

1,505

+2%



Belle Plaine

490

439

535

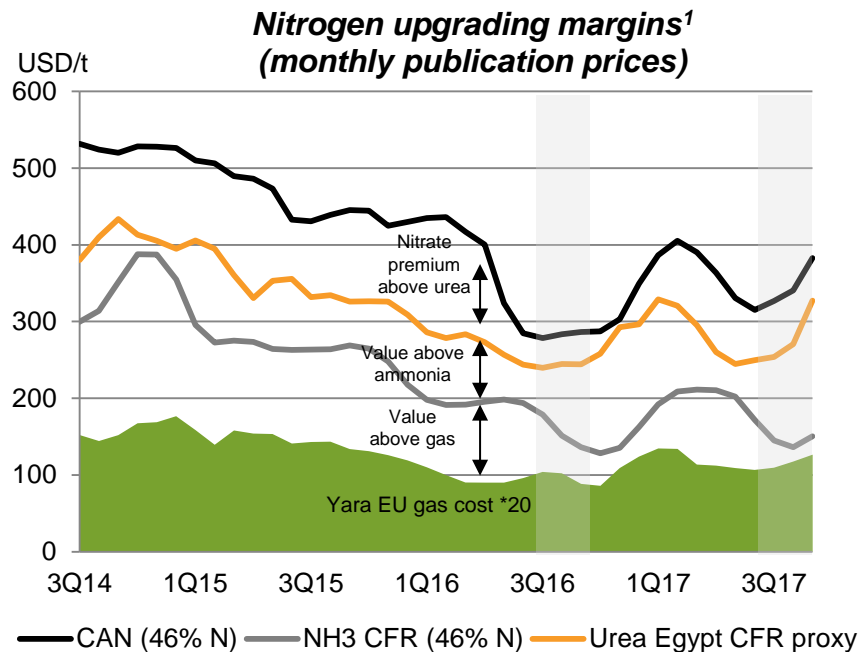
+9%

3Q15

3Q16

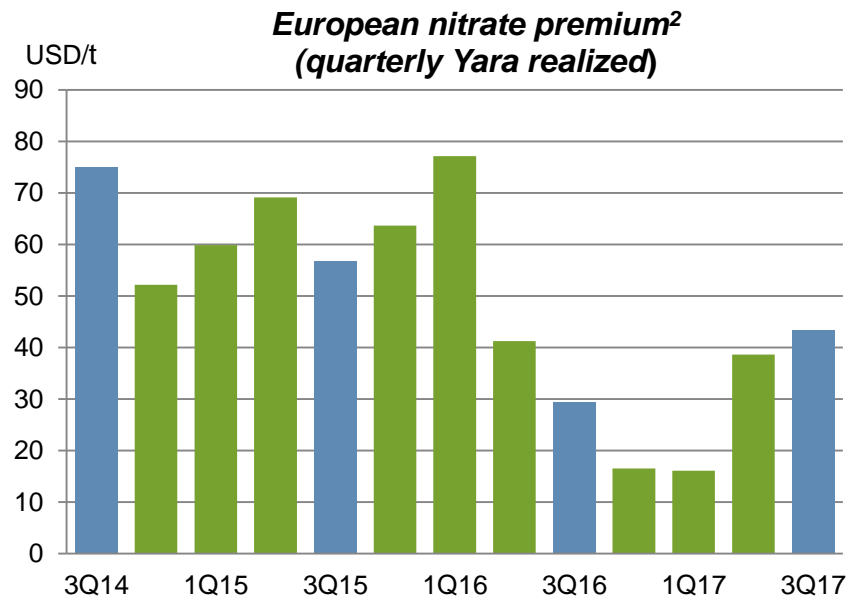
3Q17

# Higher European nitrate premiums



1) All prices in urea equivalents

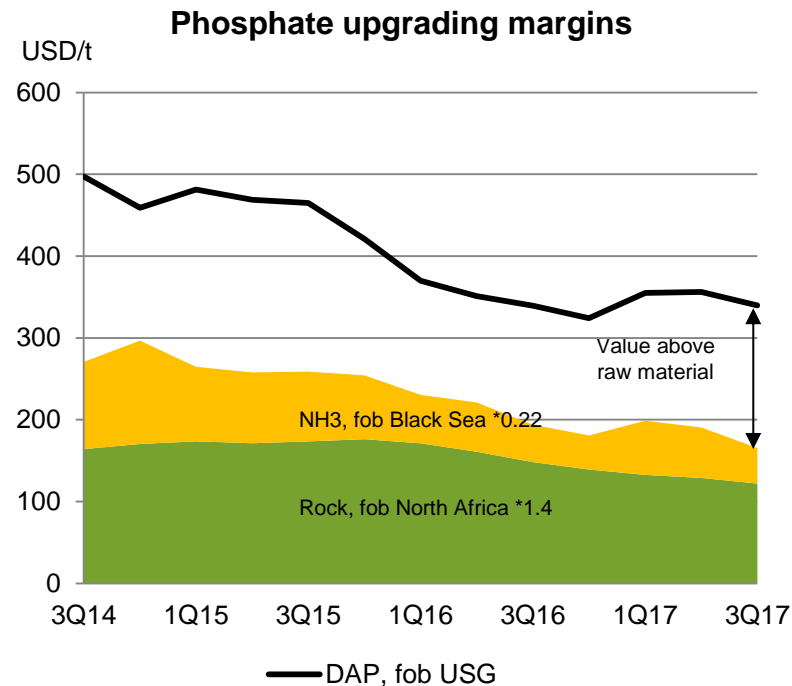
Source: Fertilizer Market Publications



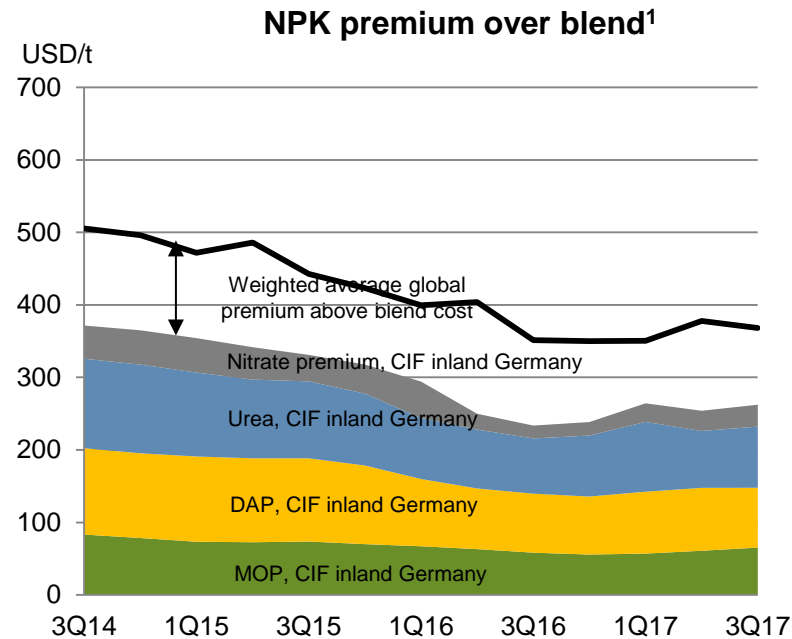
2) Yara European realized nitrate prices (excl. sulphur grades) compared with urea publication prices (Egypt CFR proxy) with 1 month time lag. All numbers in USD per tonne of CAN equivalents.



# Solid commodity phosphate margins and compound NPK premiums



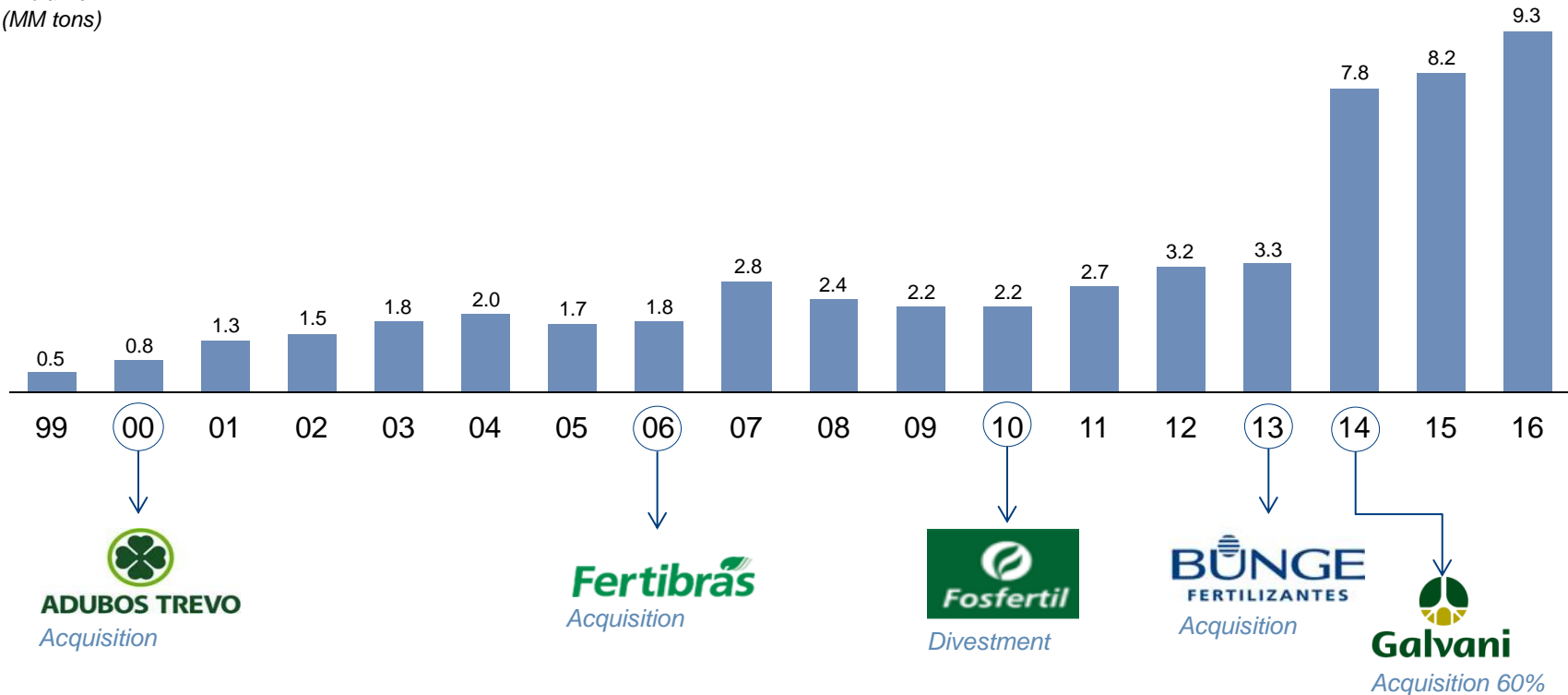
Source: Fertilizer Market Publications



1) Export NPK plants, average grade 19-10-13, net of transport and handling cost.

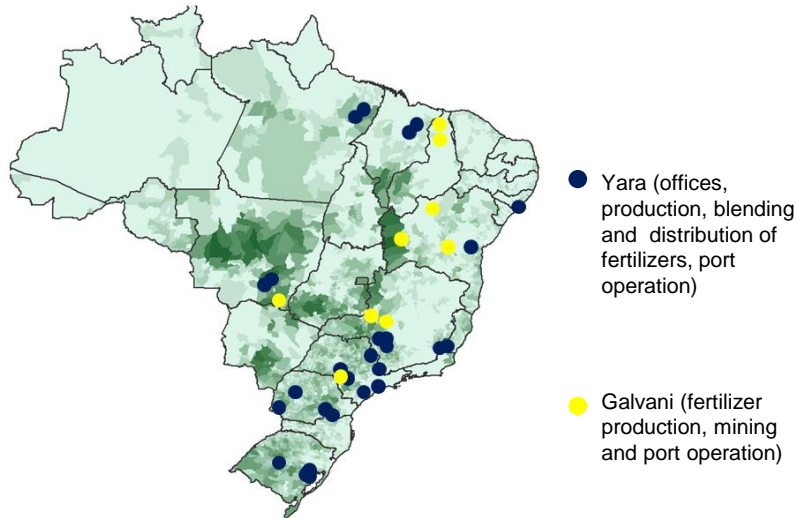
# Yara has invested for the long term in Brazil; Bunge acquisition brought critical mass in distribution

Volume  
(MM tons)



# Yara Brazil today: unrivalled market presence and farmer-centric strategy

## Unrivalled presence: 28 sites in 11 states



## Farmer-centric strategy drives growth

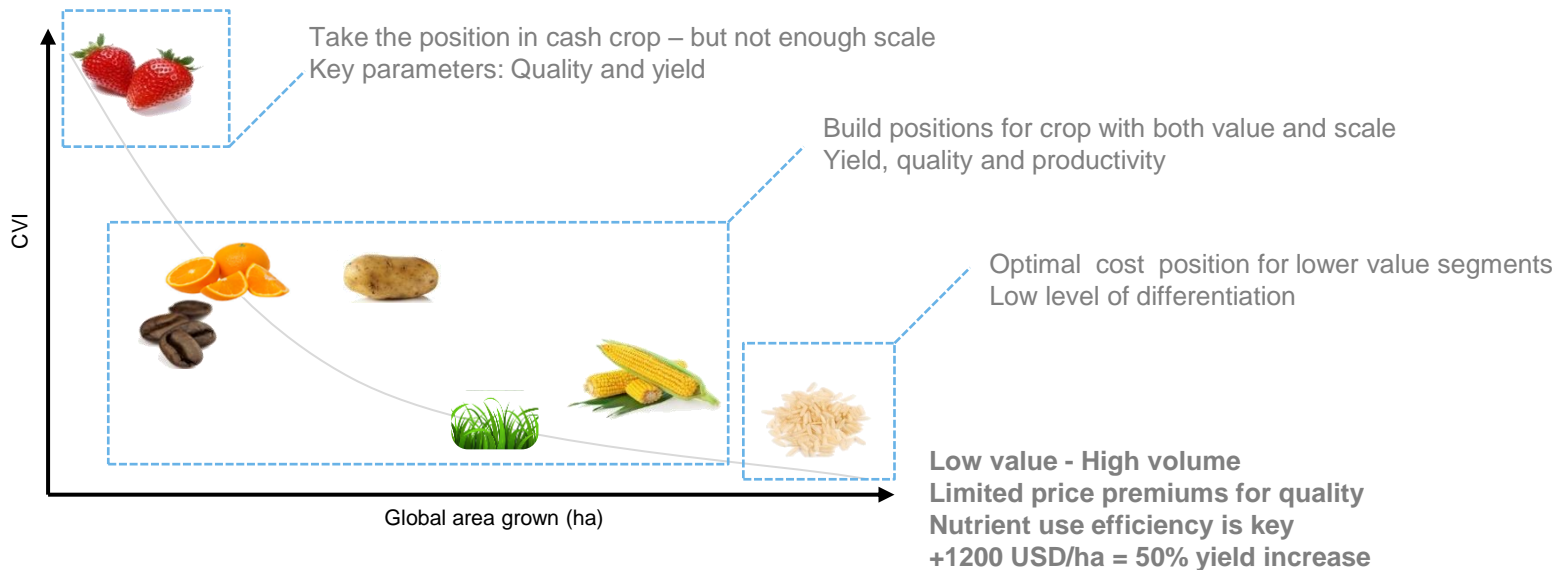
- > 20,000 growers using Yara solutions
- > 200 Yara agronomists and 600 sales representatives
- > 55% of Yara deliveries are direct to farmer
- > 55,000 interactions with growers p.a.

# Crop Value Index – a key guide to our approach

What is CVI:

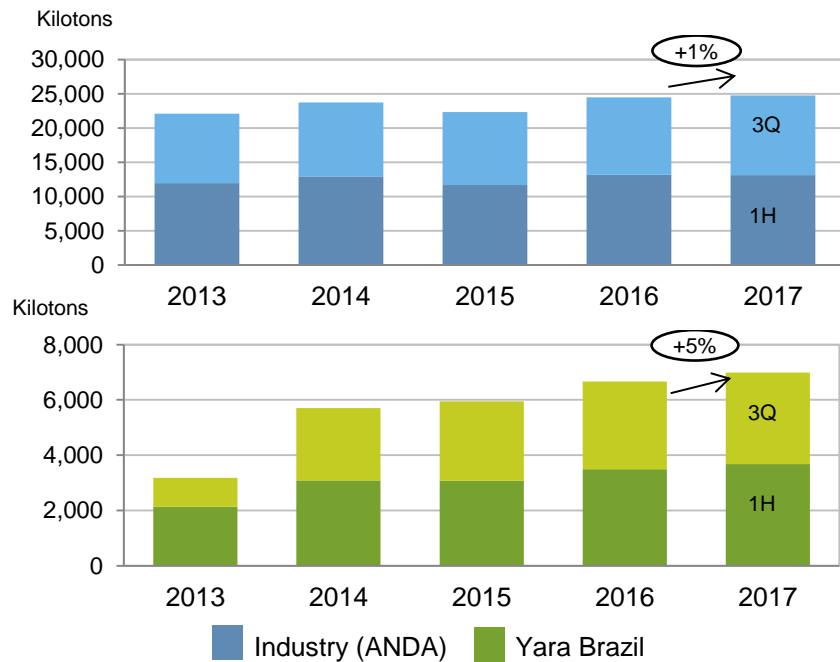
$\frac{\text{Crop revenue}}{\text{Fertilizer costs}}$

High value, Low volume  
Double price premium for high quality  
2% yield increase = +1200 USD/ha

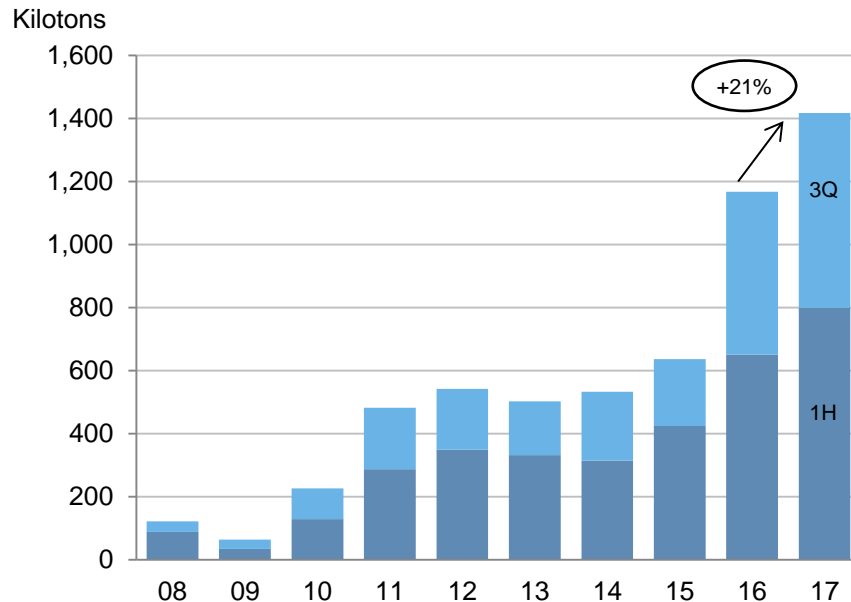


# Brazil: focus on premium products and solutions drives growth

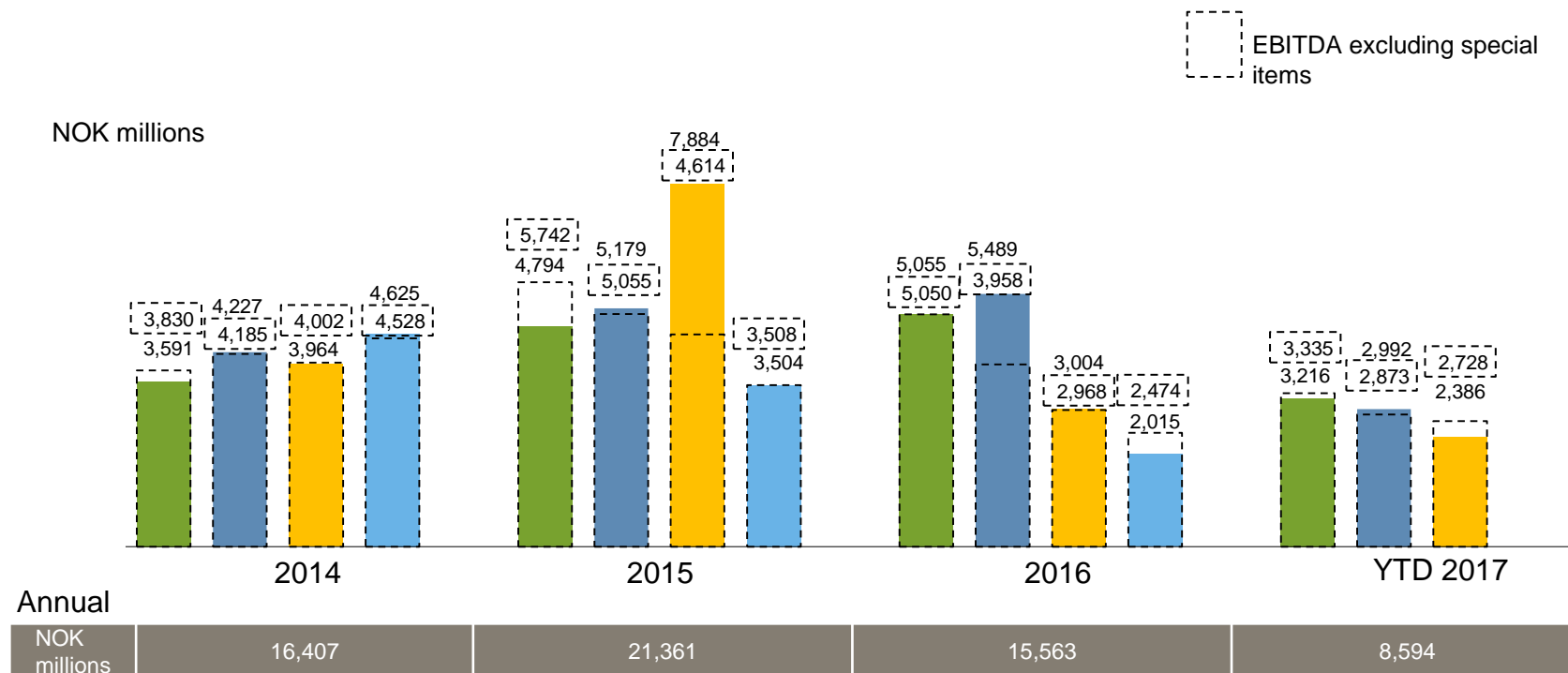
## Brazil season-to-date fertilizer deliveries



## Brazil season-to-date premium product deliveries

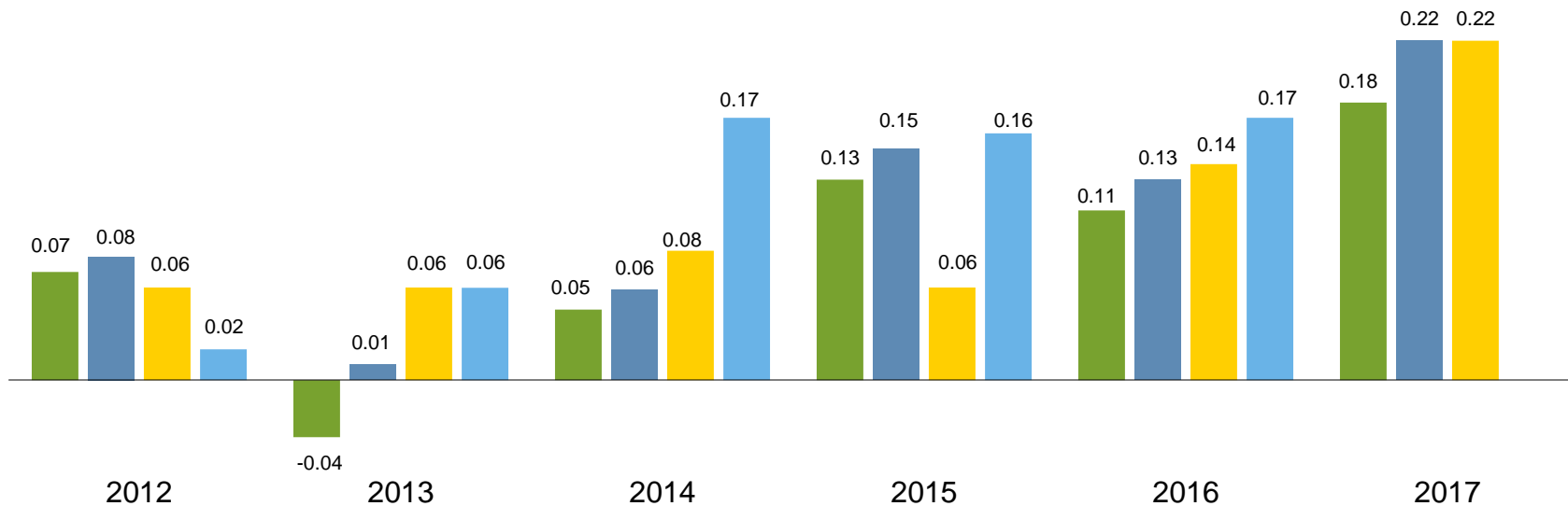


# Earnings before interest, tax, depreciation and amortization (EBITDA)



# Debt/equity ratio

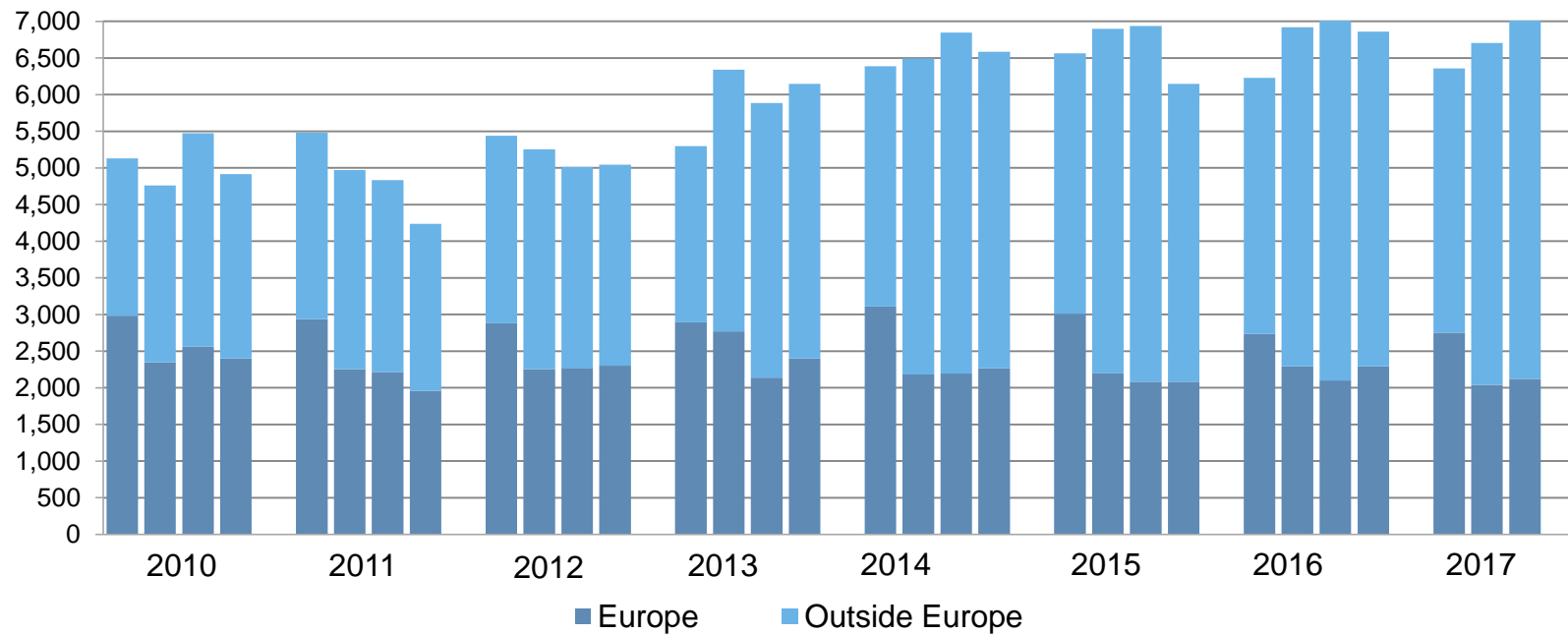
## *Net interest-bearing debt / equity ratio (end of period)*





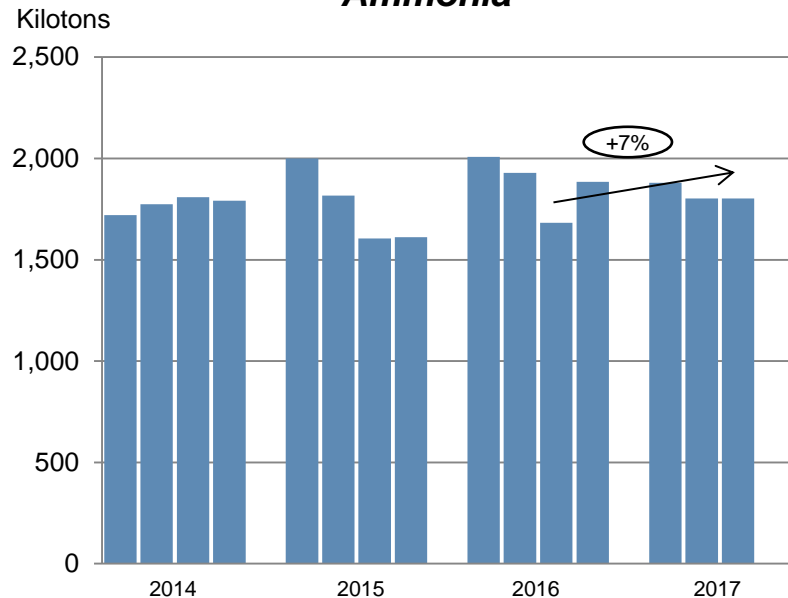
# Fertilizer deliveries

Kilotons

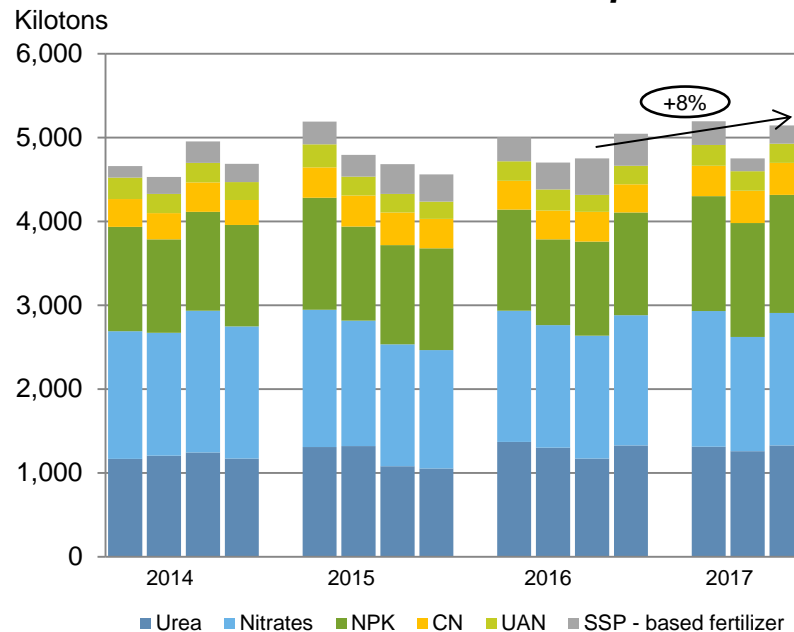


# Higher finished fertilizer and ammonia production

**Ammonia<sup>1</sup>**



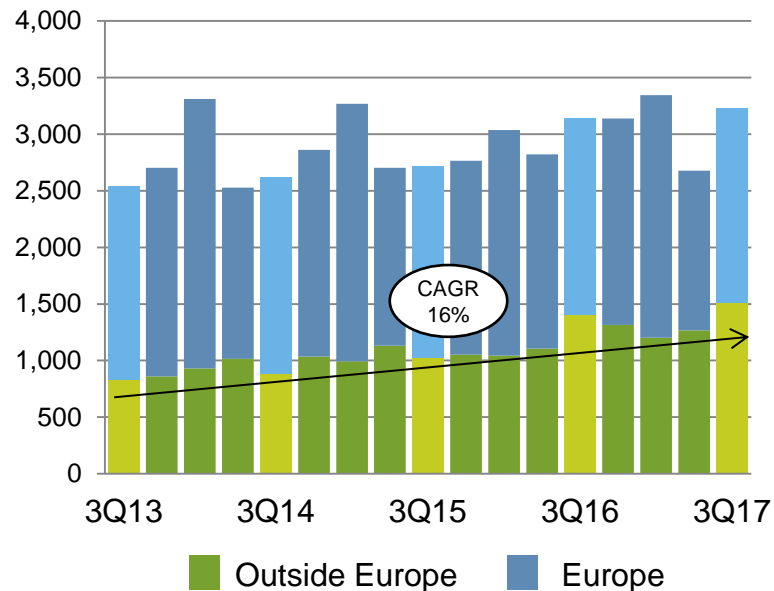
**Finished fertilizer & industrial products<sup>1</sup>**



1) Including share of equity-accounted investees

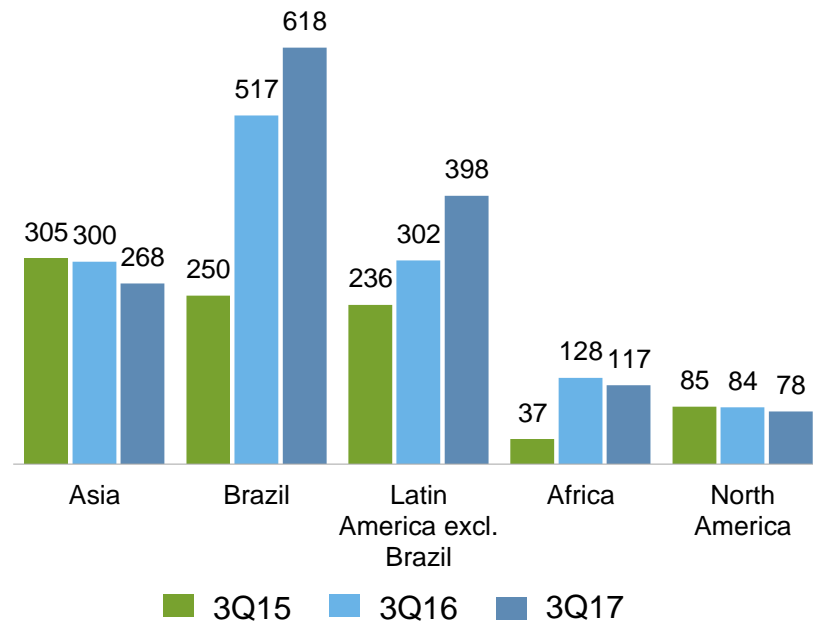
# Strong premium product deliveries

*Value-added fertilizer deliveries<sup>1</sup>*

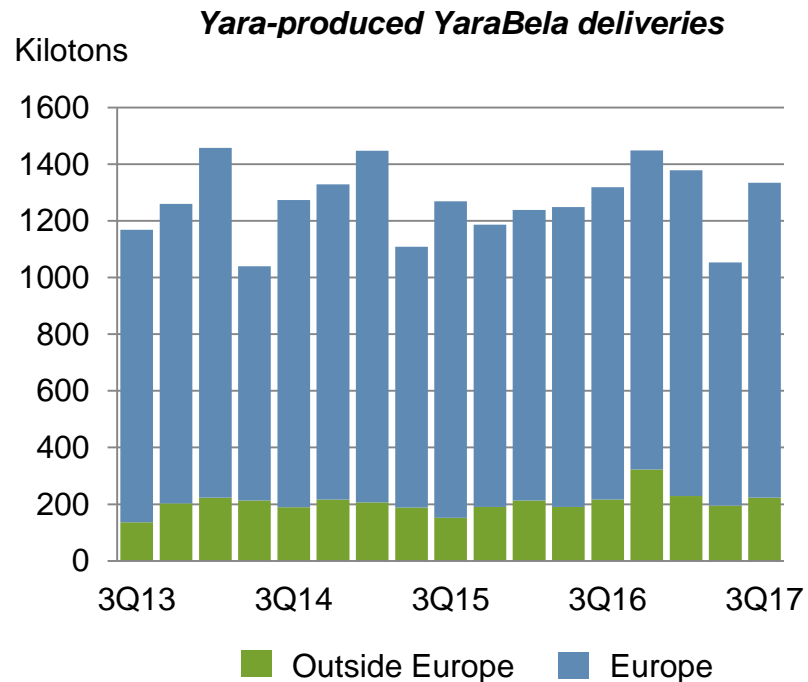
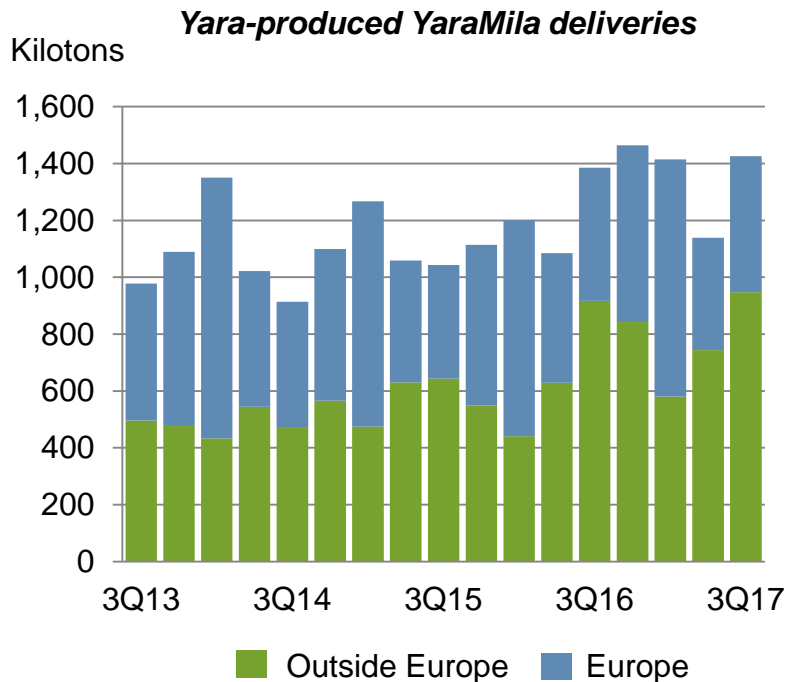


1) YaraBela, YaraMila and YaraLiva deliveries

*Value-added fertilizer deliveries<sup>1</sup>*

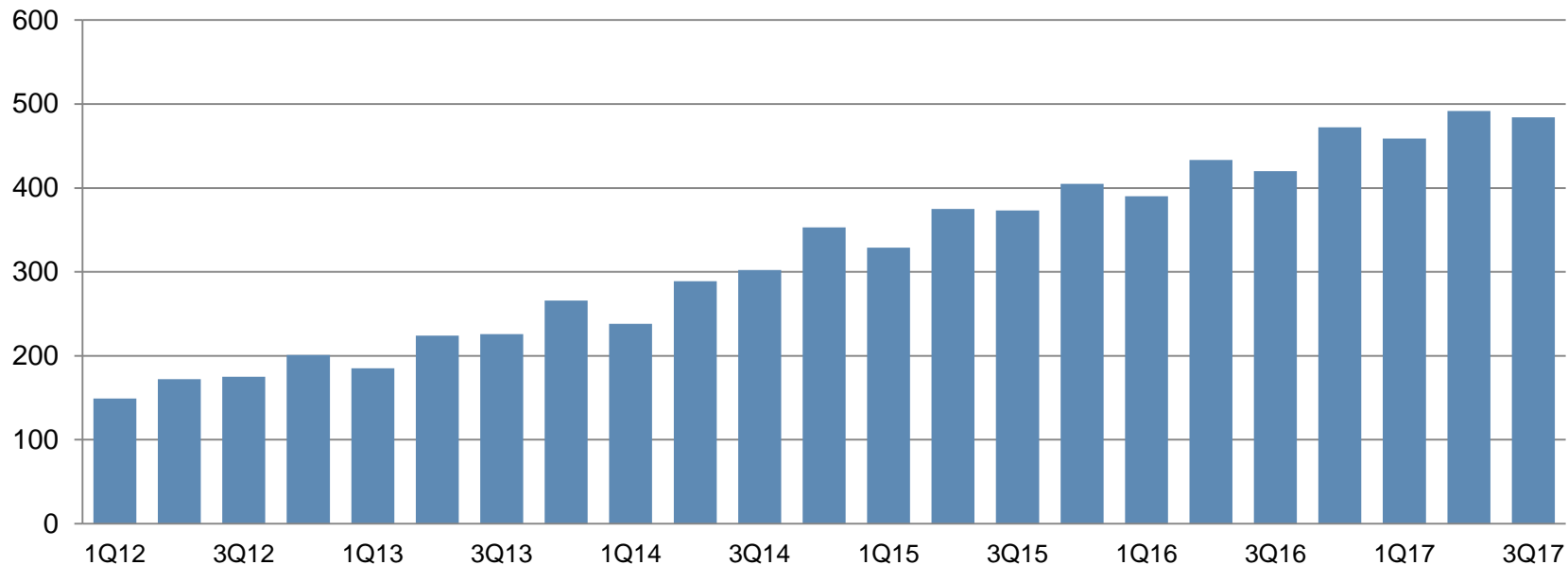


# YaraMila (compound NPK) and YaraBela (nitrate) deliveries

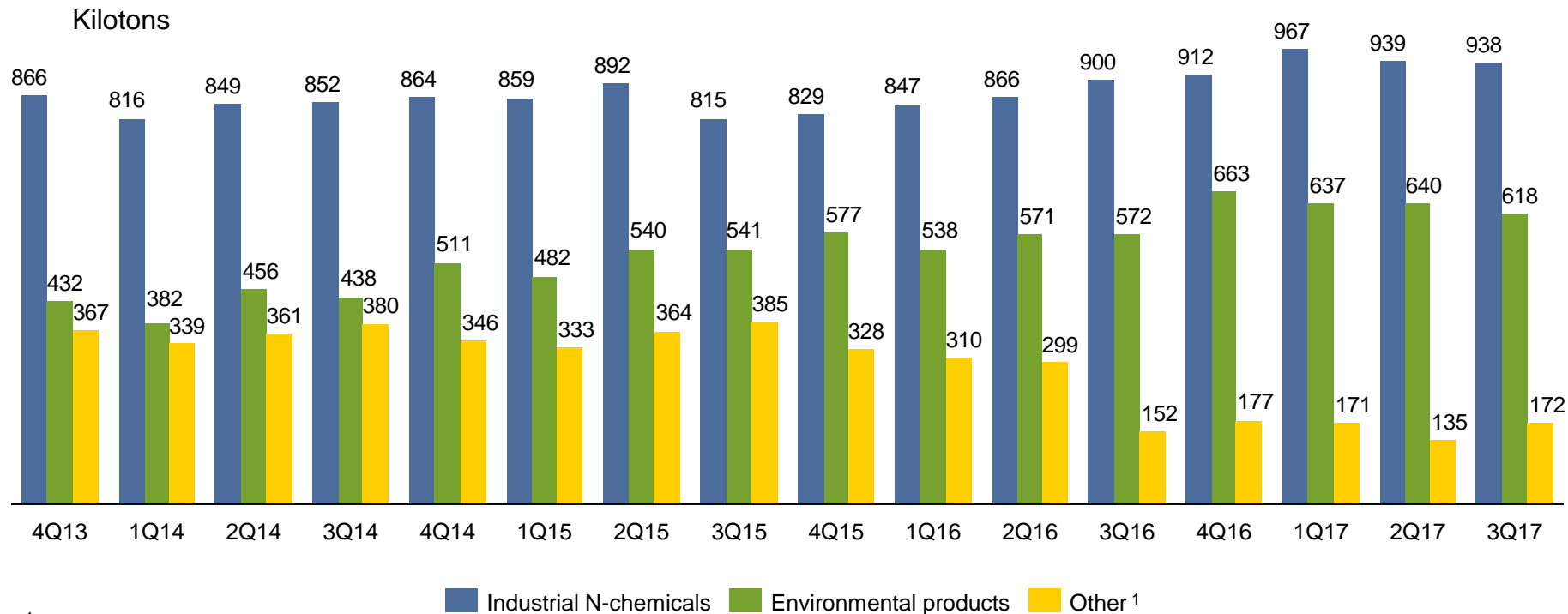


# AdBlue deliveries

Kilotons



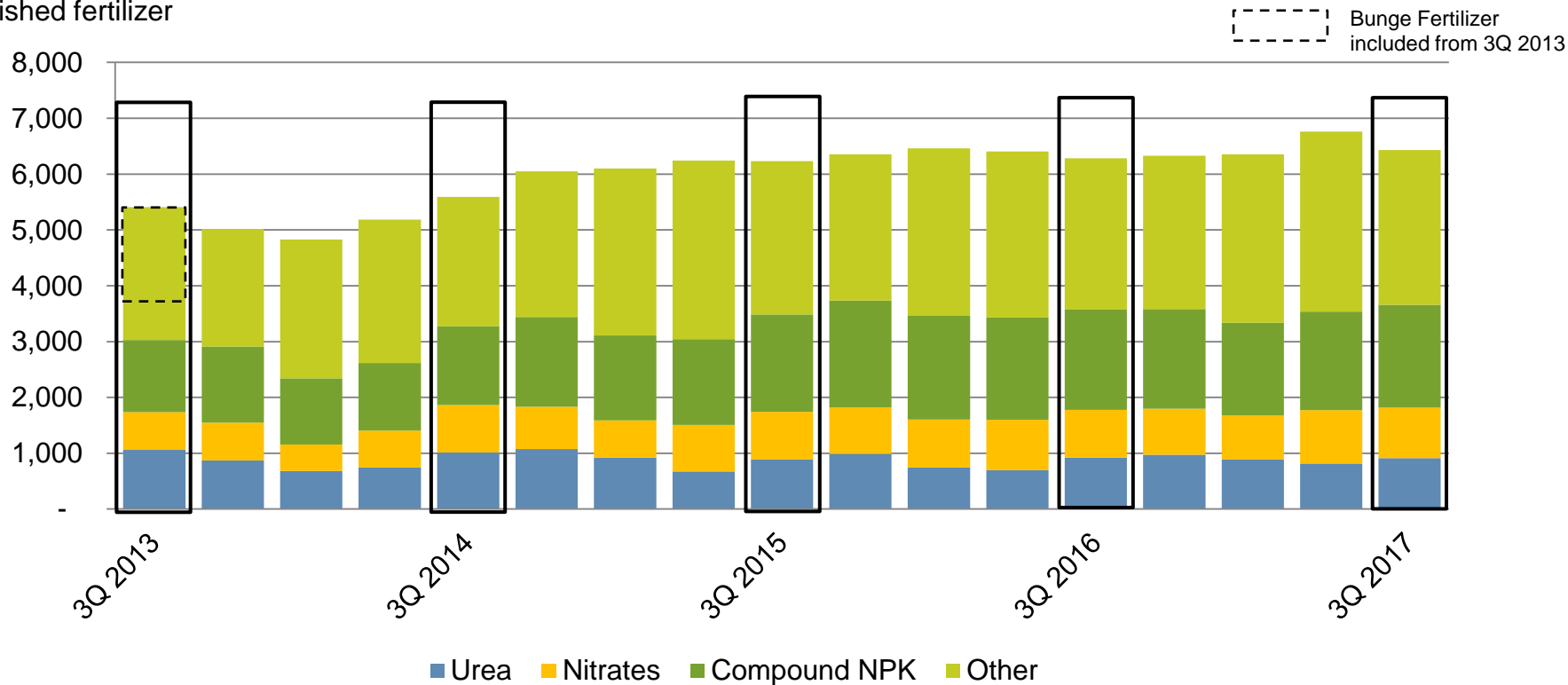
# Industrial volume development



<sup>1</sup> European CO2 business divested 1 June 2016

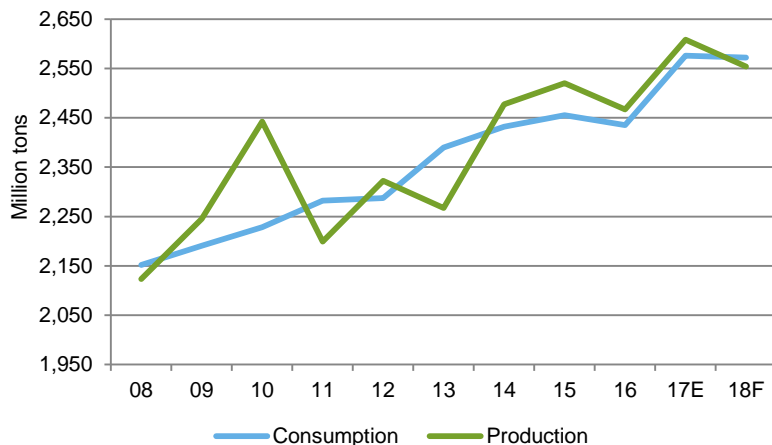
# Yara stocks

Kilotons  
Finished fertilizer

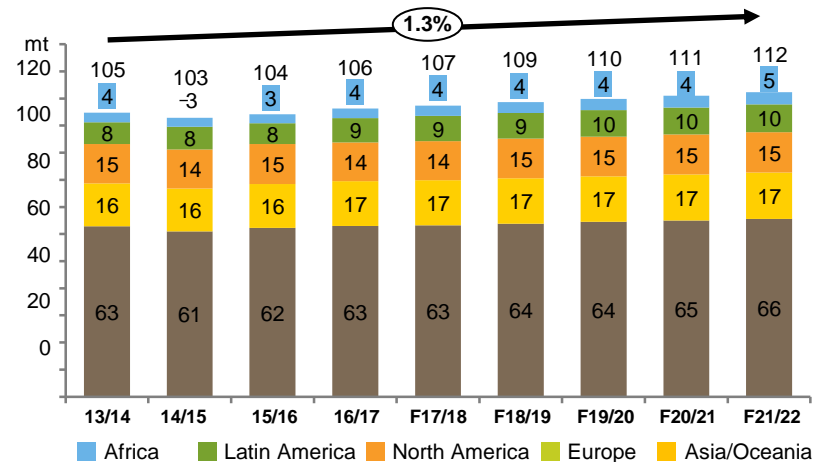


# Food demand drives fertilizer consumption – Grain is the key driver for nitrogen consumption growth

Grain consumption and production<sup>1</sup>



Global nitrogen consumption growth<sup>2</sup>

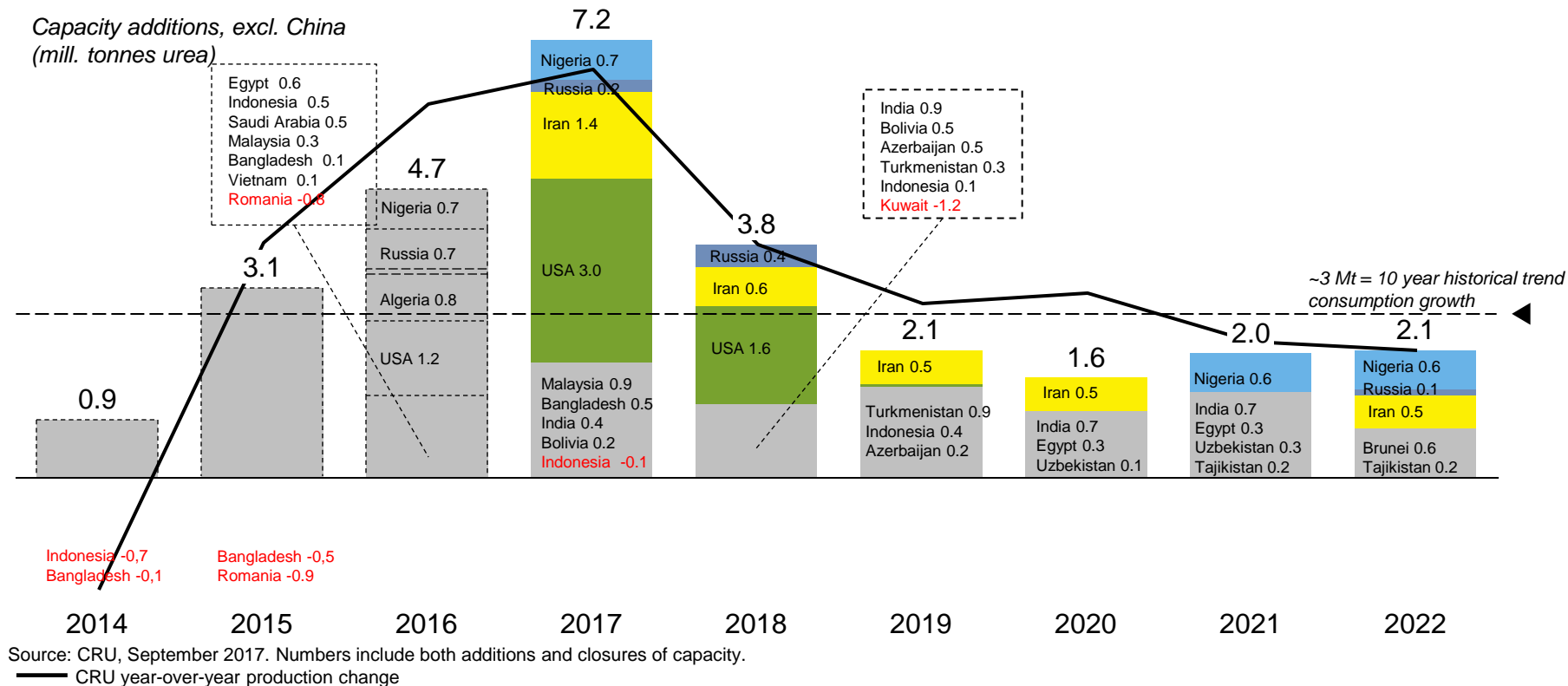


## Food demand drives fertilizer consumption

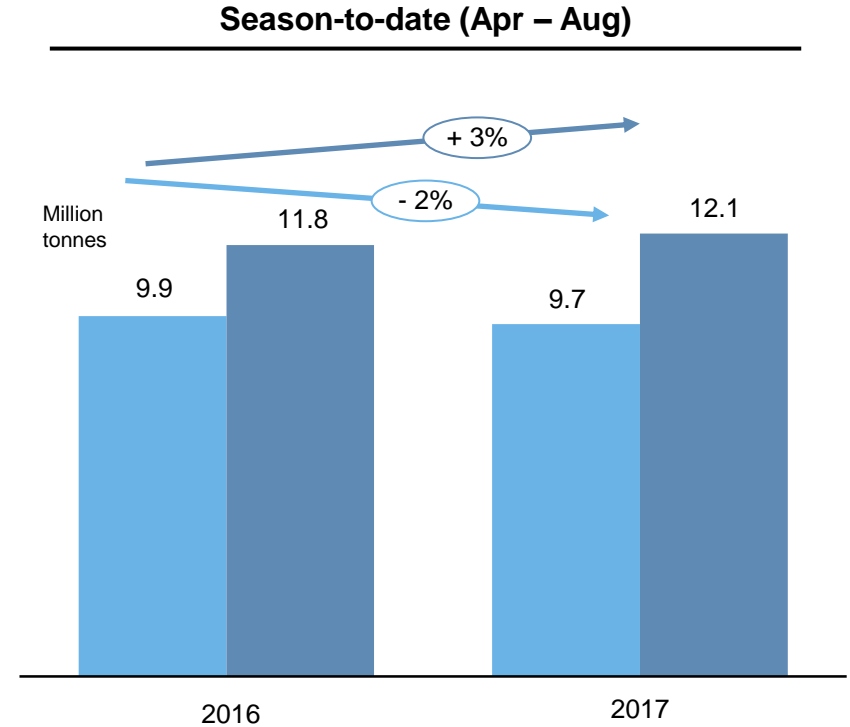
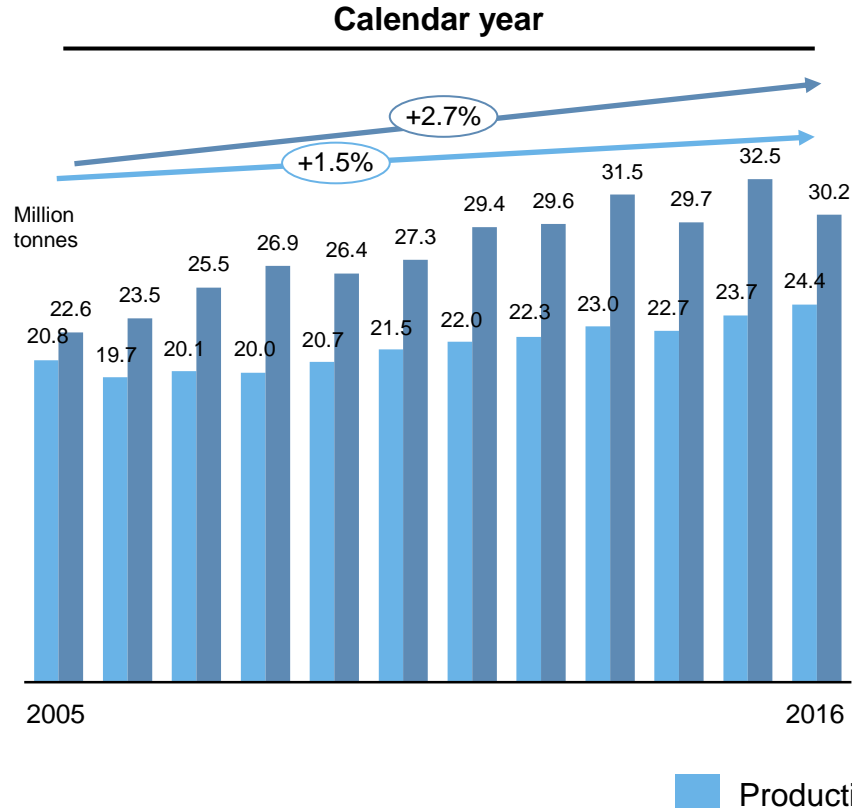
- Population growth of about 80 million each year
- Economic growth also changes diets



# Strong urea oversupply outside China



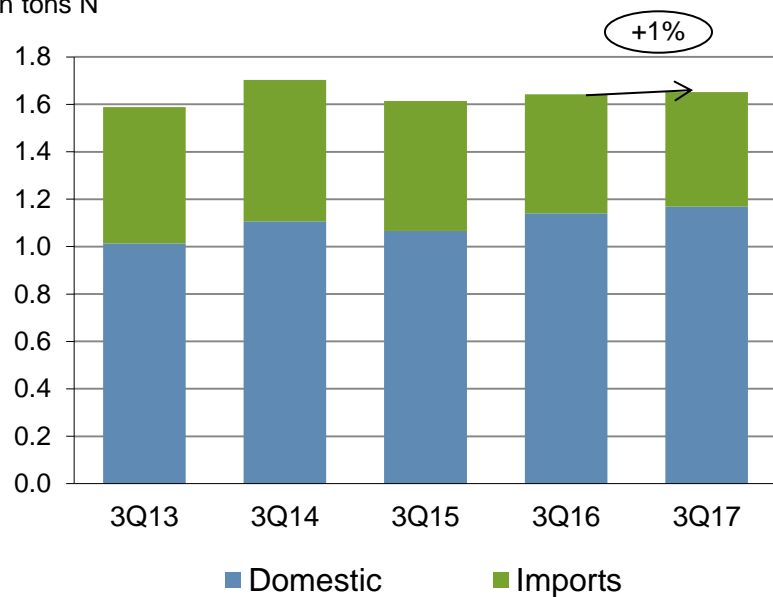
# Import catch-up need in India



# Normal start to the European fertilizer season, slow in USA like last season

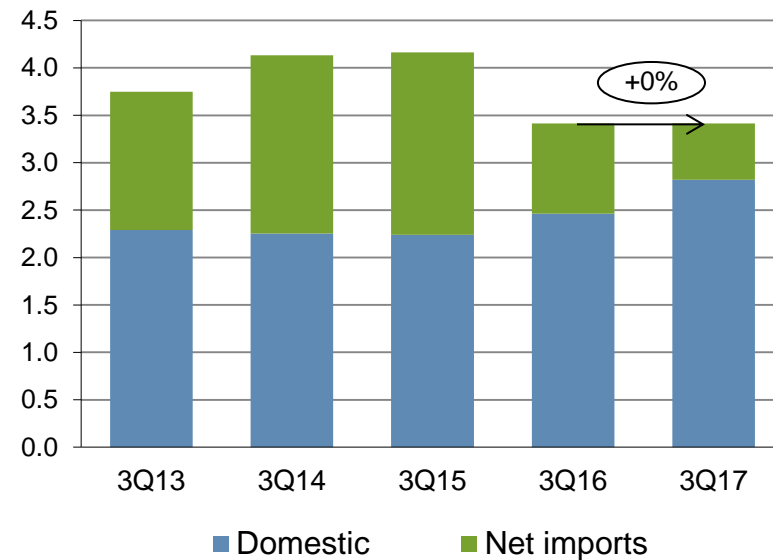
## West Europe

Million tons N



## USA

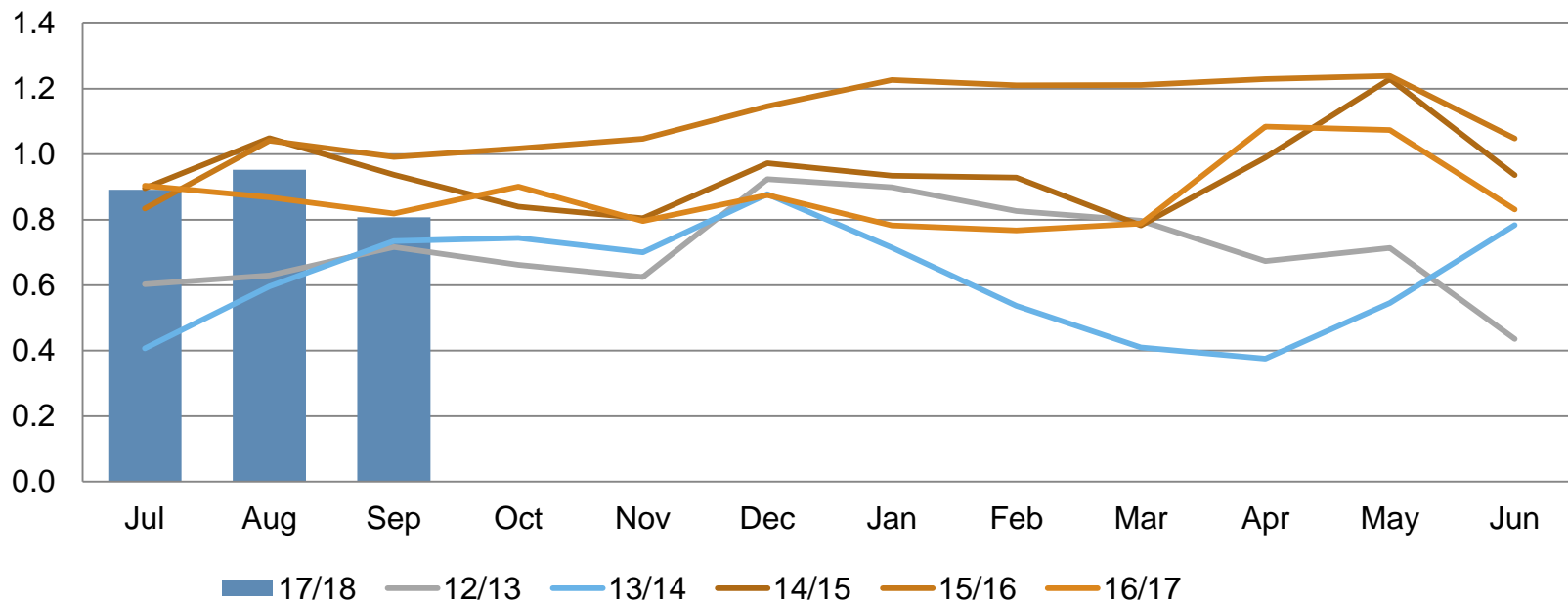
Million tons N



Source: Yara estimate, TFI, US Customs.

# European producers' nitrate stocks

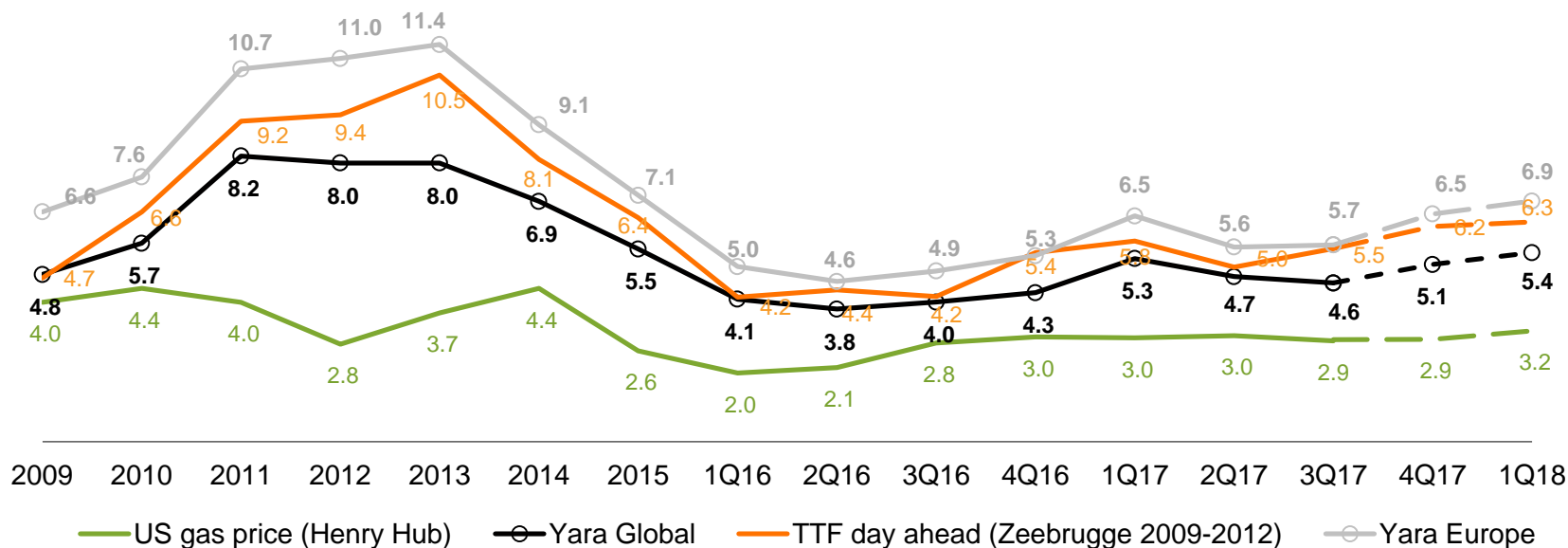
Index  
June 2007 = 1



Source: Fertilizers Europe, Yara estimate for September

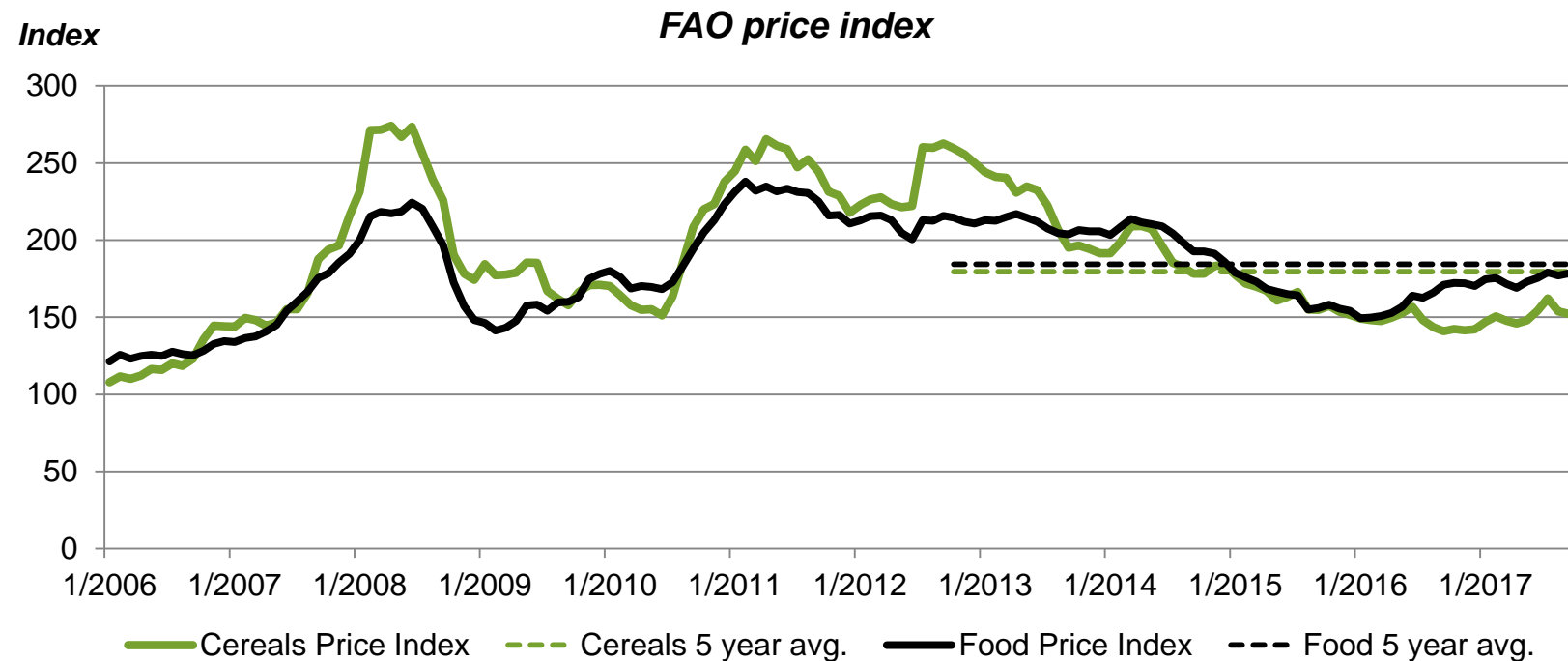
# Energy cost

Yearly averages 2009 – 2015, quarterly averages for 2016-18 with forward prices\* for 4Q17 and 1Q18.



\*Dotted lines denote forward prices as of 10 October 2017  
Source: Yara, World Bank, Argus/ICIS Heren

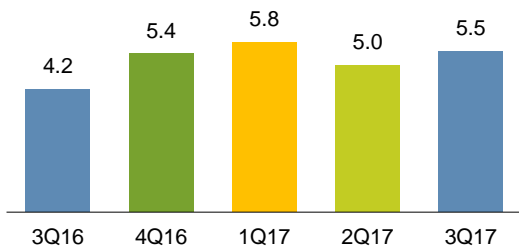
## Relatively weak grain economics



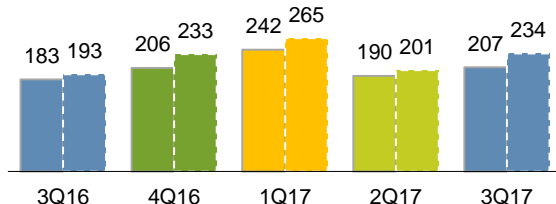
Source: FAO

# Key value drivers – quarterly averages

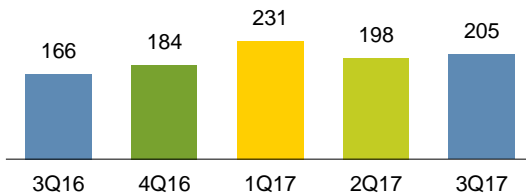
TTF day ahead (USD/MMBtu)



Urea prilled fob Black Sea (USD/t)/Urea granular fob Egypt (dotted line, USD/t)



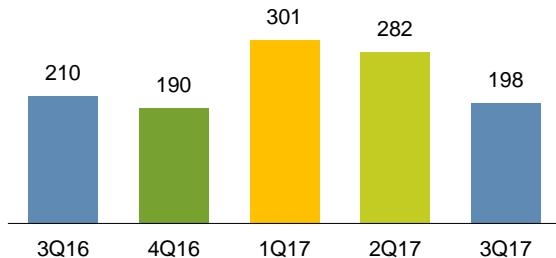
CAN cif Germany (USD/t)



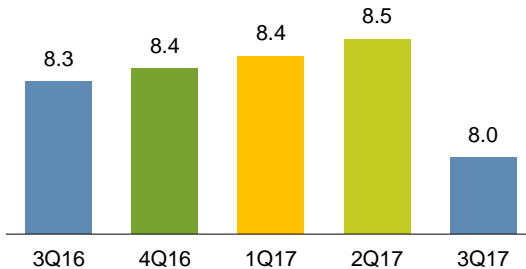
US gas price Henry Hub (USD/MMBtu)



Ammonia fob Black Sea (USD/t)



NOK/USD exchange rate



Source: Fertilizer Market Publications, CERA, World Bank, Norges Bank