International Fertilizer Industry Association

Global Fertilizer Markets

IFA Medium-Term Outlook

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IFA Secretariat

Afcome 2015 – Reims, France – October 21st - 23rd 2015

Fertilizers and Raw Materials Global Supply 2014 – 2019

- Supply: key issues and emerging trends
- Fertilizer capacity outlook
- Fertilizer medium-term supply / demand
- Fertilizer trade prospects

Key Issues - Supply Aspects

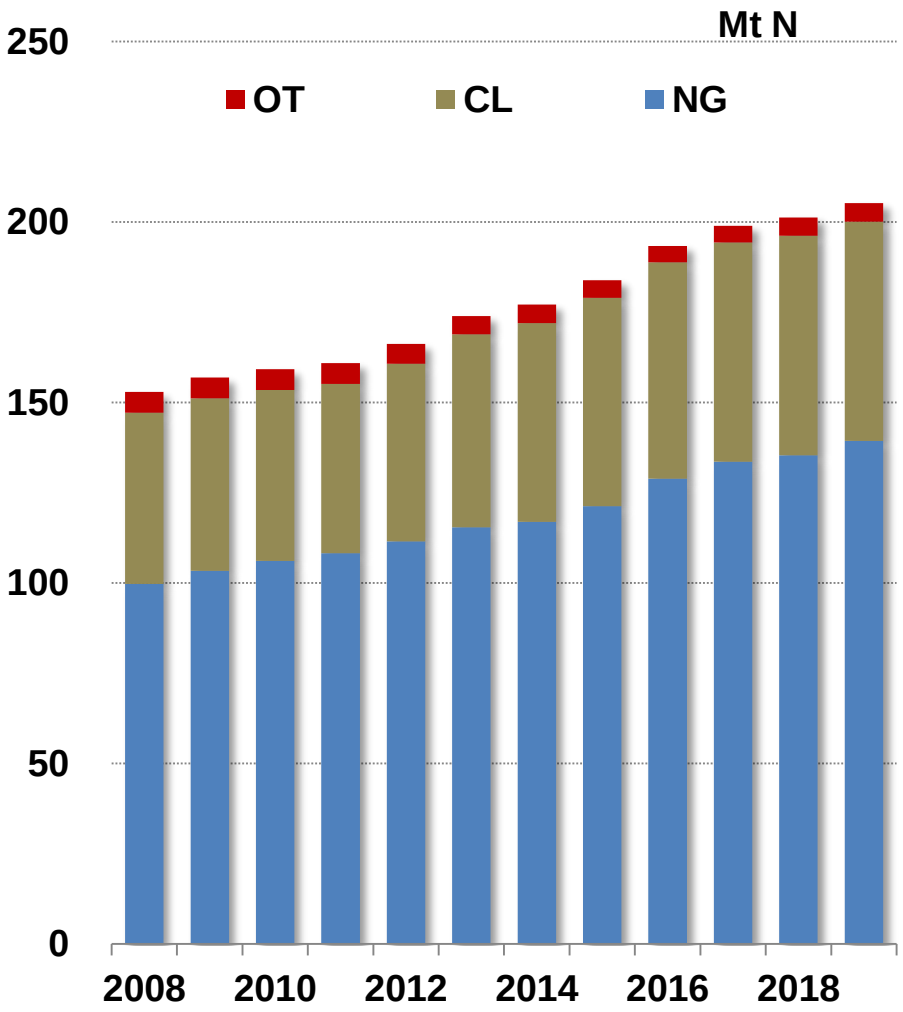
2014/19 Operational risks and supply issues

- ✓ Chronic shortfalls in natural gas supply
- ✓ Mine depletion and flooding in the potash segment
- ✓ Decreasing phosphate ore quality and need for ore upgrading
- ✓ Energy prices fluctuations
- ✓ Currency devaluation : impact on imports
- ✓ Financing for junior mining projects
- ✓ Trade policies and trade measures
- ✓ Subsidy policies

Recent trade measures on fertilizers: 2014/15

- Argentina: DAP, MAP
- Ukraine: NPK, urea, AN
- India: urea, industrial urea
- Belarus: potash, NPK
- Vietnam: urea, DAP
- United States, Russia, Iran, Nigeria….

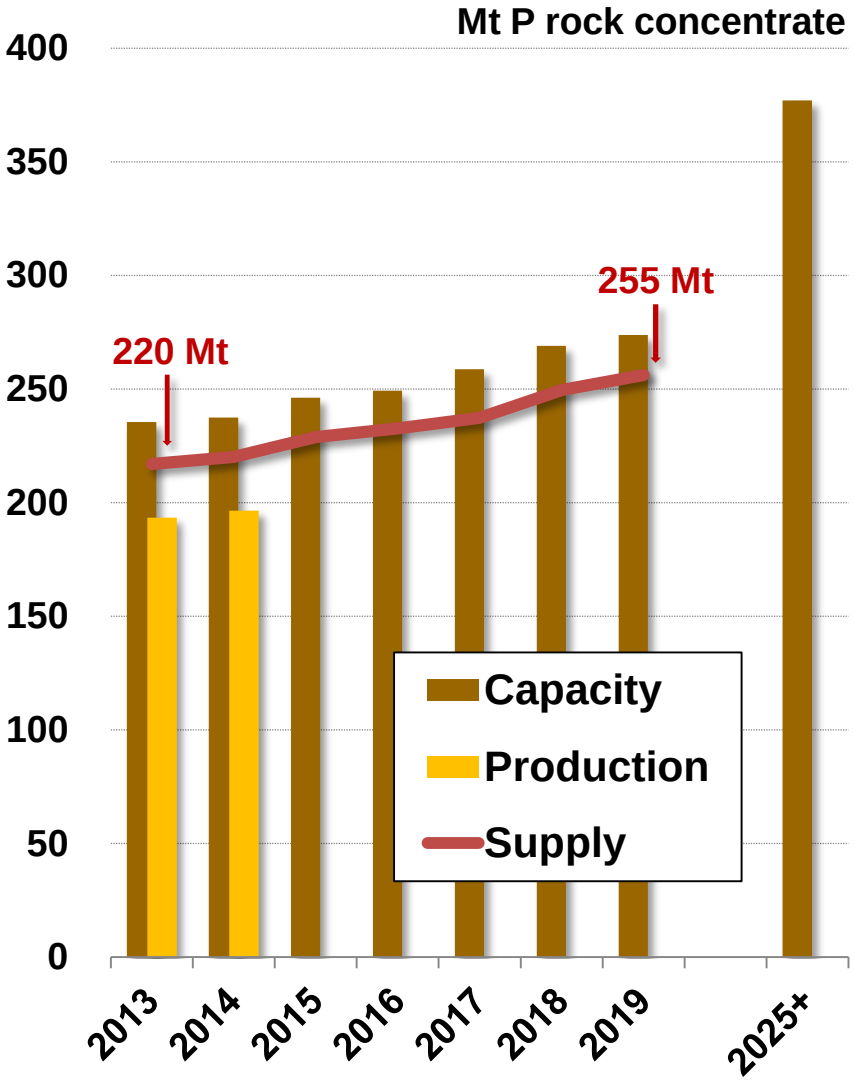
Nitrogen capacity evolution – Natural gas and coal feedstock



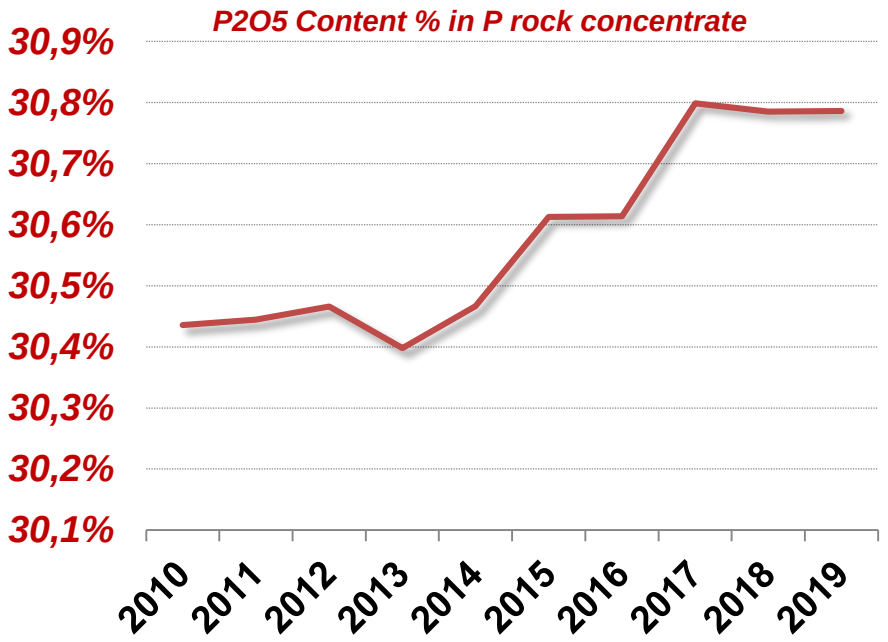
- Natural gas: +19% over 2014: 68% share
- Coal : +10% over 2014
  - ➢ 30% share of world NH3 capacity
  - ➢ China: 96% share of world's coal-based NH3

Source: IFA Production and International Trade 2015

Feedstock issues – Phosphate rock reserves, grade and potential supply

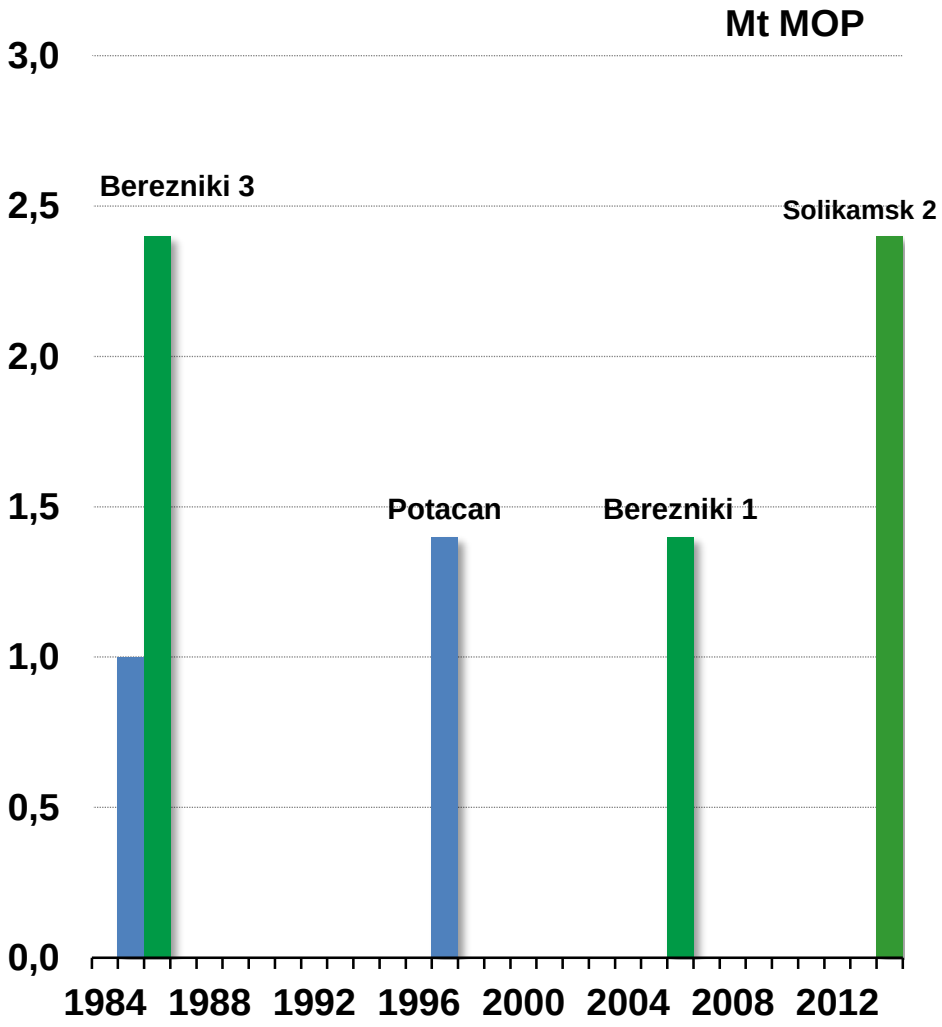


- Rising P rock capacity and potential supply
- Morocco, China & Saudi Arabia: 70% of increase
- Concentrate P_2O_5 grade: rising in near future!



Source: IFA Production and International Trade 2015

Flooding…. inherent risks of potash mining!



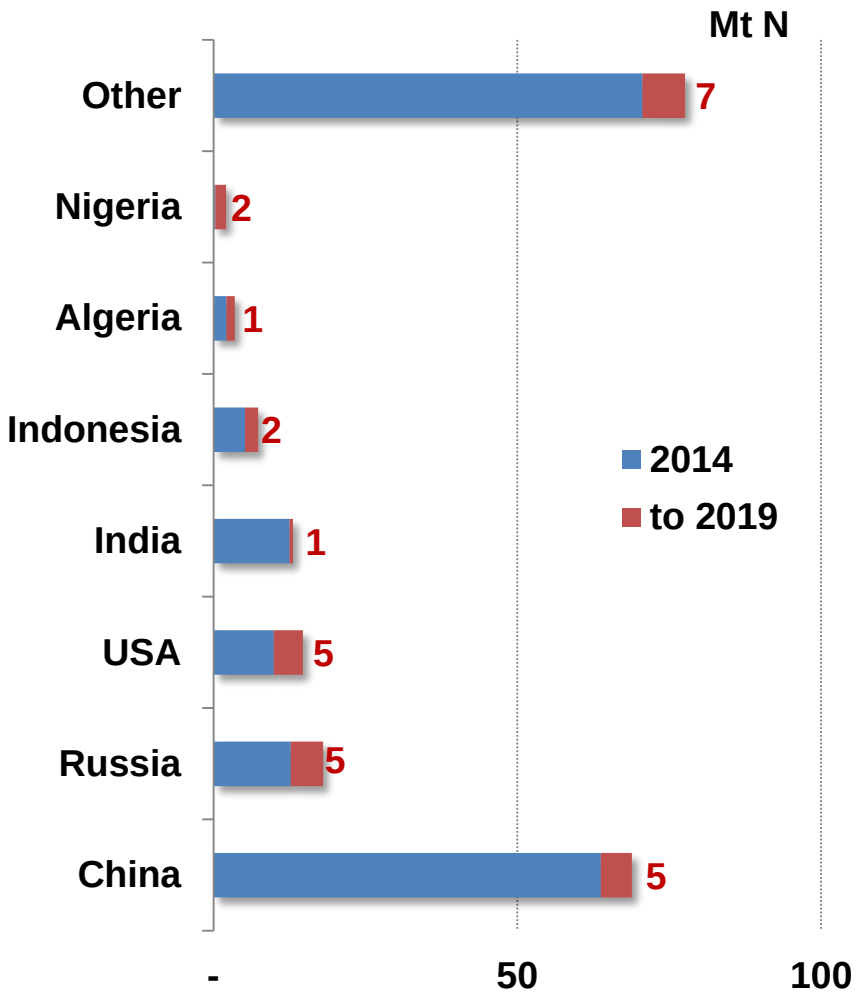
- **Global capacity rose by a net 16 Mt K_2O between 1995 and 2015.**

but

- Five underground/conventional mines were flooded over the past 30 years in Canada and Russia.
- Nearly one mine every 7 years.
- Capacity losses equated to 9 Mt K_2O, or 15 Mt MOP.
- Unless additional ore can feed these plants, nameplate capacity is reduced.

Source: IFA Production and International Trade 2015

Fertilizer capacity developments – Nitrogen and seaborne ammonia



Seven countries:75% of the new capacity

- **China: 18%**
- **Russia: 19%**
- **USA: 17%**

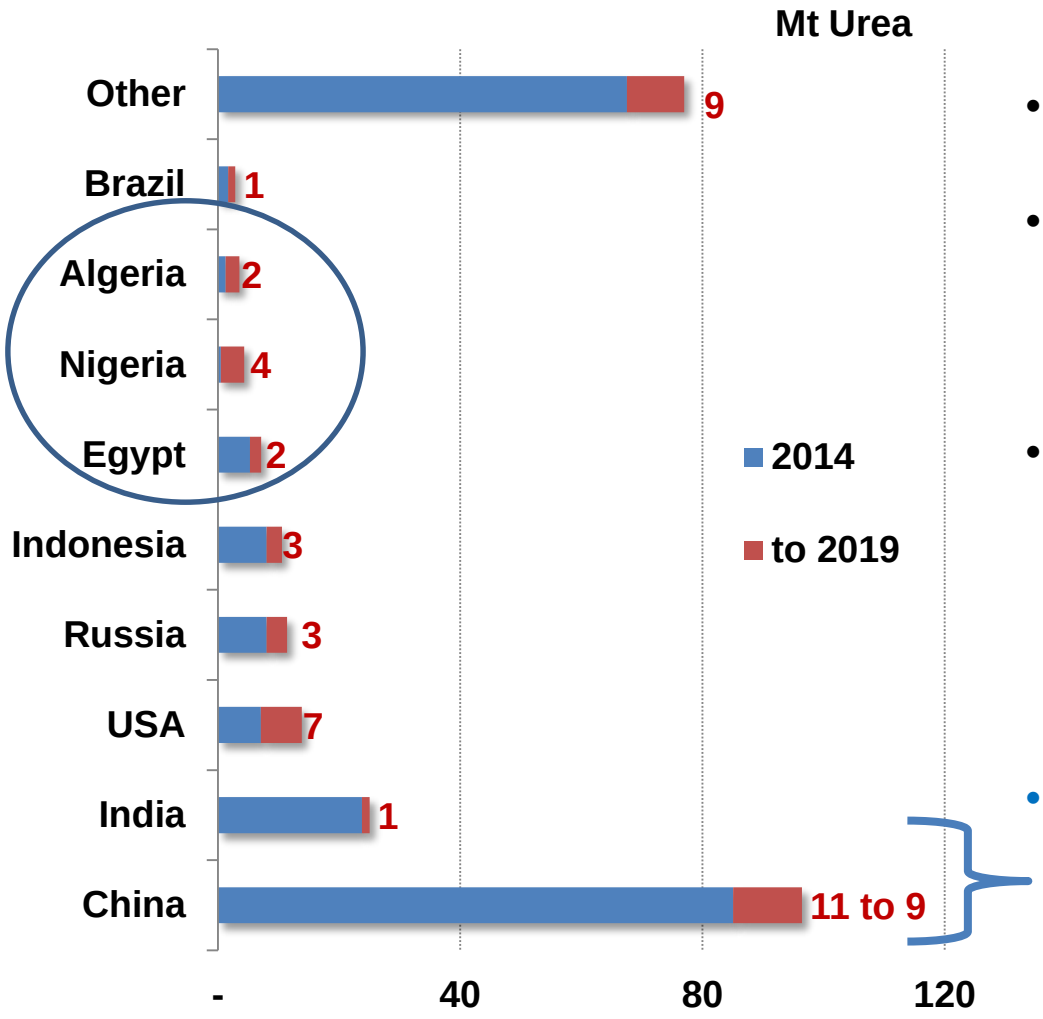
Global net increase 28 Mt to 205 Mt N

= 16% overall

Mt NH3	WEST OF SUEZ	EAST OF SUEZ	WORLD
2014	11.8	6.7	18.5
2019	12.7	6.2	18.9

Source: IFA Production and International Trade 2015

Fertilizer capacity developments – Urea

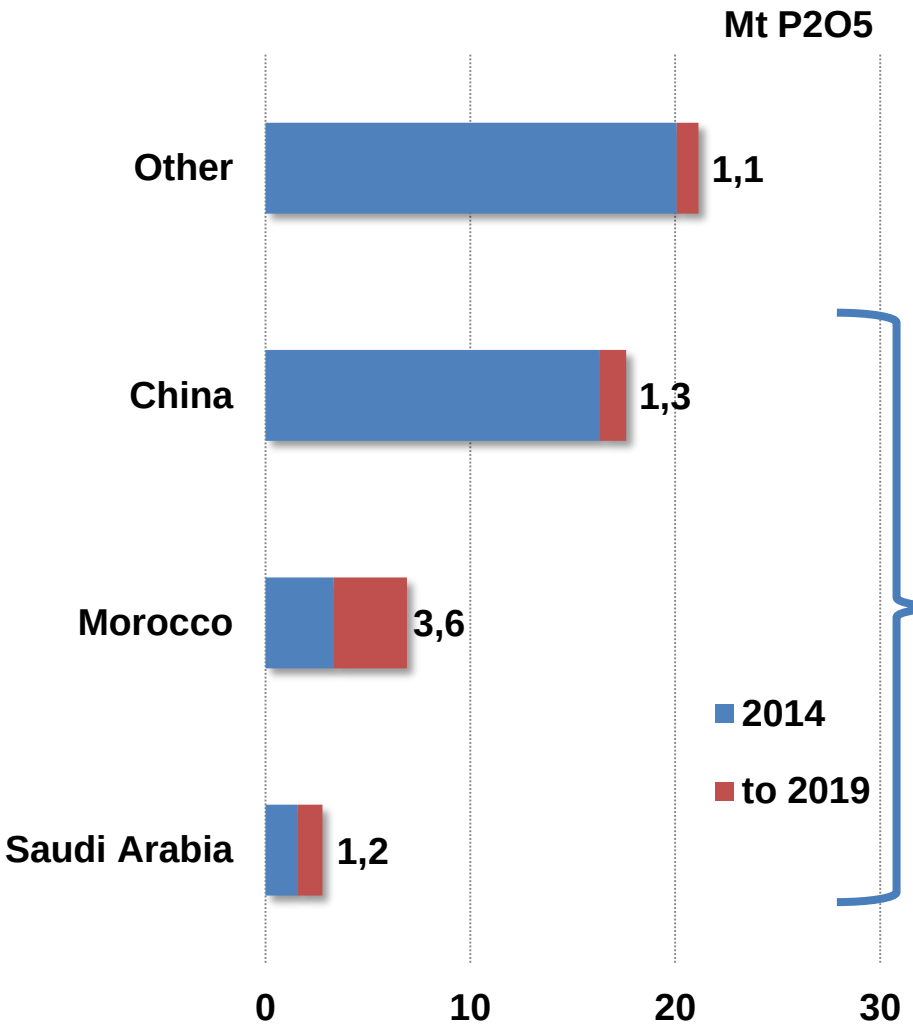


- Global urea capacity: +20% over 2014.
- 60 new units, of which 20 in China but at least 5 projects are currently idled.
- Global urea capacity rises by a net 41-44 Mt to 250 Mt in 2019.

- Capacity increases in China but 5 Mt is removed from closure .

Sources: IFA Production and International Trade ; CNFIA 2015

Fertilizer capacity developments – Processed Phosphates

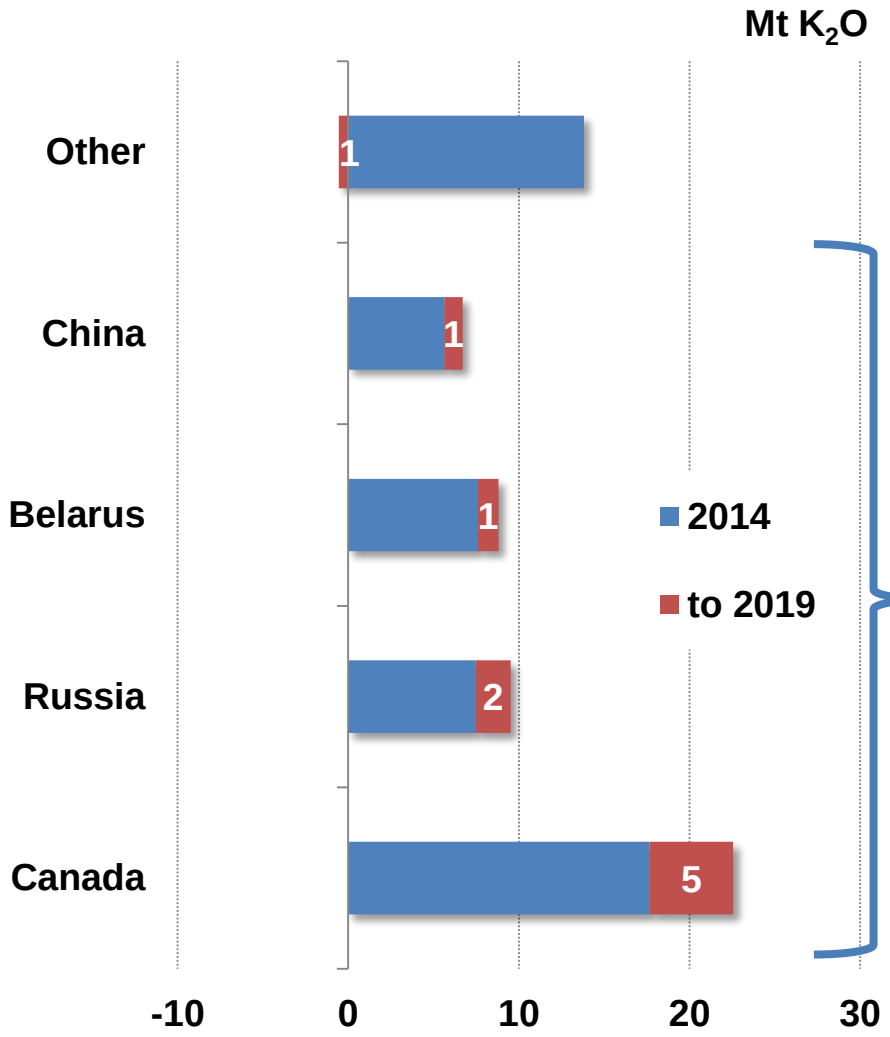


Processed phosphates capacity

- Processed Phosphates: +16% over 2014.
- 30 new units.
- 3 countries account for 85% of net growth.
- PP capacity rises by 7 Mt to 50 Mt in 2019.

Source: IFA Production and International Trade 2015

Fertilizer capacity developments – Potash

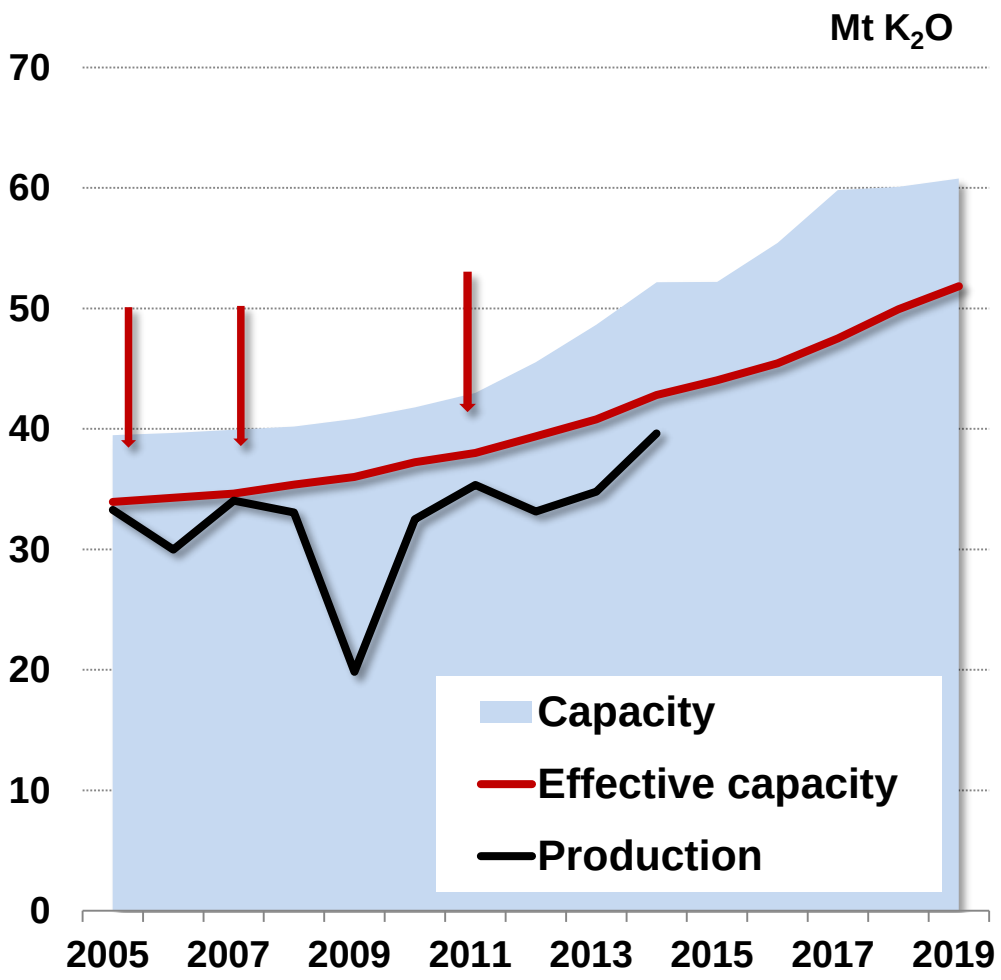


Potassium capacity

- Global K_2O capacity: 52 Mt to 61 Mt : +17%.
- 25 projects worldwide; 4 greenfielfd projects.
- 4 countries: 100% of net growth.

Source: IFA Production and International Trade 2015

Capacity vs. supply and production – Potash example

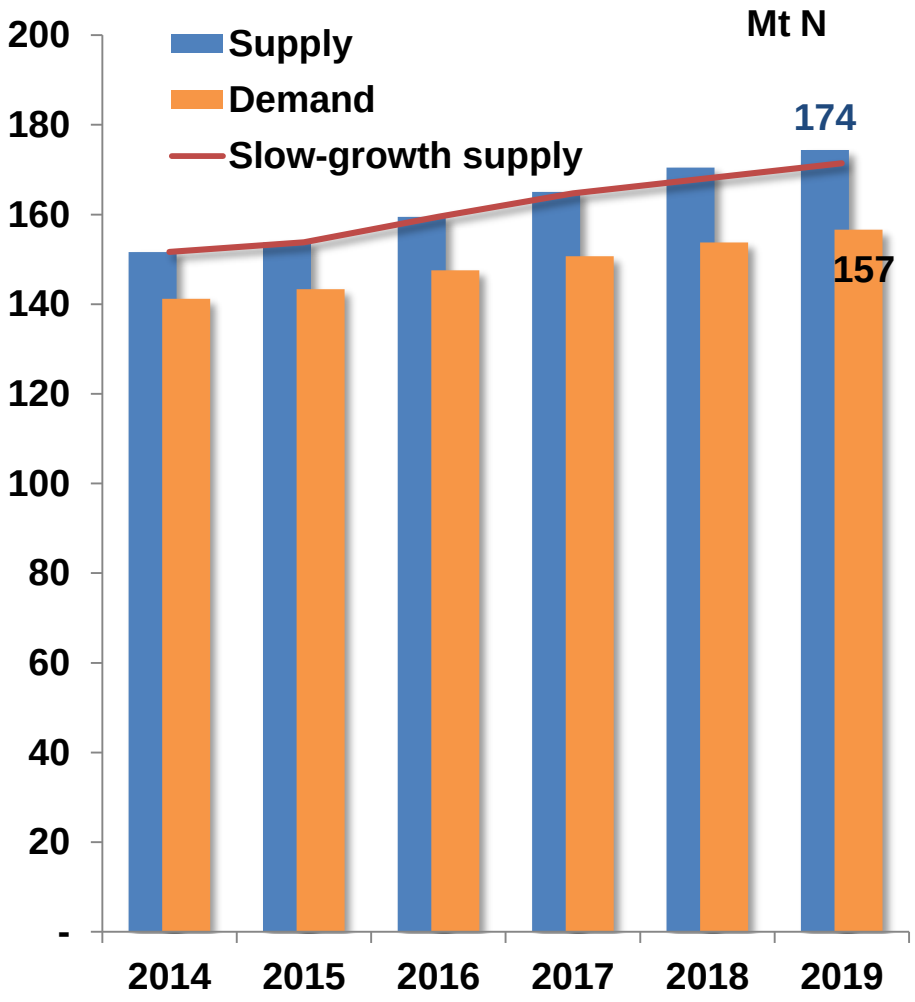


Effective capacity

- 2005-2014 : avg 86% of capacity.
- 2005-2007-2011: benchmarks.
- 2014 : 93% of effective capacity.
- In future: 82-83% of capacity.

Source: IFA Production and International Trade 2015

Potential Supply/Demand Balance – Nitrogen



- Global nitrogen potential supply: 3% pa
- 84% of nameplate capacity
- Global nitrogen demand: 2.2% pa
- Firm industrial demand growth

Baseline scenario

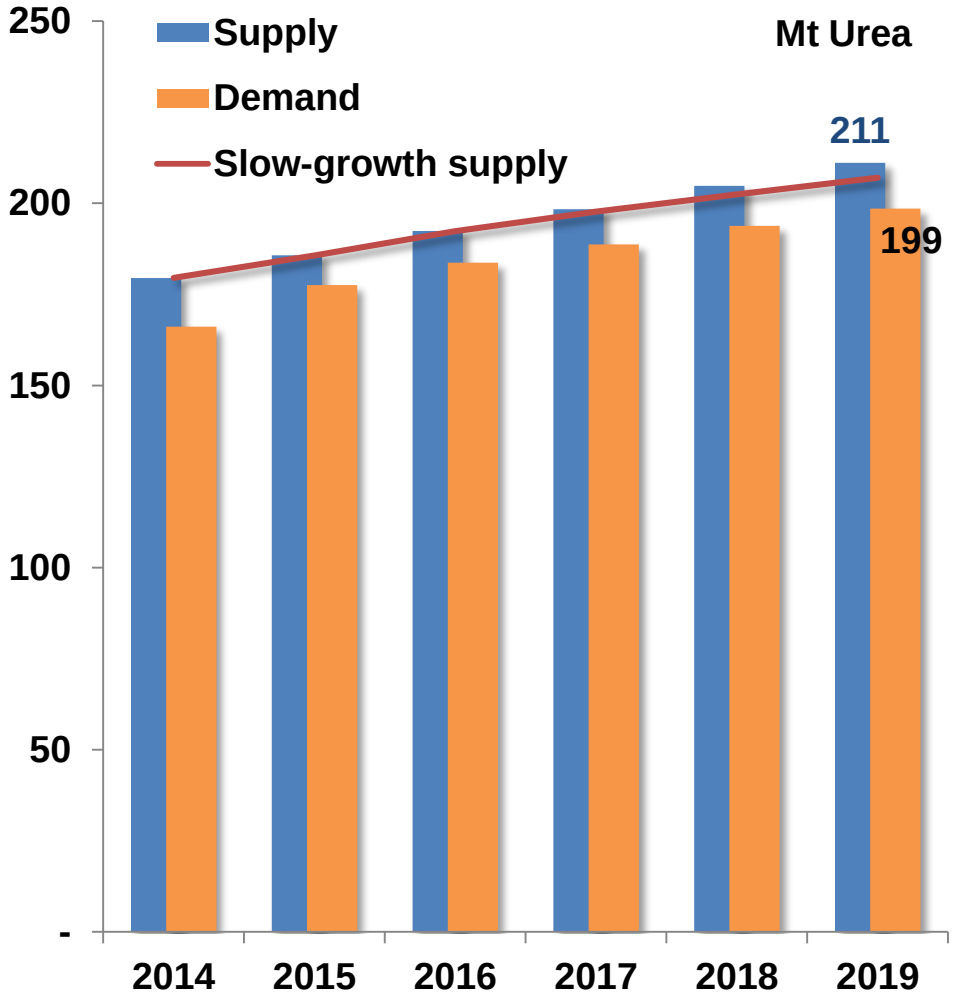
- Growing surplus, accelerating after 2016

Slow-growth scenario

- ***Rapid growth, but static post-2017***

Source: IFA Production and International Trade 2015

Potential Supply/Demand Balance – Urea



- Global urea potential supply: 3.5% pa over 2014
- 81-83% of capacity
- Global urea demand growing 3.6% pa
- Industrial urea demand growing 8% pa

Baseline scenario

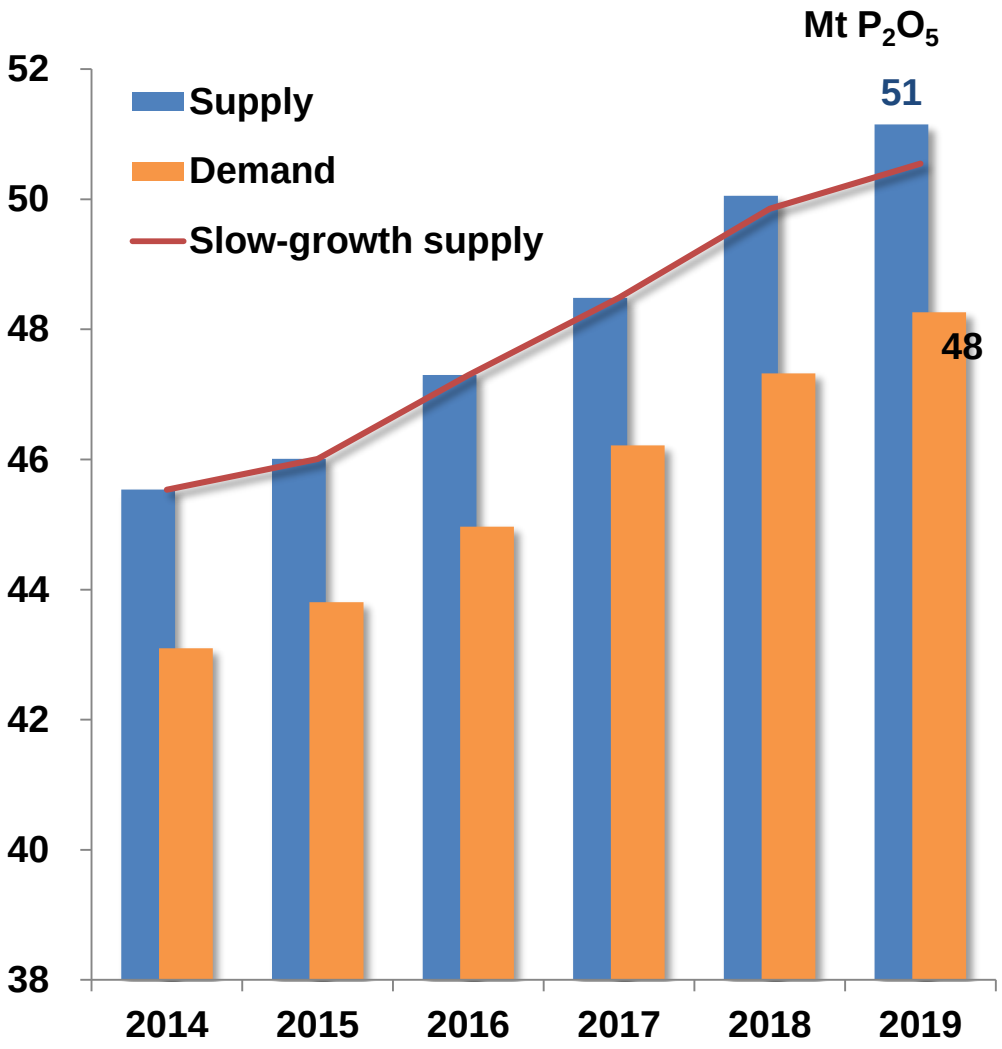
- Demand growth exceeds supply demand growth
- Emerging surplus by 2019

Slow-growth scenario

- ***static imbalance through 2019***

Source: IFA Production and International Trade 2015

Potential Supply/Demand Balance – Phosphoric acid



- Global PA supply growing 2.5% pa
- 80-82% of nameplate capacity
- Global PA demand growing 2.4% pa

Baseline scenario

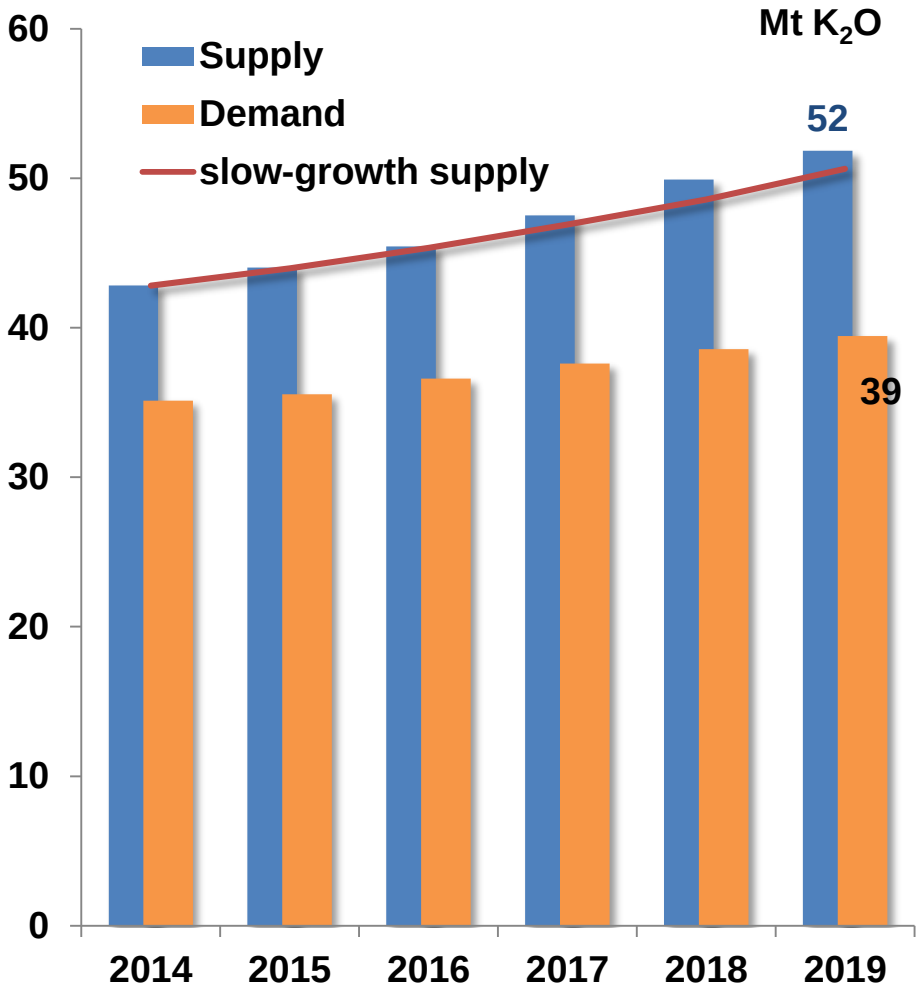
- Stable balance for the near term

Slow-growth scenario

- ***Gradually declining potential surplus***

Source: IFA Production and International Trade 2015

Potential Supply/Demand Balance – Potassium



- Global potassium potential supply growing 4.2% pa over 2014
- 80-85% of nameplate capacity
- Global potassium demand growing 2.5% pa

Baseline scenario

- Moderate increase in potential surplus up to 2017, then accelerating to 2019.

Slow-growth scenario

- ***Stable potential surplus until 2016, growing afterward.***

Source: IFA Production and International Trade 2015

Key take-aways – Supply aspects

1. Global nutrient supply growing 3% per annum over 2014
2. New capacity: N (EA, NA, AF, EECA), P (AF, EA, WA); K (NA, EECA, EA)
3. Growing potential surplus on K and N; Relative balance on urea and P2O5
4. Global nutrient sales : + 2% pa to 264 Mt nutrients: Fertilizer: +1.7% pa; Industrial +3.6% pa
5. Global trade rising for all products between 2015 and 2019:
   - Higher urea Import in SA and EU, but lower in USA and LA: Global urea trade at 52 Mt .
   - Phosphate rock: growing imports in EA, EECA, Europe; trade may reach 34-35 Mt rock.
   - Processed phosphates in SA, AF, LA: Global trade rising to 33 Mt products.
   - Larger potash imports in LA, EA, SA; global trade at 55 Mt .

Uncertainties:

- ❖ *Energy prices /Shortfalls of natural gas supply*
- ❖ *Access to financing /Completion delays*
- ❖ *Policy: Export policy / Subsidy policies*

Thank you for your attention

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