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Argus Water-Soluble Fertilizer Strategy Report 2022

Sample slides



Fertilizers

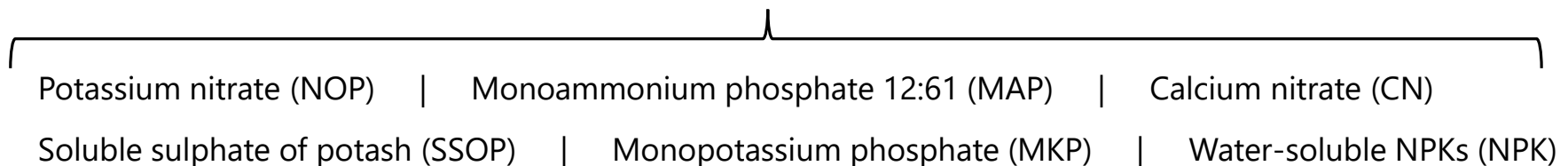
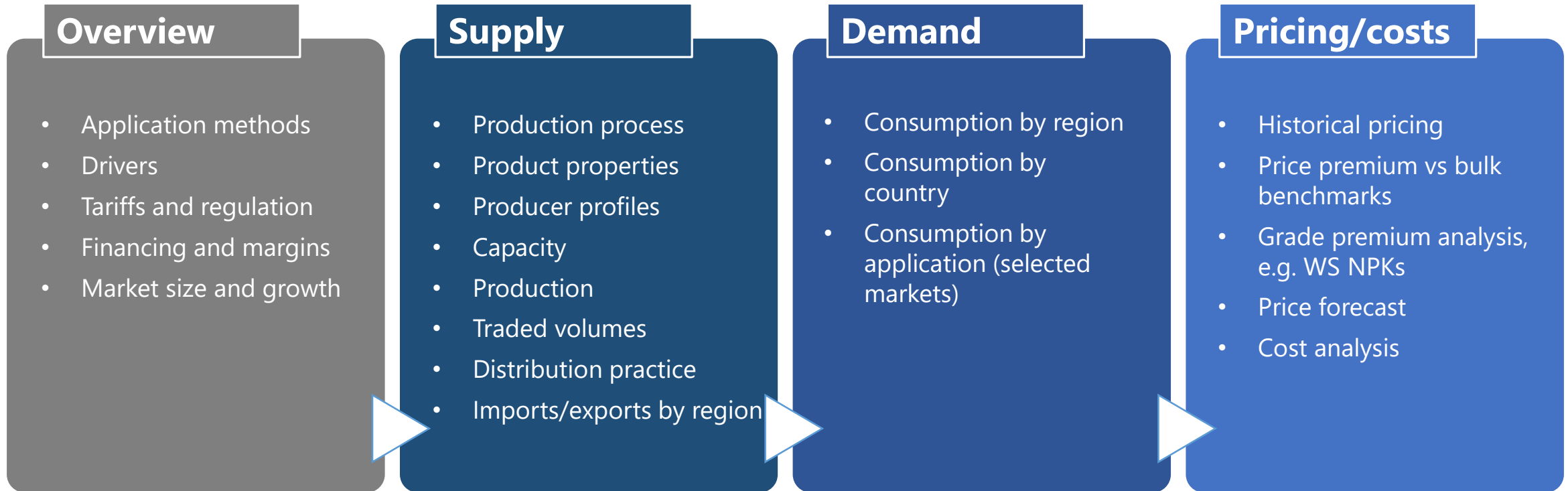
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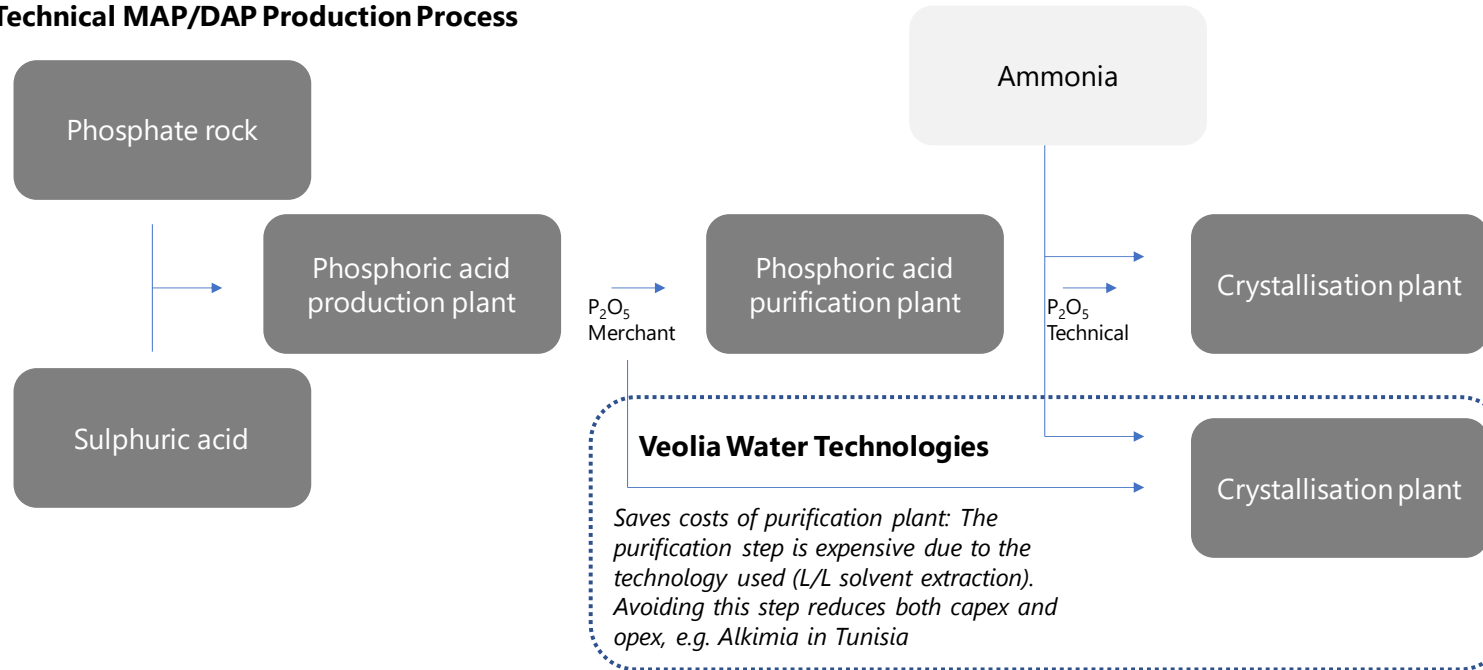


Production process

The standard “wet” production process requires purification via solvent extraction and crystallization but cheaper options exist

80

Technical MAP/DAP Production Process



Source: company literature, Argus interviews and analysis

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What you receive:

- Production process described for all products
- Raw materials and production process comparison between different producers
- Commentary on novel production processes (often using cheaper raw materials) which reduce costs of production, e.g. NOP, MAP, SOP, MKP, NPK
- Analysis of water-soluble NPK raw materials and value chain

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Product description

Yara's fertigation CN has similar nutrient content to field grade but is sold in crystalline form with slightly higher solubility 107

Calcium Nitrate Range – Yara and Uralchem

Criteria	Yara				Uralchem Tech-grade Anhydrous	Commentary
	Water Soluble (Fertigation) Range		Field Grade			
	Calcinit®	Calcibor®	Tropicote®	Nitrabor®		
Avg. N	15.5%	15.4%	15.5%	14-15%	17%	Main Nutrients: Similar across product ranges
Avg. Ca	19%	18.3%	18.8%	17-18%	24%	
Avg. B	-	0.2%	-	0.25-0.3%	-	Boron: added as differentiator for CN+B products
Shape	Crystalline Granules		2-4mm Granules		1-4mm granules	Shape: Crystalline granules guaranteed zero residual dissolving
pH	6.0	6.3	6.0	6.3	5.8	Neutral pH: Similar across product range
Solubility @ 20°C (g/l)	1,200		1,100		N/A	Only slight increase in solubility from dry applied to water soluble

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Source: company literature, Argus analysis

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What you receive:

- Application trends
 - Crop drivers
 - Customer segment, e.g. fertigation, foliar
 - Application rate
- Physical properties
 - Nutrient content
 - Insoluble content
 - pH
 - Salt index
 - Solubility
- Commentary on link between product properties and price premium
- Water-soluble NPK grade analysis

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Capacity by region and plant

Tessenderlo accounts for the majority of global soluble SOP capacity from its plant in Belgium

127

Water-soluble SOP Production Capacity (Excluding China), 2020

Region	Location	Company	Source	Capacity (kt/y)
Europe	Belgium	Tessenderlo	<p>REDACTED</p> <p><i>Speak to us to learn more about these figures</i></p>	
Europe	Austria	Salinen		
Europe	Sweden	Kemira		
Europe	Italy	Marchi		
North America	US	Compass Minerals		
Latin America	Chile	SQM		
East Asia	Taiwan	Sesoda		
SE Asia	Indonesia	K+S		
South Asia	India	Blue Deebaj		
North Africa	Egypt	Evergrow		
North Africa	Egypt	Egypt army		
North Africa	Egypt	Other		
Middle East	Jordan	N/A		
Middle East	Saudi Arabia	N/A		
Russia	Achinsk	Rusal		

SOP Exceptionalism
 Few of the large SOP producers participate in the other large water-soluble categories. This presents a challenge as many growers wish to buy the entire product range from their suppliers, a service offered by integrated (SQM, Yara, Haifa, ICL) and unintegrated (Compo, Van Iperen) companies. Consequently, these "SOP Exceptionalists" must sometimes sell private label under the brands of competitors

This may also thwart attempts to diversify into agronomic advisory services

Evergrow estimated SOP capacity is 250kt/y but this includes standard, granular and soluble grades (see Evergrow profile for more details)

Russian SOP is a by-product of the aluminium industry. The product is used in some greenhouses in Russia but the quality is not high enough for exports. Isolated in Siberia, Rusal product is mostly sold in China

Note: * see SQM profile

Source: company literature, newspaper articles, Argus interviews and analysis

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What you receive:

- Comprehensive capacity list: all producers of all straight products: Over 60 plants included in the database
- Forecast capacity additions and impact on S/D balance
- Producer profiles for all key players, including SQM, Compo, Evergrow, Prayon, OCP and Eurochem
- Commentary on distribution practice and commercial agreements

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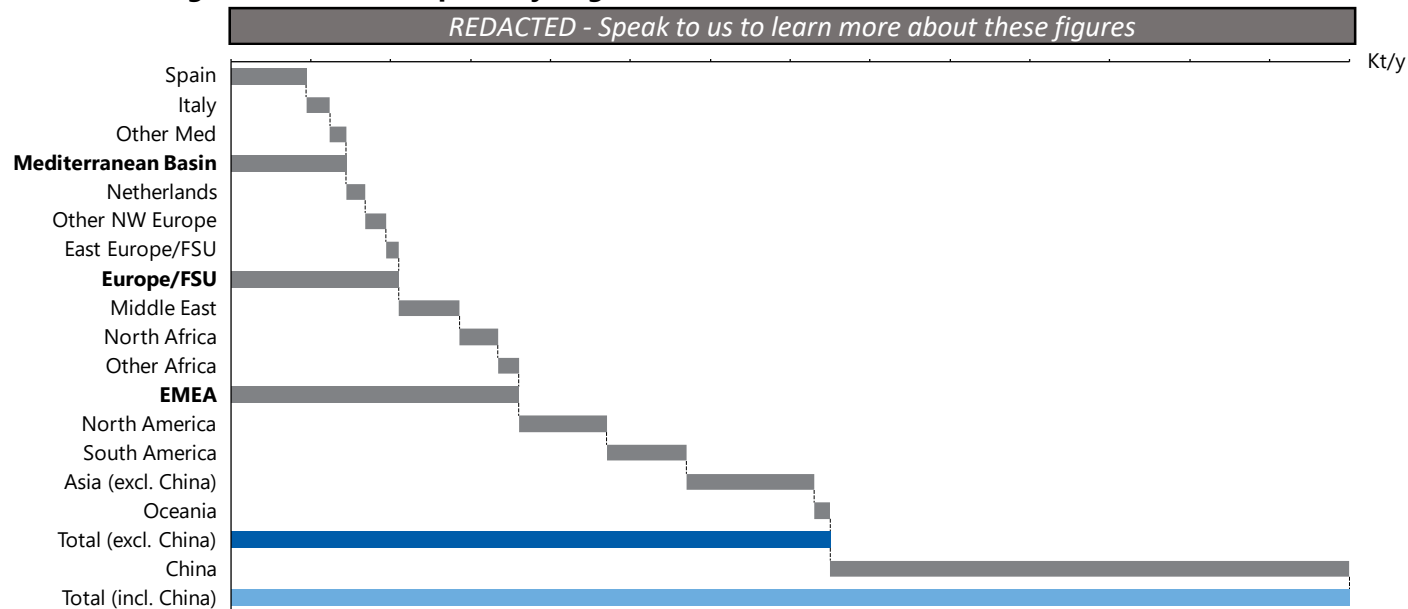


Consumption: volume by region, country and application

MAP 12-61 consumption

90

MAP 12-61 Agricultural Consumption By Region, 2021



Source: IFA, company literature, newspaper articles, Argus interviews and analysis

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What you receive:

- Consumption by region and major country
- Consumption by application in selected countries, e.g.
 - Fertigation vs foliar
 - Greenhouse vs open-field
 - Direct application vs NPK production

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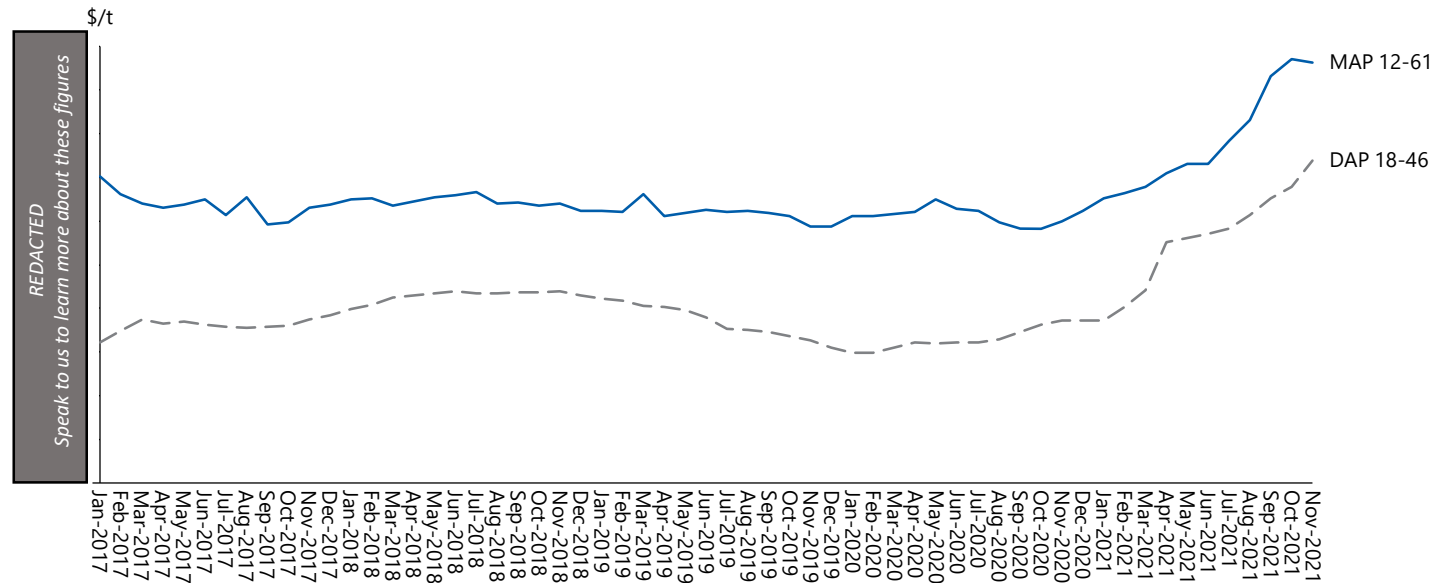


Historical price and premium analysis

MAP 12-61 price premium

94

MAP 12-61 Vs DAP 18-46, India Imports, January 2017-November 2021



Source: Tradesparq, Argus analysis

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What you receive:

- Price series
 - NOP India, Mexico import
 - MAP 12:61 fob China, India import
 - CN India import
 - MKP Mexico, India import
 - NPK (various) Mexico, India import
- Premium analysis
 - Soluble premium vs bulk benchmarks
 - Producer/country of origin premium, e.g. NOP, MAP, NPK
 - Form/grade premium, e.g. CN
 - Application premium, e.g. foliar
 - NPK upgrading analysis vs raw materials (NOP, MAP + bulk nitrogen)

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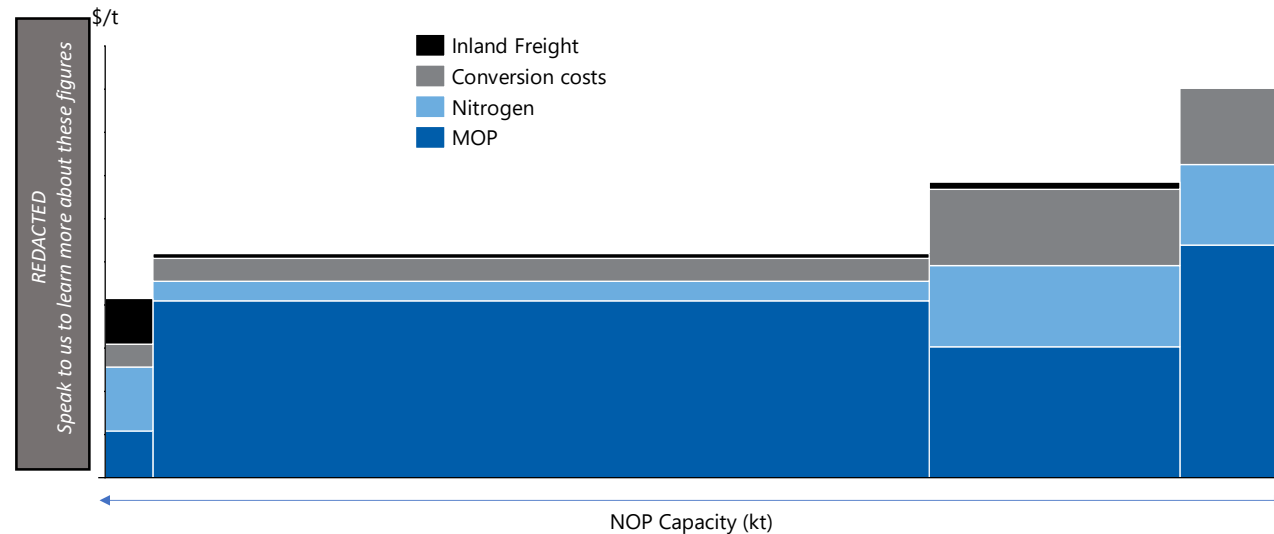


Cost analysis

NOP FOB Cost Curve

75

NOP Fob Cost Curve, Selected Producers, 2025



Source: Argus Consulting

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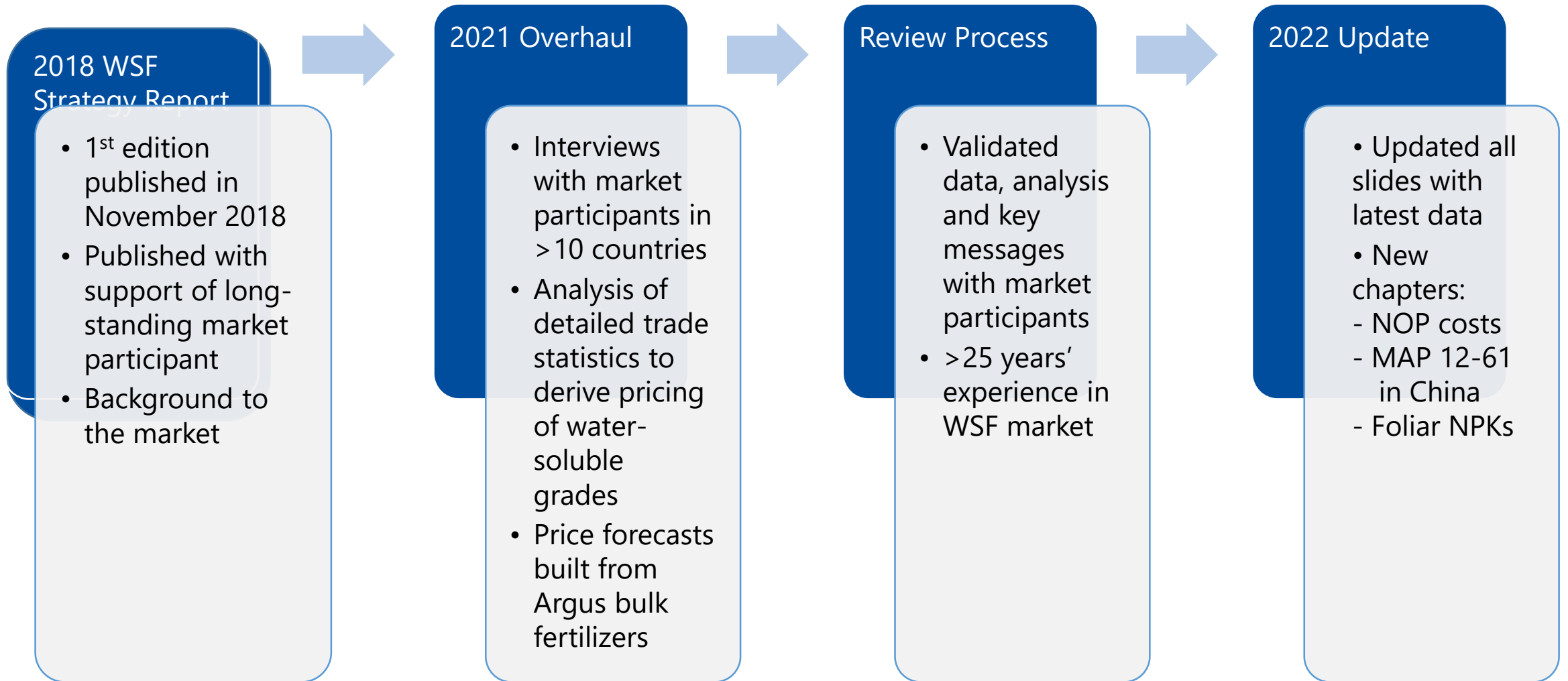
- Historical raw material cost analysis
 - MAP: phosphoric acid, ammonia
 - MKP: phosphoric acid, MOP
 - MKP: phosphoric acid, KOH
 - NPK margin analysis
- Cash cost curve for NOP

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2022 WSF Strategy Report - Methodology





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Argus WSF Strategy Report – more information/demo

Request more information – or get a personal demonstration of the report. Simply contact us:

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