



## **9<sup>th</sup> GPCA Fertilizer Convention**

# M&As in Fertilizers and Agrochemicals Recent years and potential future scenario

Muscat, 19<sup>th</sup> September 2018

# Contents
































- **Analysis on M&A in recent years**
- Key questions and hypotheses to forecast future activity

# 2017 saw the creation of Dow-DuPont and significant M&A activity by US and China, led by agrochemical companies

## Main findings

- The completion of the Dow-DuPont merger created the world's largest chemical company in terms of sales
- US firms again led the way, with their M&A representing >50% of the top 10 companies. China was next
- The agriculture chemicals sector was most active with three companies in the top 10

## Top deals completed in 2017

Acquirer (nationality)	Target (nationality)	Deal value (\$ bn.)	Primary announced deal rationale
Dow Chemical 	DuPont 	81,9	 
China National Chemical Corp - ChemChina 	Syngenta AG (95% <sup>1</sup> ) 	44,6	 
Sherwin-Williams Co 	Valspar Corp 	11,3	 
Avantor Performance Materials Holdings 	VWR Corp 	6,3	
Lonza Group AG 	Capsugel SA 	5,5	 
Existing Shareholders 	Valvoline Inc (83% <sup>1</sup> ) 	3,9	
Evonik Industries AG 	Air Products & Chemicals (Performance Materials) 	3,8	
PAG Asia Capital Ltd 	Yingde Gases Group Co Ltd (Bid No 3) 	2,8	
Lanxess AG 	Chemtura Corp 	2,5	 



Vertical integration



Regional expansion



Product extension



Business diversification



Consolidation/scale



Portfolio restructuring



Financial investment

1. All deals are 100 percent ownership acquisitions unless otherwise indicated  
Source: Dealogic, A.T. Kearney analysis

# Agrochemicals & fertilizers have continued in 2018 large scale, global consolidation driven by deals open at the end of 2017

## Top pending deals at end of 2017<sup>1</sup>

### Main findings

- Two mega deals above \$40 billion to be completed in 2018:
  - Bayer to complete Monsanto acquisition in 2018, to create an agrochemicals powerhouse; Bayer to sell selected seed and herbicide businesses to obtain regulatory approval
  - Linde and Praxair will form the world's largest industrial gas company in late 2018. Finalizing divestments to gain antitrust approval
- Consolidation & geographical expansion as key drivers for top deals currently underway (and announced previously to reach the endgame)

Acquirer (nationality)	Target (nationality)	Deal value (\$ bn.)	Primary announced deal rationale
Bayer AG 	Monsanto Co 	66,3	 
Praxair Inc 	Linde AG 	42,5	
BASF SE 	Bayer AG (Crop Science businesses) 	7,0	 
Anhui Leimingkehua Co Ltd 	Huaibei Mining Co Ltd 	3,2	
Mosaic Co 	Vale SA (Fertilizer Assets) 	2,8	
Tronox Ltd 	National Titanium Dioxide Co Ltd (TiO2 business) 	2,2	 
Shandong Ruyi Investment Holdings 	Invista BV (Apparel & Advanced Textiles) 	2,0	 
BASF SE 	Solvay SA (Polyamide business, France) 	1,9	 
China Petroleum & Chemical Corp - SINOPEC 	Shanghai SECCO Petrochemical Co (50%) 	1,7	



Vertical integration



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Product extension



Business diversification



Consolidation/scale



Portfolio restructuring

1. Refers to all deals announced in 2017 or before but not completed by 31st December 2017  
All deals are 100 percent ownership acquisitions unless otherwise indicated. Source: Dealogic, A.T. Kearney analysis

# After industrial gases and agrochemicals, paints & coatings and fertilizers segments have seen largest deals

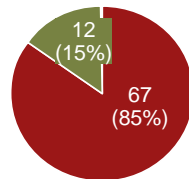
## Main findings

- Industrial gases as most consolidated segment; major M&A endgame completed with Praxair–Linde
- Agrochemicals also highly consolidated; after current wave, segment will be dominated by three companies
- Concentration lower in paints and coatings; Sherwin-Williams–Valspar deal is a major step and potentially not the last
- Fertilizers have also seen a series of larger deals - starting with Potash-Agrium, completed in early 2018 to form a Canadian global champion

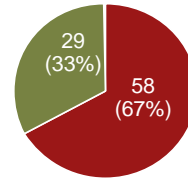
## Level of consolidation by revenues<sup>1</sup>

(in \$ bn.)

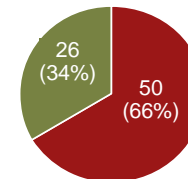
Industrial gases



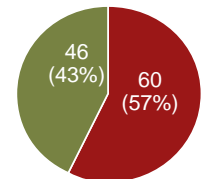
Agrochemicals



Paints & coatings



Fertilizers



■ Top 5 companies ■ Next 15 companies

## Top companies and FY2016 revenues<sup>2</sup>

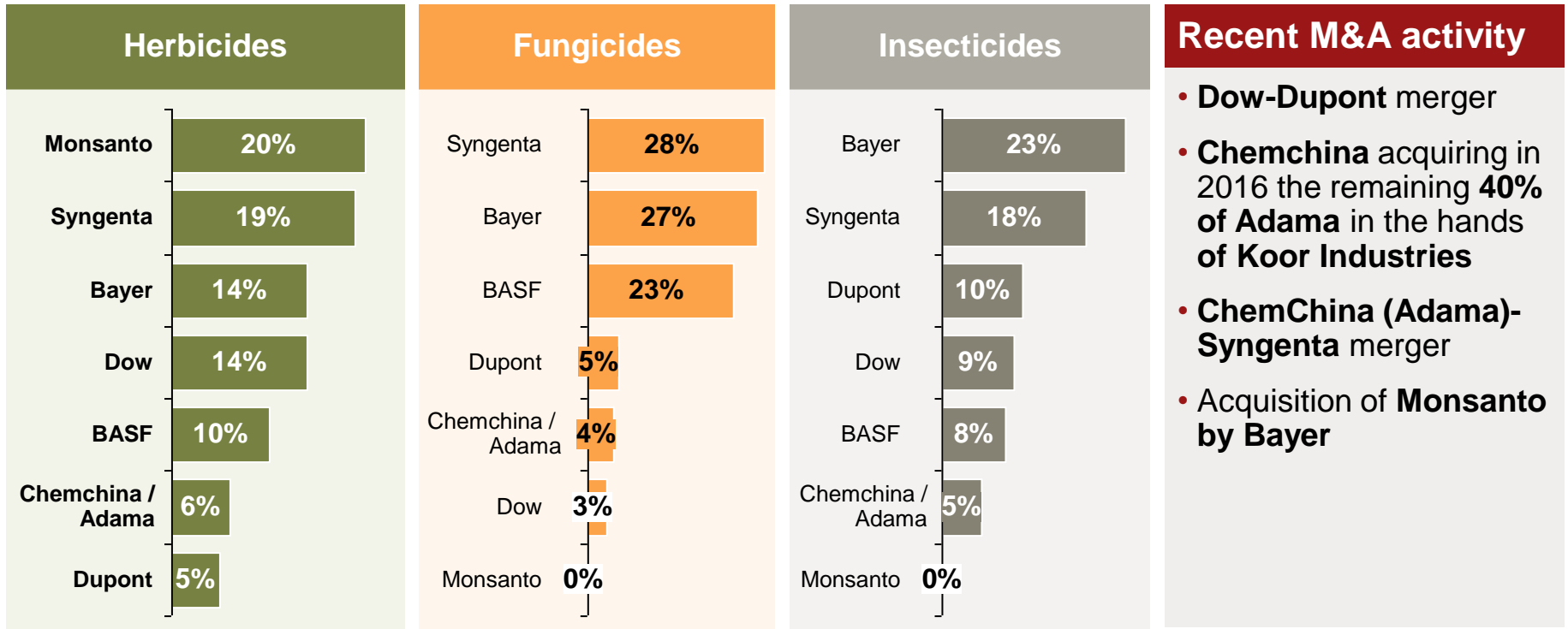
Company (FY 2016)	Revenues	Company (FY 2016)	Revenues	Company (FY 2016)	Revenues	Company (FY 2016)	Revenues
Air Liquide	\$24,5 bn.	Dow Dupont (Dupont Agriculture + Dow Agricultural Sciences)	\$15,7 bn.	Sherwin-Williams (Sherwin-Williams + Valspar)	\$15,9 bn.	China Co-op Group	\$18,5 bn.
Linde	\$19,6 bn.	Monsanto	\$13,5 bn.	PPG Industries	\$14,3 bn.	Nutrien (Agrium + PotashCorp)	\$17,4 bn.
Praxair	\$10,5 bn.	Syngenta	\$12,8 bn.	Akzo Nobel	\$10,0 bn.	Yara	\$9,2 bn.
Air Products and Chemicals	\$7,5 bn.	Bayer Crop Science	\$10,5 bn.	Nippon Paint	\$5,1 bn.	Yunnan	\$7,6 bn.
Taiyo Nippon Sanso	\$5,2 bn.	BASF Agriculture Solutions	\$5,9 bn.	RPM International	\$5,0 bn.	Mosaic	\$7,2 bn.

■ Combined revenue for deals completed after 2016 ■ M&A announced/in progress with deal value >\$1bn

1. Company allocation to segments defined by Capital IQ classifications and industry reports, followed by manual screening: Agrochemicals and Fertilizers split into separate segments; 2. Segment specific as far as available, based on Capital IQ or Coatings World  
 Source: Capital IQ, Coatings World, A.T. Kearney analysis

Crop protection, already highly consolidated in all segments, will further increase concentration through recent M&As

Competitive landscape before recent M&A wave – Market share<sup>1</sup>



Recent M&A activity in this market has resulted in an increased level of consolidation, with all majors involved in the top transactions

1. Based on sales in 2014  
Source: Morgan Stanley, A.T. Kearney

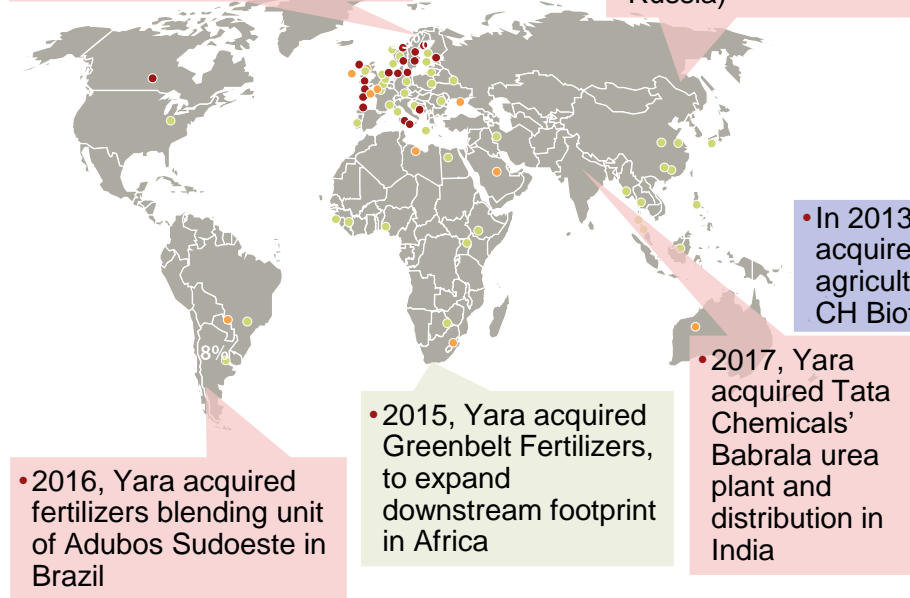
# Also in fertilizers, leading companies have strengthened their position by accruing resources and channel operators

## Footprint and M&A activity in major fertilizer companies (1/2)

Not Exhaustive

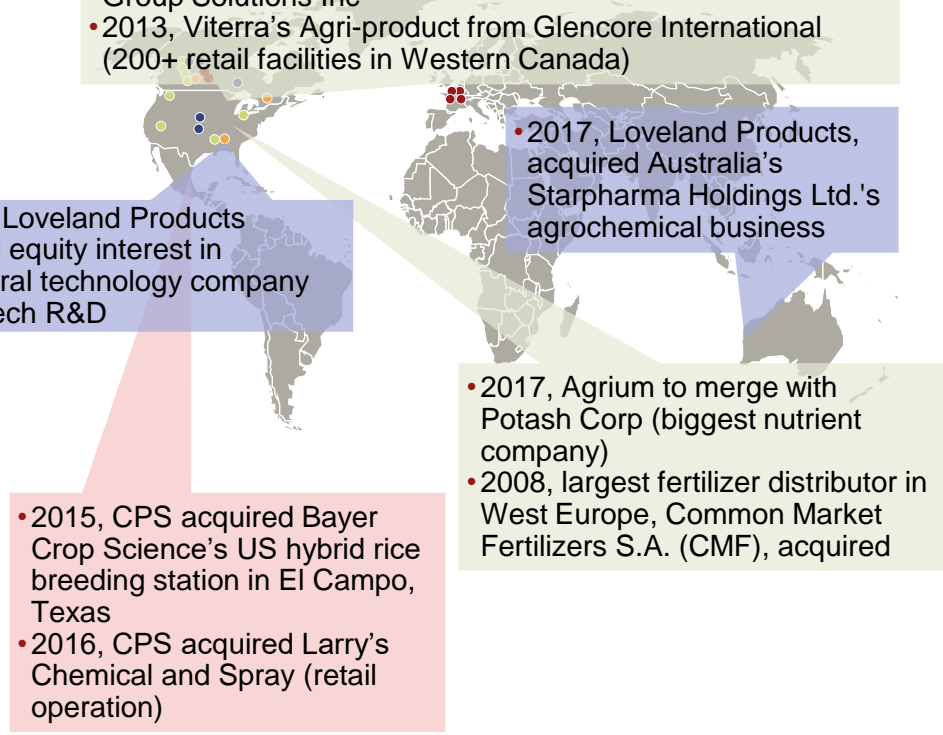
### Yara

- 2017, Yara acquired Herøya Nett AS and quay at Herøya from Norsk Hyrdo
- 2007, Yara held share in Rossosh (fertilizers producer in Russia)



### Agrium

- 2017, Agrium Crop Production Services acquired 18 retail locations from Cargill AgHorizons
- 2016, 16 locations in Western Canada from Andrukow Group Solutions Inc
- 2013, Viterra's Agri-product from Glencore International (200+ retail facilities in Western Canada)
- 2017, Loveland Products, acquired Australia's Starpharma Holdings Ltd.'s agrochemical business
- 2017, Agrium to merge with Potash Corp (biggest nutrient company)
- 2008, largest fertilizer distributor in West Europe, Common Market Fertilizers S.A. (CMF), acquired
- 2015, CPS acquired Bayer Crop Science's US hybrid rice breeding station in El Campo, Texas
- 2016, CPS acquired Larry's Chemical and Spray (retail operation)



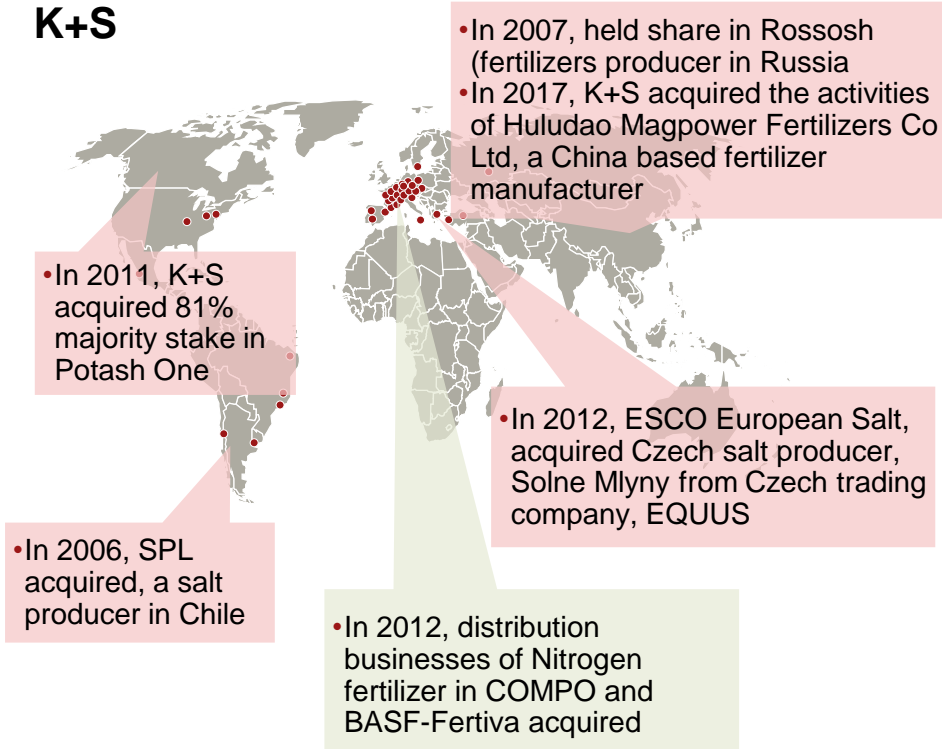
- Acquire channels
- Acquire resources
- Acquire technologies

# Also in fertilizers, leading companies have strengthened their position by accruing resources and channel operators

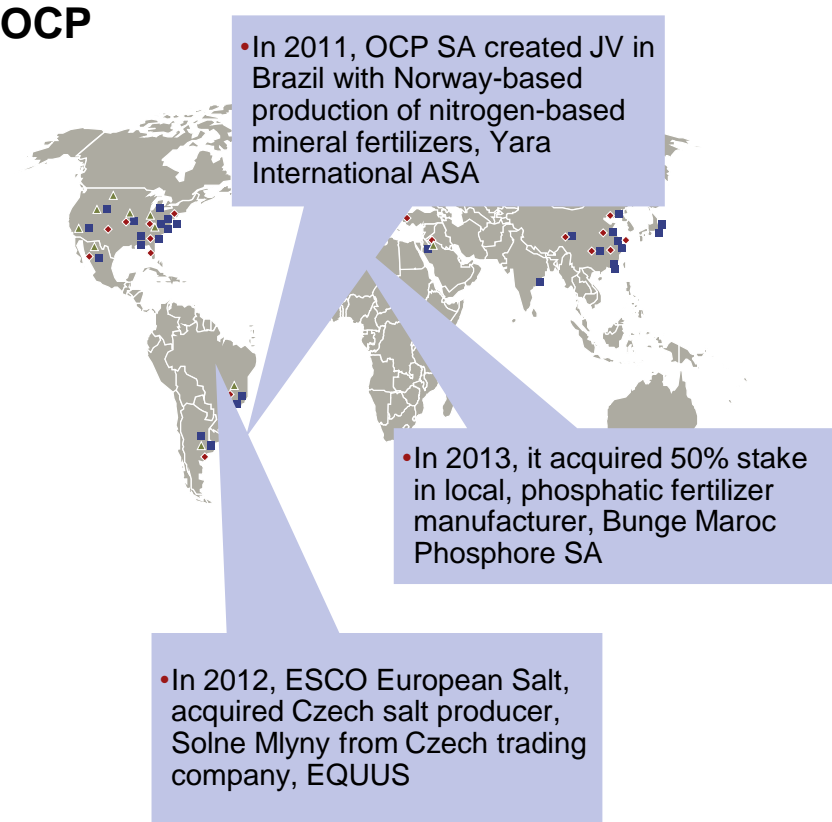
## Footprint and M&A activity in major fertilizer companies (2/2)

Not Exhaustive

### K+S



### OCP



- Acquire channels
- Acquire resources
- Acquire technologies



# Contents

- Analysis on M&A in agrochemicals in recent years
- **Key questions and hypotheses to forecast future activity**

## Key questions to evaluate for assessing state of future M&A

### Key questions to ask

- 1 What was the **rationale** for existing M&A? Are there any **market trends** that made this M&A necessary?
- 2 Will the trends that made M&A happen in the past also **continue into the future**?
- 3 If such trends do mandate M&A, who would be likely **acquirers and targets** and is there availability of such targets in the market?
- 4 Will expected M&A going forward be in the form of a **mega-deal or a string of pearls** (multiple small deals)?
- 5 Will expected M&A activity be **global or more regional**?

Five high level rationale have been driving M&A in the past- out of these, three are likely to be drivers of future M&A

**1 & 2 Understanding rationale for M&A**

Rationale for M&A	Has this been used as a rationale for recent M&A	Any near term trends that may mandate this?	Is this a likely strong driver for future M&A
<b>Consolidation and cost synergy</b>	Yes (Bayer-Monsanto)	<ul style="list-style-type: none"> <li>Falling prices of commodity fertilizers requiring consolidation</li> <li>Slowdown in markets</li> </ul>	<ul style="list-style-type: none"> <li><b>Likely</b>; limited growth and falling prices forces cost cutting via consolidation (however targets need to be available)</li> </ul>
<b>Access to new technology/ knowledge</b>	Yes (BASF, Bayer-AG; Chemchina - Syngenta)	<ul style="list-style-type: none"> <li>Falling prices of commodities requiring moves into specialty</li> </ul>	<ul style="list-style-type: none"> <li><b>Likely</b>; several companies have excess commodities looking at how to further monetize (however growth areas to be ascertained)</li> </ul>
<b>Access to new markets</b>	Yes (Mosaic- Vale SA; Yara-ADubos Sudoeste)	<ul style="list-style-type: none"> <li>High growth in some products and regions (e.g., Asia / solvents) would be a key trend, however unlikely such growth taking place widely</li> </ul>	<ul style="list-style-type: none"> <li><b>Unlikely</b> unless it's a very niche product, as fertilizer markets are likely to remain slow</li> </ul>
<b>Product diversification</b>	Yes (BASF, Bayer-AG)	<ul style="list-style-type: none"> <li>Falling prices of commodities and slowing market requiring moves into specialties as growth engines</li> </ul>	<ul style="list-style-type: none"> <li><b>Yes</b>, as companies will look to move into specialties in light of limited attractiveness in commodities</li> </ul>
<b>Reliability and security of supply chain</b>	Yes (Yara chemicals- Tata chemicals)	<ul style="list-style-type: none"> <li>Resource scarcity in select geographies (e.g. NG in Europe, Potash in Asia)</li> </ul>	<ul style="list-style-type: none"> <li><b>Unlikely</b>, as market is generally oversupplied and reliability should not be an issue</li> </ul>

■ M&A drivers that will likely remain

There may not be many large targets left- smaller independents holding niche technology likely to be prime targets

### 3 Understanding company profiles in future transactions

Rationale for M&A	Who would be likely acquirer	Who would be likely target?	Are target acquirers interested	Are suitable targets available
<b>Consolidation and cost synergy</b>	<ul style="list-style-type: none"> <li>Large global companies</li> <li>Medium regional companies</li> </ul>	<ul style="list-style-type: none"> <li>Large company, with overlapping footprint (or)</li> <li>Medium company in same region</li> </ul>	<ul style="list-style-type: none"> <li><b>Large players have already consolidated</b> in agrochemicals- limited interest in <b>large scale</b> transactions; smaller optimizations more likely</li> </ul>	<ul style="list-style-type: none"> <li>NOCs or already consolidated companies willing to restructure portfolio - <b>limited likelihood of an attractive target</b></li> </ul>
<b>Access to new technology/ knowledge</b>	<ul style="list-style-type: none"> <li>Large company playing largely in commodities (e.g. NOCs in countries with access to advantaged feedstock)</li> </ul>	<ul style="list-style-type: none"> <li>Small player/ carve out containing niche technology</li> </ul>	<ul style="list-style-type: none"> <li>Likely, <b>as most NOCs still playing mainly in commodity space</b>, however need to evaluate fertilizers as part of their long term strategy</li> </ul>	<ul style="list-style-type: none"> <li>Several independent smaller companies with agro Chem portfolio <b>still available as potential targets</b></li> </ul>
<b>Product diversification</b>	<ul style="list-style-type: none"> <li>Large company (with big commodities and some specialty portfolio)</li> </ul>	<ul style="list-style-type: none"> <li>Small to large company with a complementary portfolio</li> </ul>	<ul style="list-style-type: none"> <li>Likely as large players (Bayer, BASF, ...) and NOCs have low exposure to specialty portfolios, <b>however fit to strategy needs to be established</b></li> </ul>	<ul style="list-style-type: none"> <li>Several independent smaller companies with agro Chem portfolio <b>still available as potential targets</b></li> <li>Large players with complementary portfolios <b>likely hard to find</b></li> </ul>

Large deals are likely only if companies wish to consolidate footprint- we will more likely see smaller deals spanning geographies

**4 & 5 Determining type of M&A happening**

Rationale for M&A	Who would be likely acquirer	Who would be likely target?	Will this be a mega deal	Will this be a global or regional deal
<b>Consolidation and cost synergy</b>	<ul style="list-style-type: none"> <li>Large global companies</li> <li>Medium regional companies</li> </ul>	<ul style="list-style-type: none"> <li>Large company, with overlapping footprint (or)</li> <li>Medium company in same region</li> </ul>	<b>Possible</b> (but less options available to continue global consolidation with global scope transactions)	<b>Likely global (if any targets left)</b> , although US, China, India may see some regional M&A for consolidation
<b>Access to new technology/ knowledge</b>	<ul style="list-style-type: none"> <li>Large company playing largely in commodities (e.g. NOCs in countries with access to advantaged feedstock)</li> </ul>	<ul style="list-style-type: none"> <li>Small player/ carve out containing niche technology</li> </ul>	<b>Unlikely</b> , as smaller players will be more attractive technology targets	<b>Likely global</b> , as the target acquires likely to be in Middle East or China or SEA with initially limited presence in specialty chemicals
<b>Product diversification</b>	<ul style="list-style-type: none"> <li>Large company (with big commodities and some specialty portfolio)</li> </ul>	<ul style="list-style-type: none"> <li>Small to large company with a complementary portfolio</li> </ul>	Possible, however chances of a <b>smaller deal are more significant</b>	<ul style="list-style-type: none"> <li><b>Likely global</b> as companies with need for diversification are in emerging markets with limited specialty presence</li> <li>Some US and European companies may also look to acquire regionally</li> </ul>

# Overall, future M&A likely to be smaller, more in number and more geographically dispersed

## Future M&A activity

- Past drivers may not work in the future: last 3-5 years prices resulted in companies looking at M&A more from a consolidation- cost angle
- Scarcity in key raw materials (P, K and also some aromatics) resulted in acquisitions driven by supply chain reliability
- Raw materials are now abundant and companies have largely adapted to a volatile / lower oil price scenario and are now focused more towards growth
- Monetizing commodities (ammonia, urea, MAP, DAP, ...) and additional raw materials coming online (P and K) will likely be priorities for both NOCs and large chemical players to set the scene for future growth
- Smaller acquisitions providing larger players with both immediate access to specialities as well as a platform to monetize their raw material into value added products will be the need of the day
- Asian players, with feedstock and also highest demand, will likely pay higher premiums to make necessary acquisitions as it not only sets them up for growth but also helps secure technology to advance their agriculture dependent economies
- Large European and American companies will also engage in acquisitions but, for products of high demand, will probably lose to Asian NOCs and large Asian players. EU and American companies will engage in JVs to secure access to these large and faster growing markets (albeit not very fast compared to other products)

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