



argusmedia.com

Argus Water-Soluble Fertilizer Strategy Report

Sample slides



Fertilizers

illuminating the markets

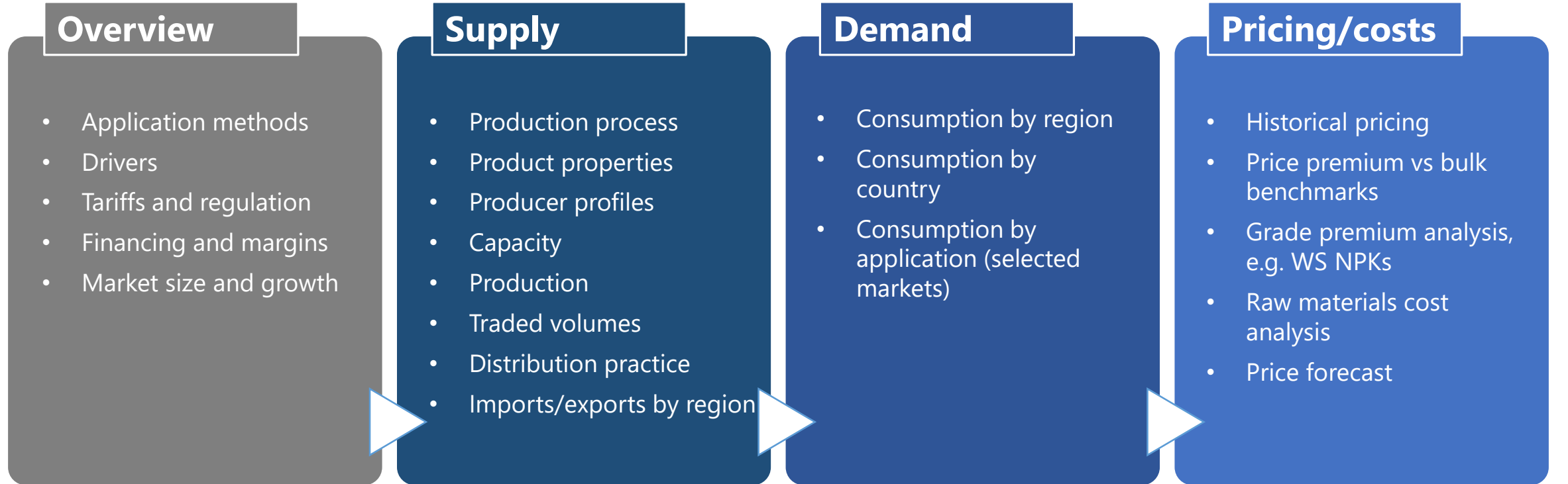
Market Reporting

Consulting

Events

Argus Water Soluble Fertilizer Strategy Report

What do subscribers receive?



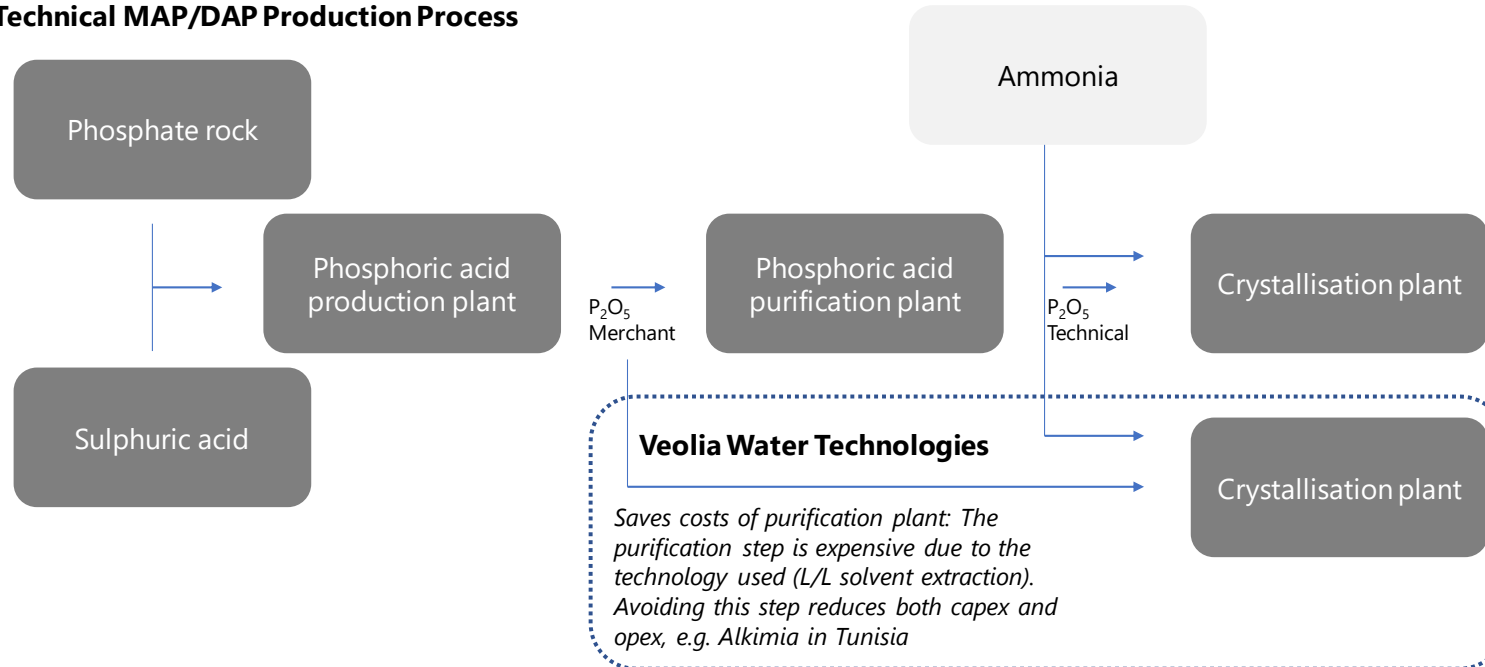
Potassium nitrate (NOP) | Monoammonium phosphate 12:61 (MAP) | Calcium nitrate (CN)
Soluble sulphate of potash (SSOP) | Monopotassium phosphate (MKP) | Water-soluble NPKs (NPK)

Production process

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

65

Technical MAP/DAP Production Process



Source: company literature, Argus interviews and analysis

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

— Fertilizers

Copyright © 2020 Argus Media group.
All rights reserved



— Fertilizers

Copyright © 2020 Argus Media group.
All rights reserved



Product description

SQM and Haifa produce SO_3 or P_2O_5 variants which are shipped under NPK HS code

41

NOP Product Range – Major Players

	SQM				Haifa			Kemapco
	Ultrasol K Plus®	Ultrasol NKS+®	Amilsol KP®	Qrop®	Multi-K Classic®	Multi-K GG®	Multi-NPK®	
N	13.7	12.0	13	12.0	13.0	13.5	13	13.7
P₂O₅	-	-	3	-	-	-	2/3	-
K₂O	46.3	46.0	44	46	46.0	46.2	43/44	46.2
SO₃		3		2				
pH	8-10	7	5.45	Prilled for field application	10	9	5-8	6-8
Insolubles (ppm)	50	50	N/A		350	350	250	100
Solubility @ 25°C (g/l)	316	315	340		315	315		313
HS code	NOP	NPK	NPK	NPK	NOP	NOP	NPK	NOP

Key	 NOP variant for fertigation	 Prilled product for field application
------------	---------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------

® Ultrasol, Amilsol and Qrop are registered trademarks of SQM S.A.; Multi-K is a registered trademark of Haifa Group
Source: Tradesparq, company literature, Argus analysis

— Fertilizers

Copyright © 2020 Argus Media group.
All rights reserved



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

— Fertilizers

Copyright © 2020 Argus Media group.
All rights reserved



Capacity by region and plant

Tessenderlo accounts for the majority of global soluble SOP capacity from its two plants in Belgium and France

101

Water-soluble SOP Production Capacity, 2020

Region	Location	Company	Source	Capacity (kt/y)
Europe	Belgium	Tessenderlo	<p style="text-align: center;">REDACTED</p> <p style="text-align: center;"><i>Speak to us to learn more about these figures</i></p>	
Europe	France	Tessenderlo		
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 also thwarts attempts to diversify into agronomic advisory services

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

What you receive:

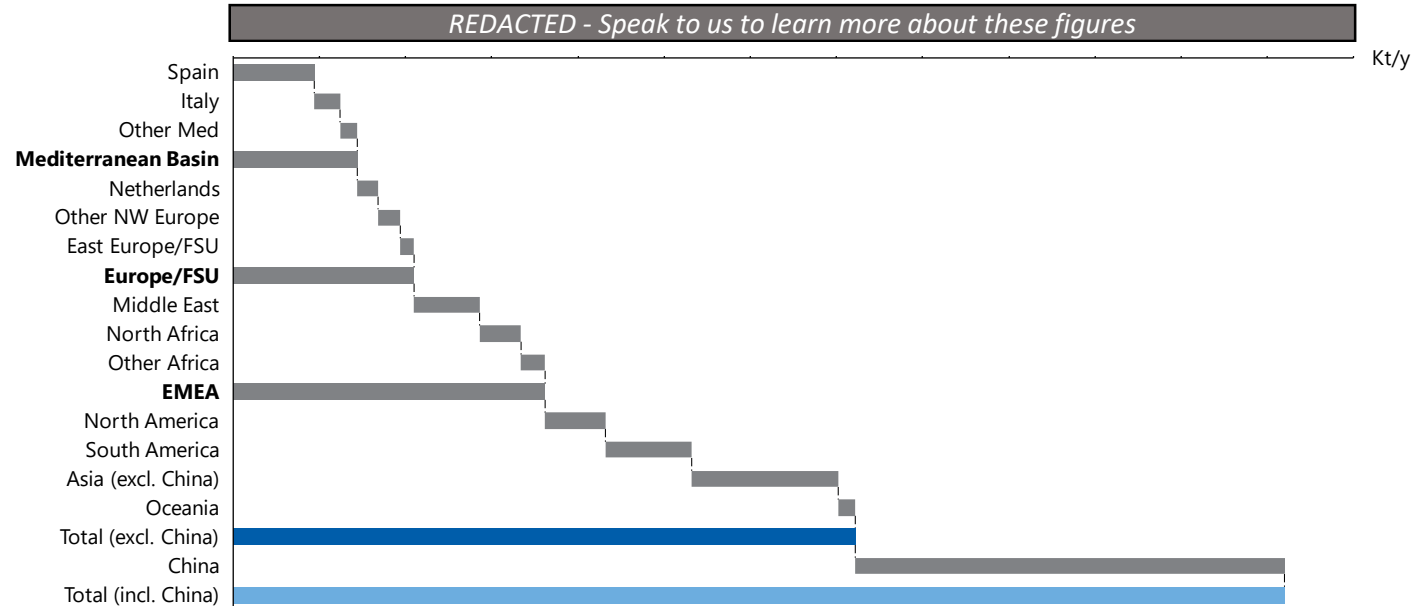
- Comprehensive capacity list: all producers of all straight products: Over 60 plants included in the database
- Forecast capacity additions and impact on S/D balance
- Producer profiles for all key players, including SQM, Compo, Evergrow, Prayon, OCP and Eurochem
- Commentary on distribution practice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

Consumption: volume by region, country and application

MAP 12-61 consumption

73

MAP 12-61 Consumption By Region, 2020



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

— Fertilizers

Copyright © 2020 Argus Media group.
All rights reserved



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

— Fertilizers

Copyright © 2020 Argus Media group.
All rights reserved

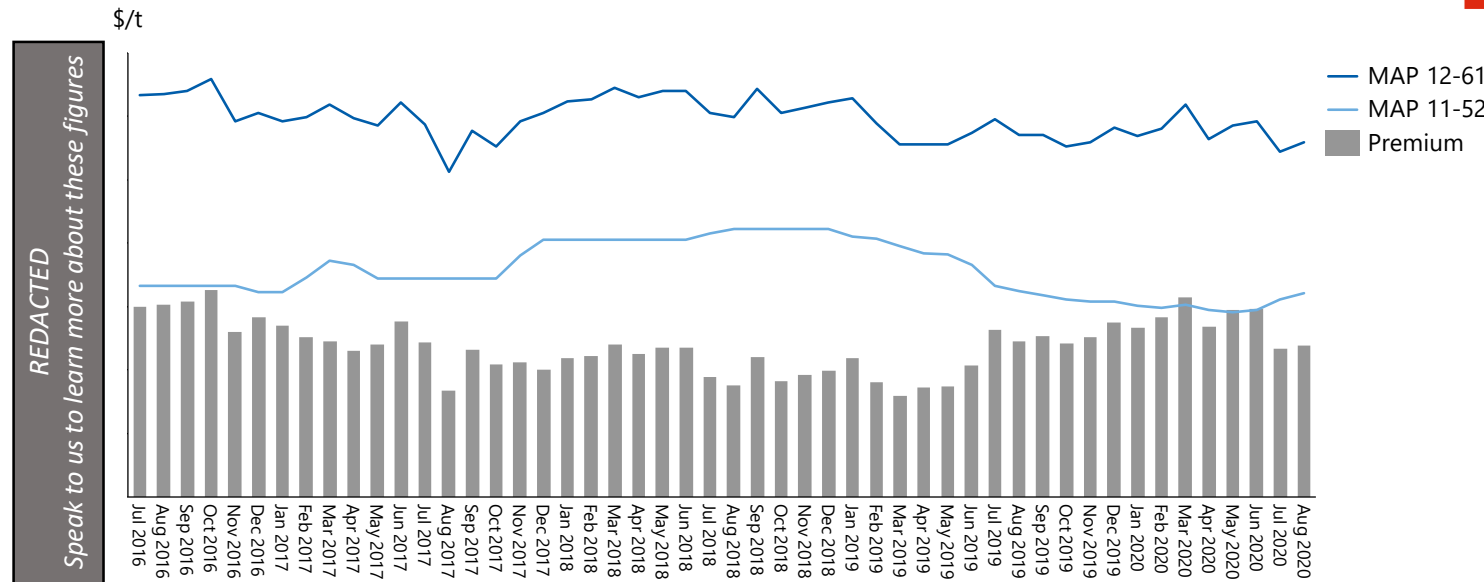


Historical price and premium analysis

MAP 12-61 FOB China price premium vs 11-52

78

MAP 12-61 FOB China Price Premium vs 11-52, July 2016-August 2020



Source: Tradeparq, Argus analysis

Fertilizers

Copyright © 2020 Argus Media group.
All rights reserved



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)

Fertilizers

Copyright © 2020 Argus Media group.
All rights reserved

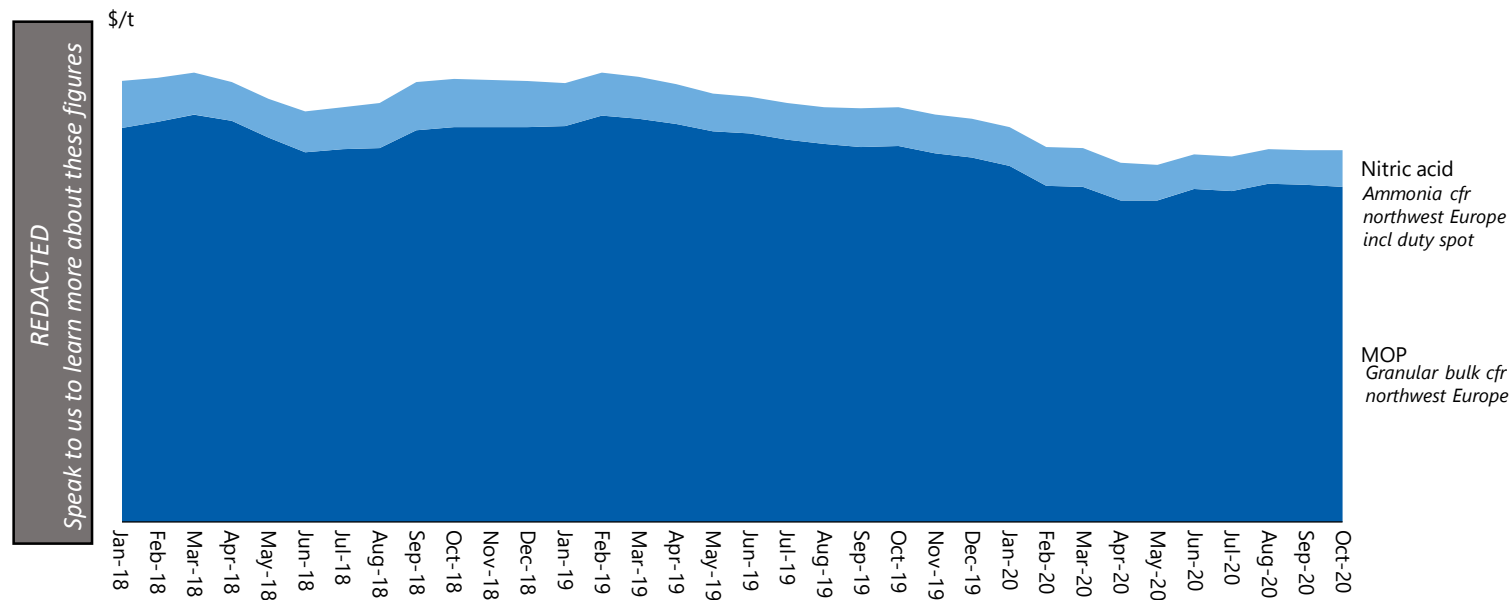


Raw materials cost analysis

MOP is the key driver of cost in NOP

60

NOP Raw Materials Price, North West Europe CFR, Jan 2018 – October 2020



Source: Argus Media

Fertilizers

Copyright © 2020 Argus Media group.
All rights reserved



What you receive:

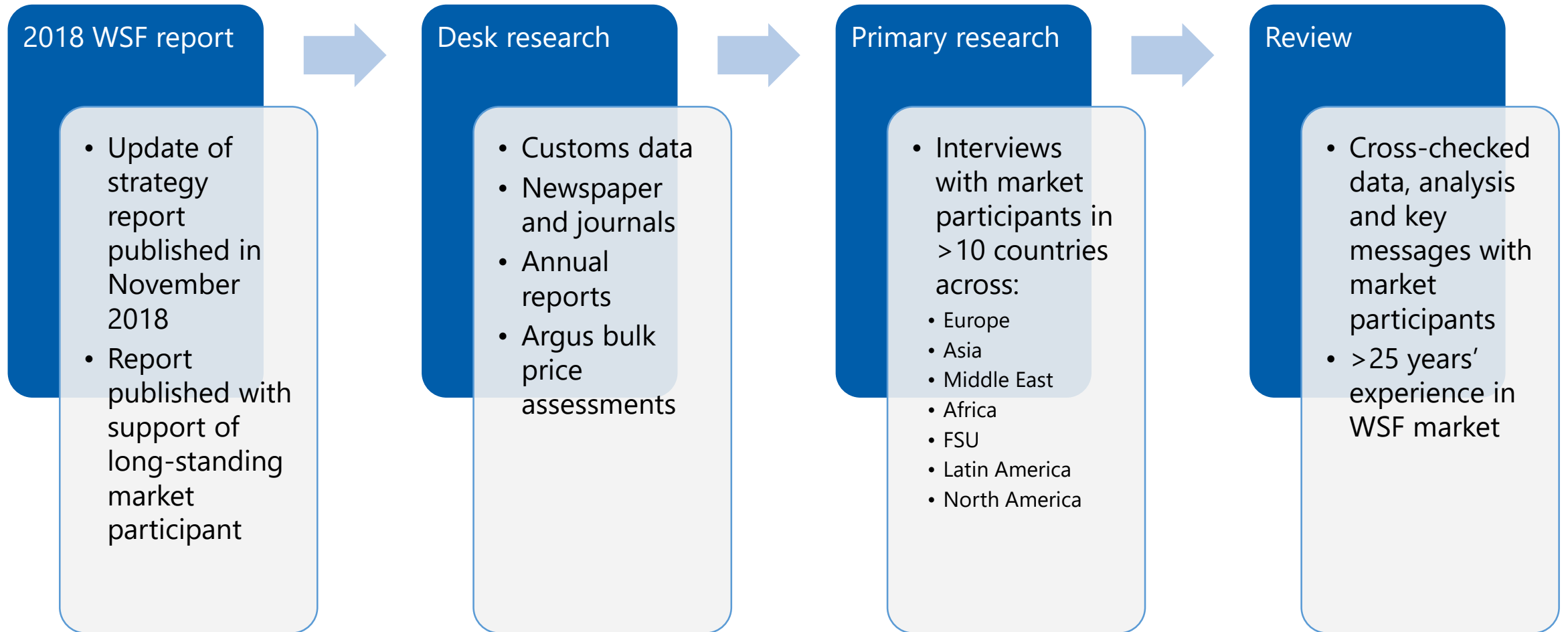
- Historical raw material cost analysis
 - NOP: MOP, nitric acid
 - MAP: phosphoric acid, ammonia
 - MKP: phosphoric acid, MOP
 - MKP: phosphoric acid, KOH
 - NPK margin analysis
- Conversion cost estimates

Fertilizers

Copyright © 2020 Argus Media group.
All rights reserved



2020 WSF Strategy Report - Methodology





argusmedia.com

Argus WSF Strategy Report – more information/demo

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

E: fertilizer-m@argusmedia.com

T: +44 20 7780 4200

Fertilizers

illuminating the markets

Market Reporting

Consulting

Events