

PARADIGM SHIFT IN AGRI-INDUSTRY

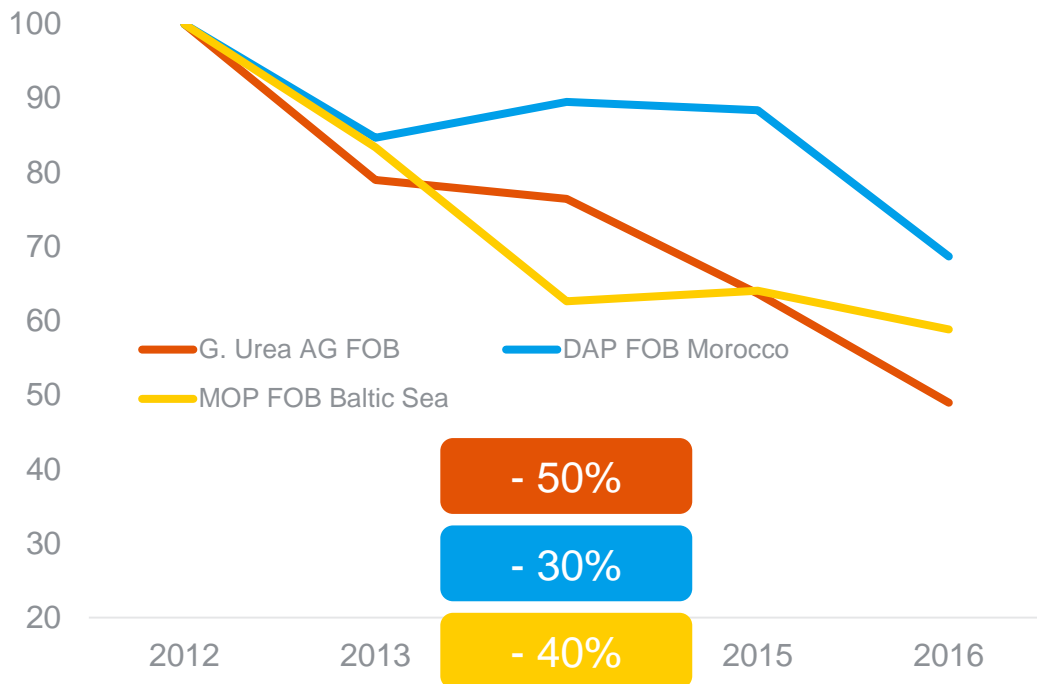
Ahmed Al Qahtani, GM- Business Strategy & Investments

September 7, 2016

RECENT CHANGES

PRICES OF KEY FERTILIZERS DECLINED SHARPLY

**Price development 2012 – 2016 FC
Indexed (2012 =100)**



Oversupply

- Urea: 77% Util. Rate
- DAP: 67% Util. Rate

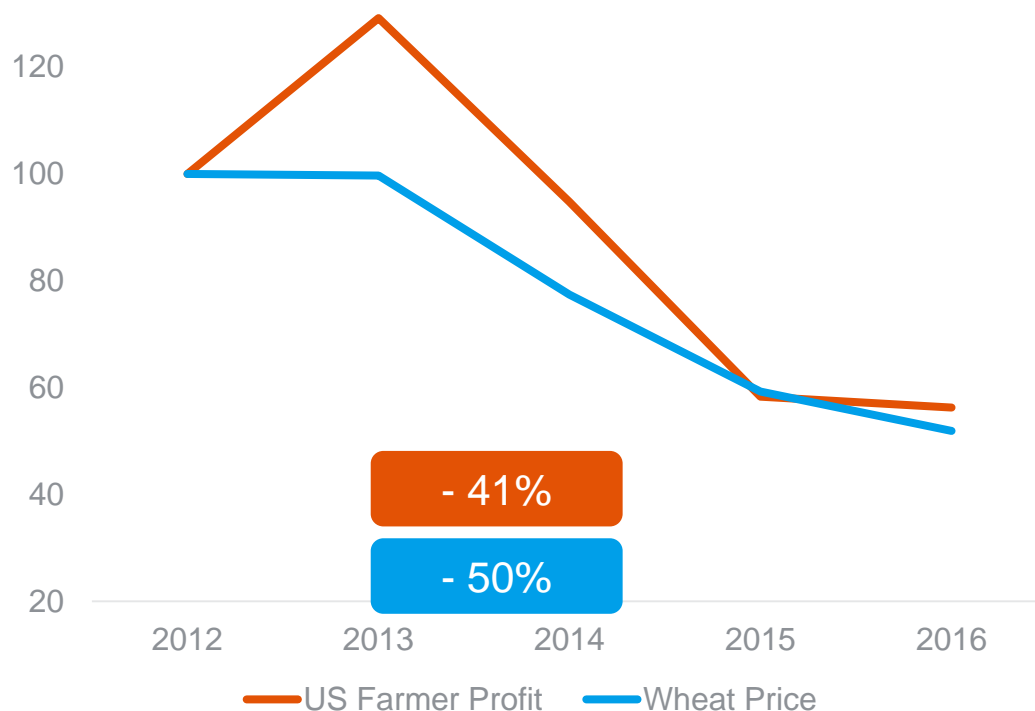
China export in Urea

- 2012: 7 mmt
- 2015: 15 mmt

➤ Lower coal and gas prices have pulled down the floor price for N

WHEAT AND FARMER INCOME DECLINED

Wheat price development and Farmer Income USA 2012 – 2016 FC Indexed (2012 =100)

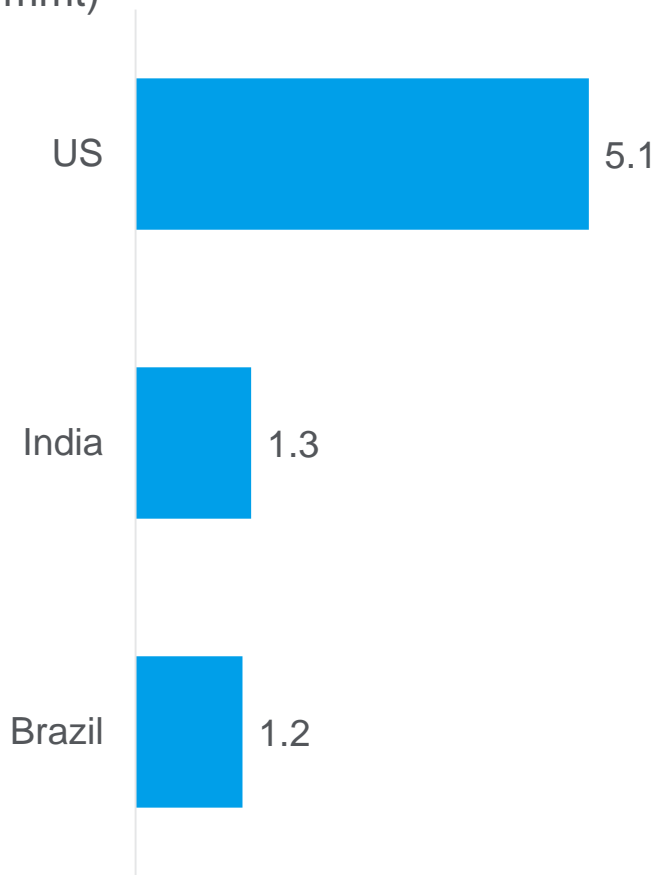


Fertilizer make up to 20% of the total farmers `s costs in field crops

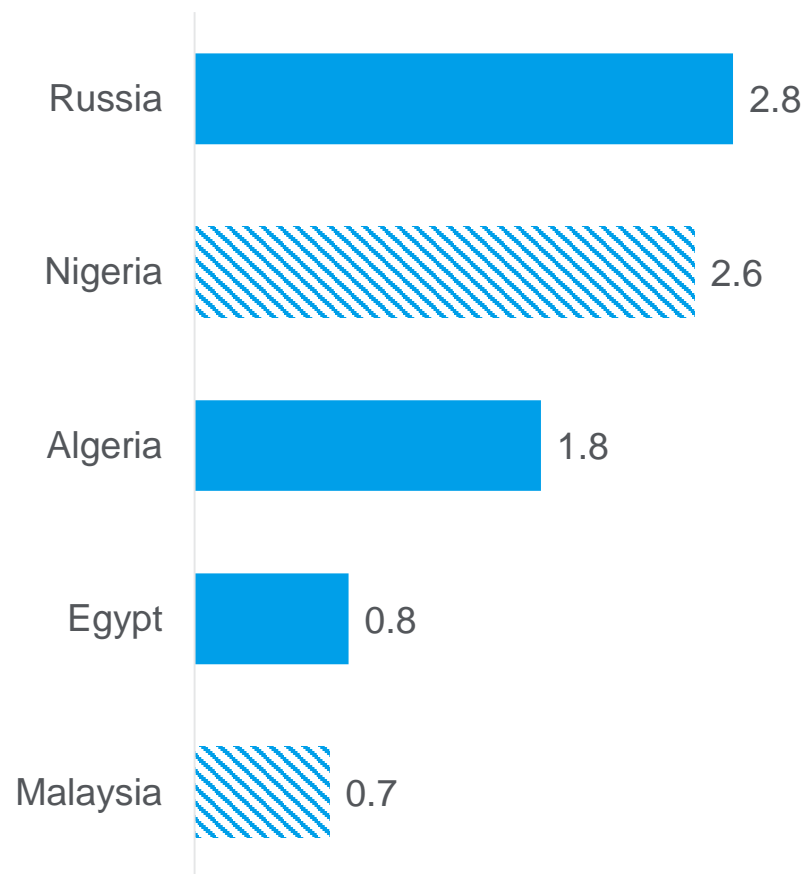
➤ Decline in Farmers' profit is not supportive of fertilizer prices

KEY N IMPORTERS ARE TARGETING SELF RELIANCE

New Capacities by 2020
(in mmt)

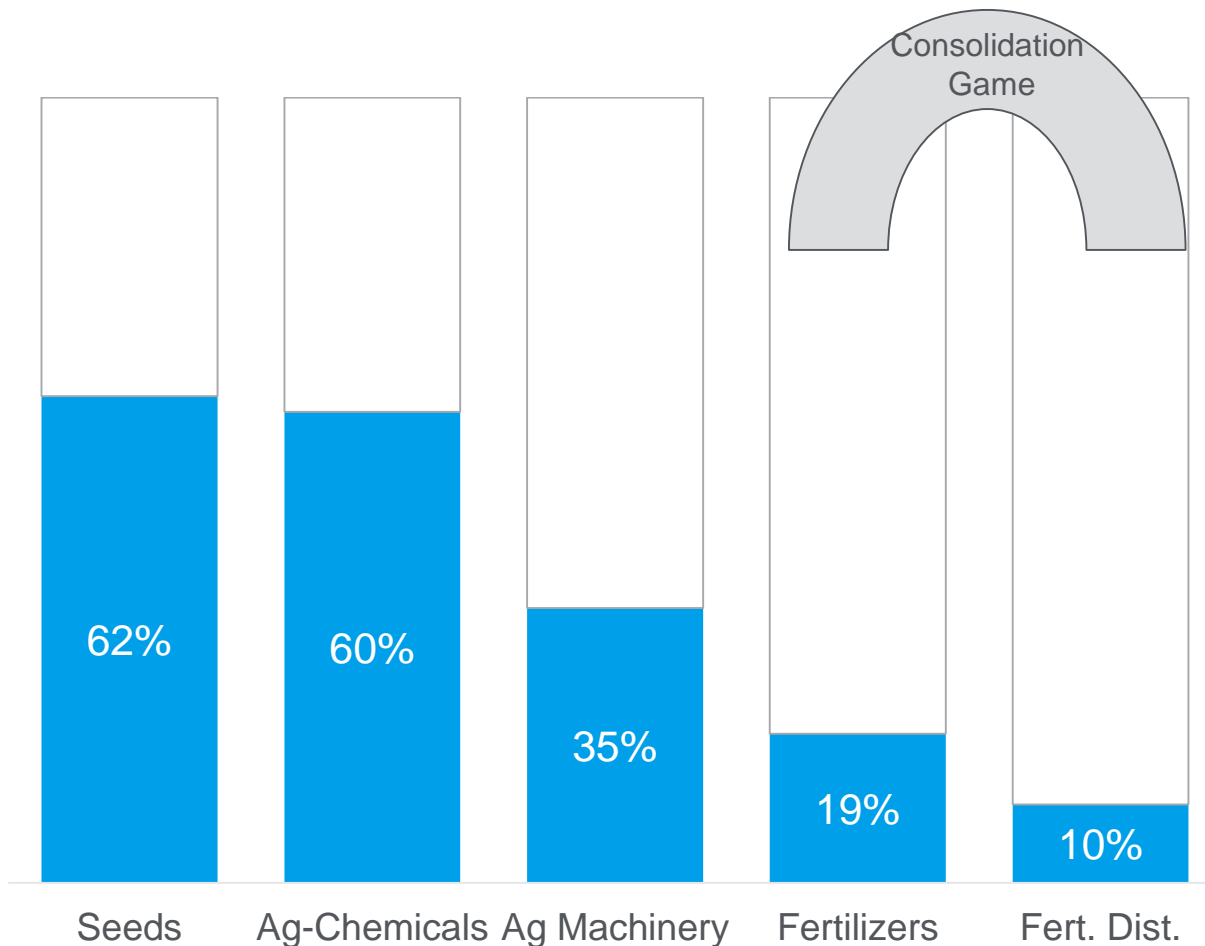


Exports from selected countries
(in mmt)



CONSOLIDATION CONTINUES

Global Market Share of top 5 Players per Agro-Industry Segment

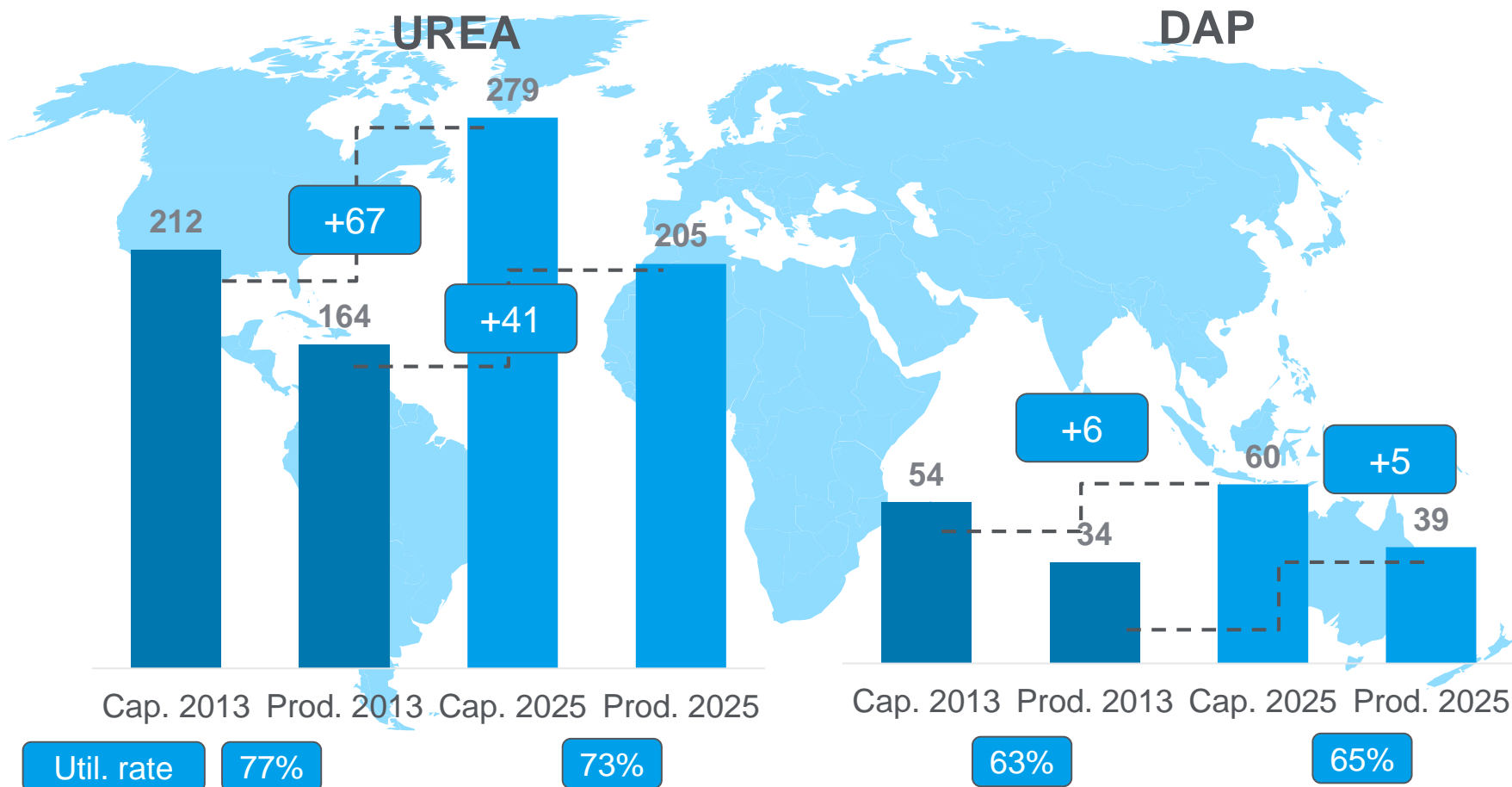


- Grain traders limiting to core business
- Fertilizer companies integrate downstream in distribution

FUTURE CHALLENGES

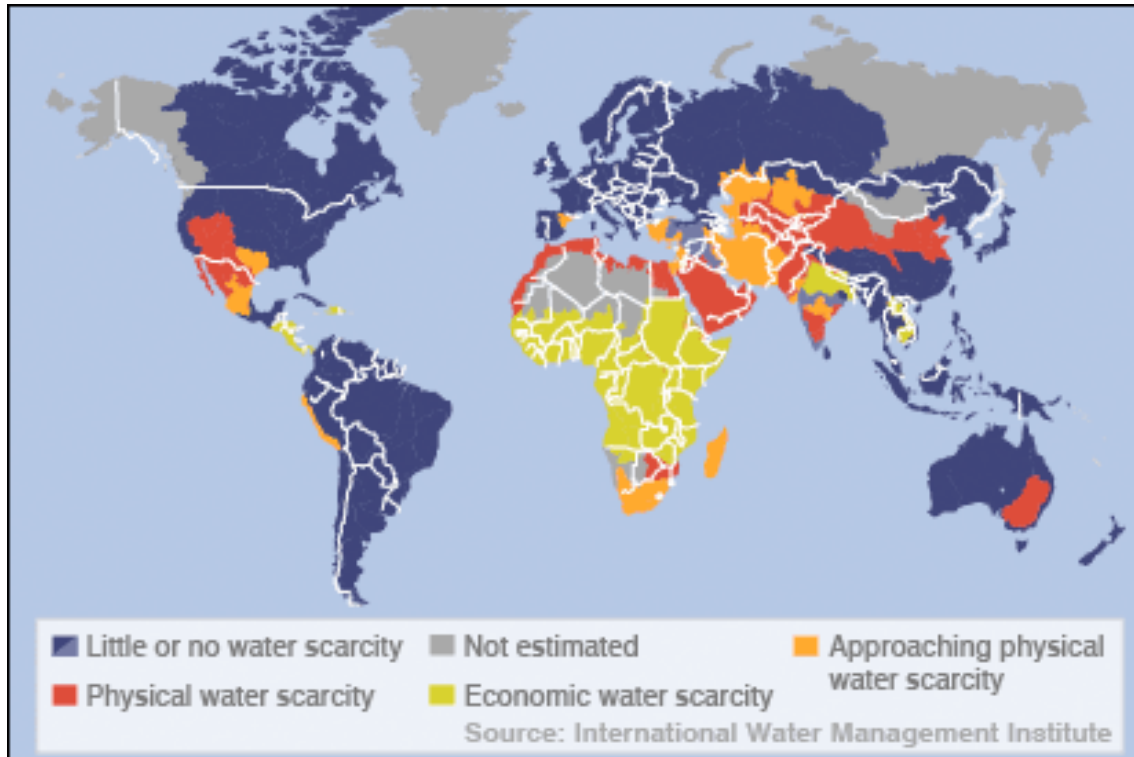
OVERSUPPLY WILL CONTINUE

UREA and DAP Global capacity , demand and utilization development (2013 – 2025)
in mmt and %



WATER SCARCITY AND SOIL DEGRADATION WOULD NEED DIFFERENT SOLUTIONS

Water scarcity and Micronutrients Deficit



20% of total arable land suffer from water scarcity

25 % of the earth's lands are degraded

41% of earth surface consists of high salinity soils

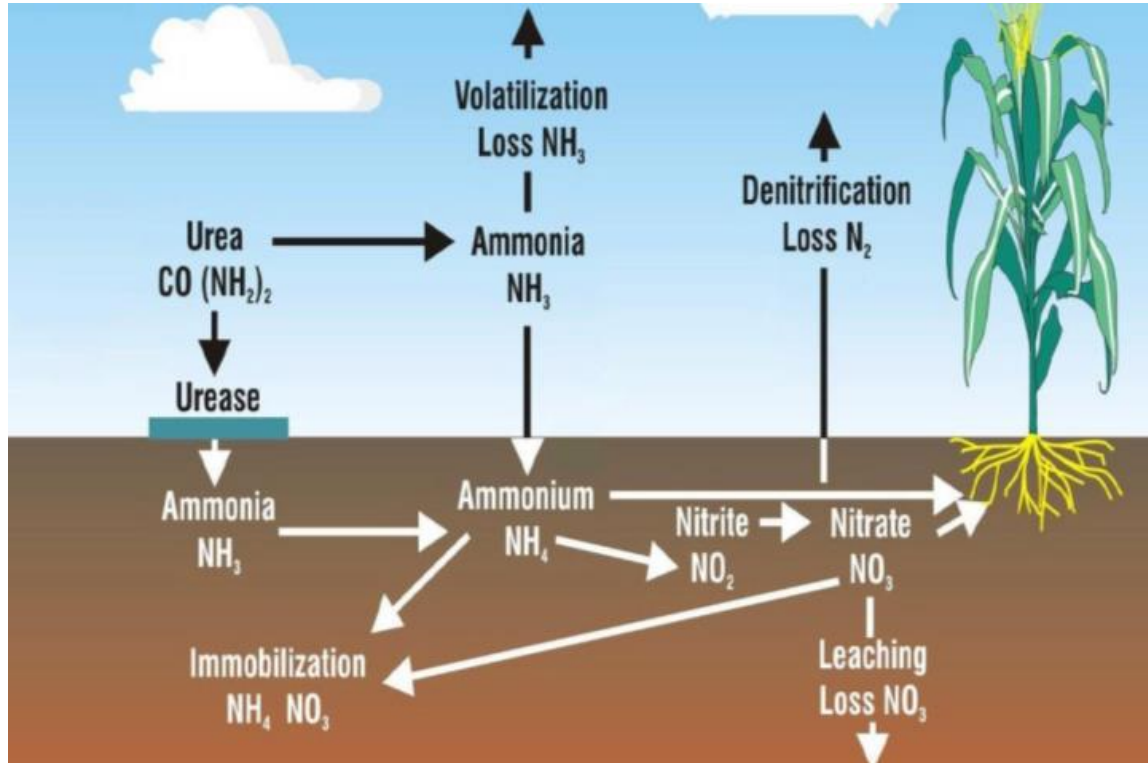
20% of North American soils have a S- deficit

85% of the cereal growing area is affected by low Zn in India

➤ **More water soluble fertilizers and micronutrients enhanced base fertilizers**

SUSTAINABILITY – ADDRESS ENVIRONMENTAL AND HUMAN HEALTH CONCERNS

Sustainability



More than 30% of applied nitrogen can be lost due to ammonia volatilization, nitrate leaching and denitrification

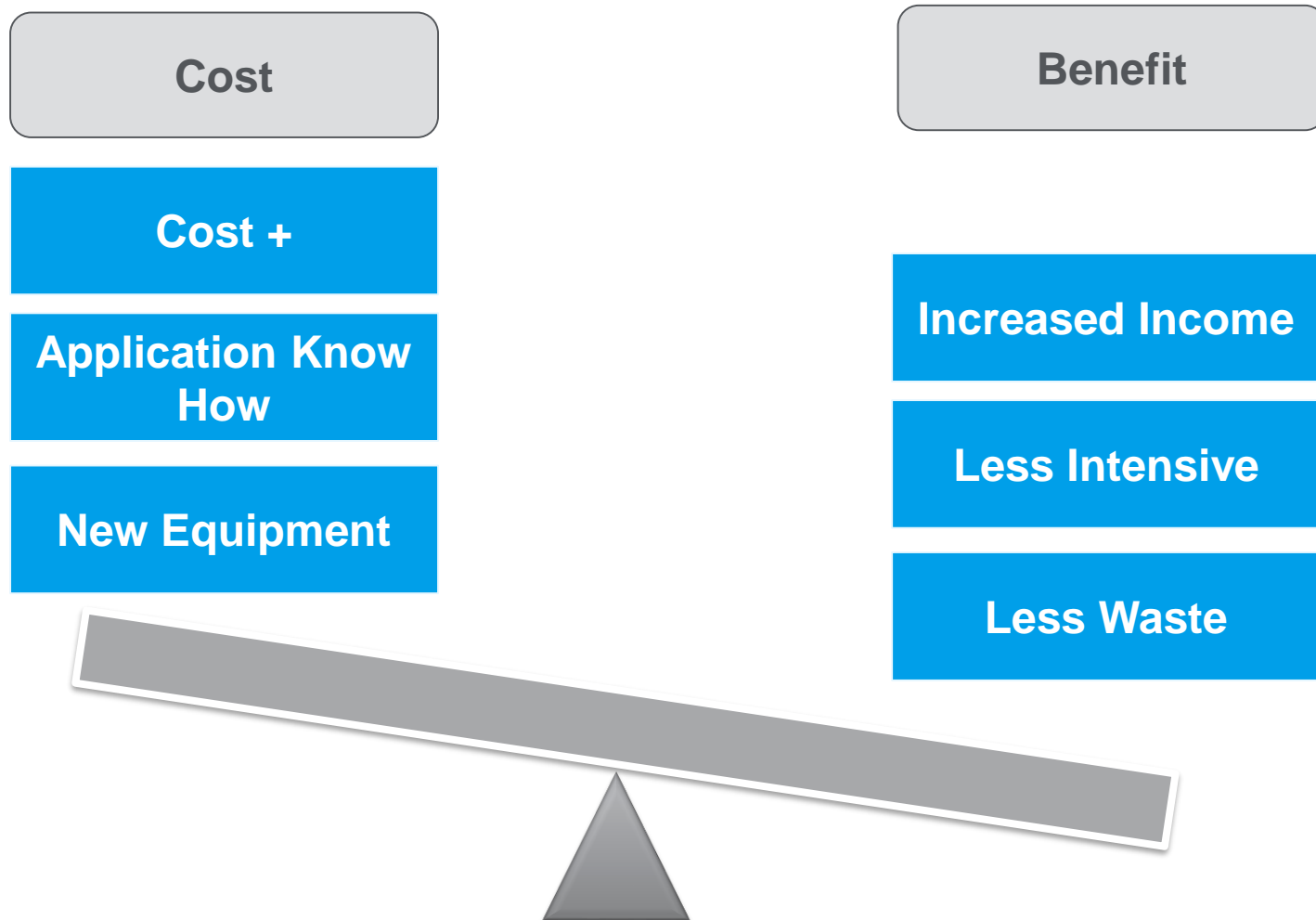
Retaining nitrogen in the soil to nourish the crop

By applying “control release” and “slow release” Urea or NPKs

Consumers would demand healthy products

➤ Need to provide micro-essentials such as B, Cu, Zn, Se proactively besides affordable slow/control release fertilizers

NEW ENHANCED EFFICIENCY FERTILIZERS NEED A CLEAR COST-BENEFIT CASE

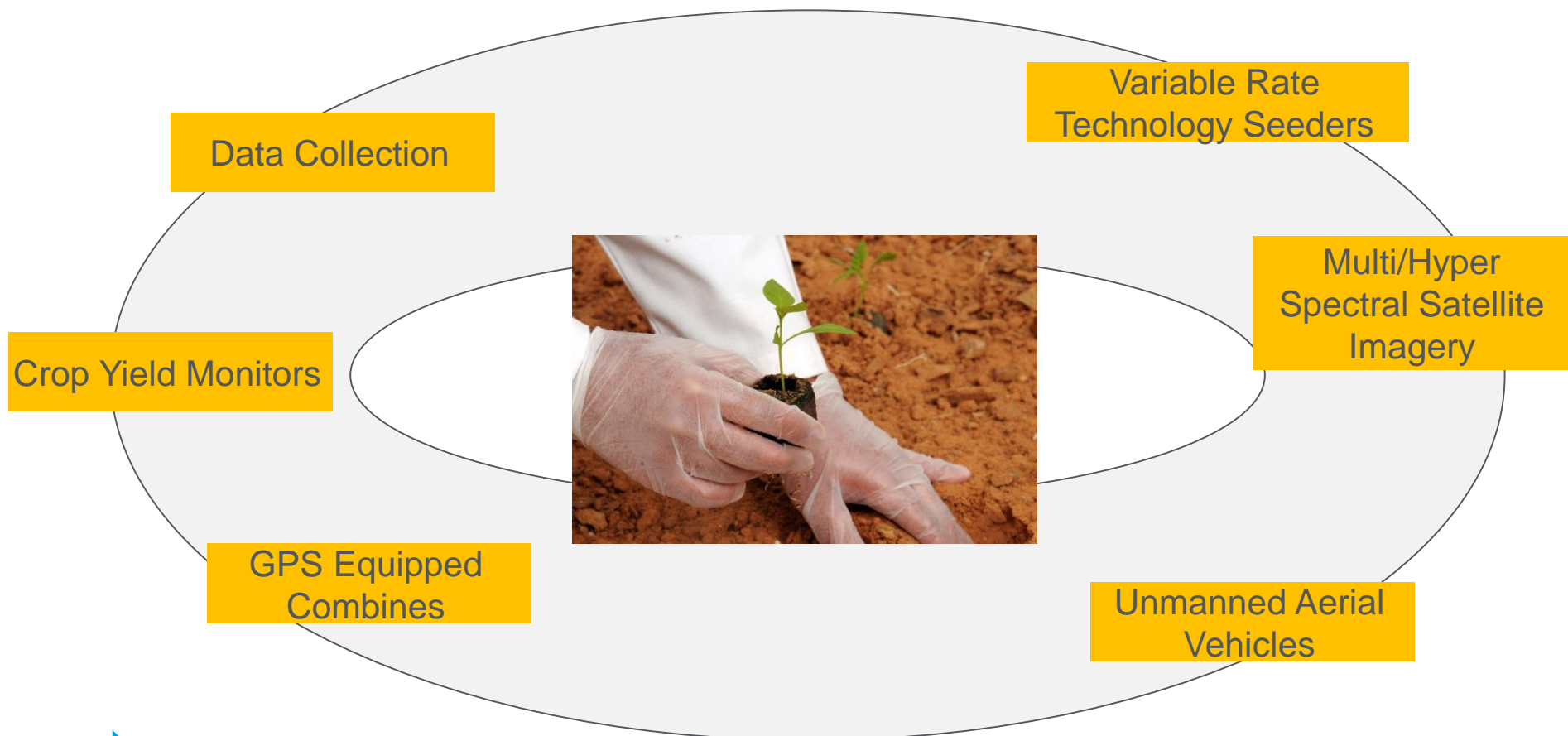


CHINA – REMAINS A KEY INFLUENCER ?

- Greater reduction in emissions, phasing out old plants
- New coal-fired power plants to be “ultra low emissions”
- Focus on High yielding and cost efficient crop production
- Zero growth in use of pesticide and chemical fertilizers
- Fast in developing and selling new fertilizer solutions

“PRECISION FARMING” WILL GAIN IMPORTANCE

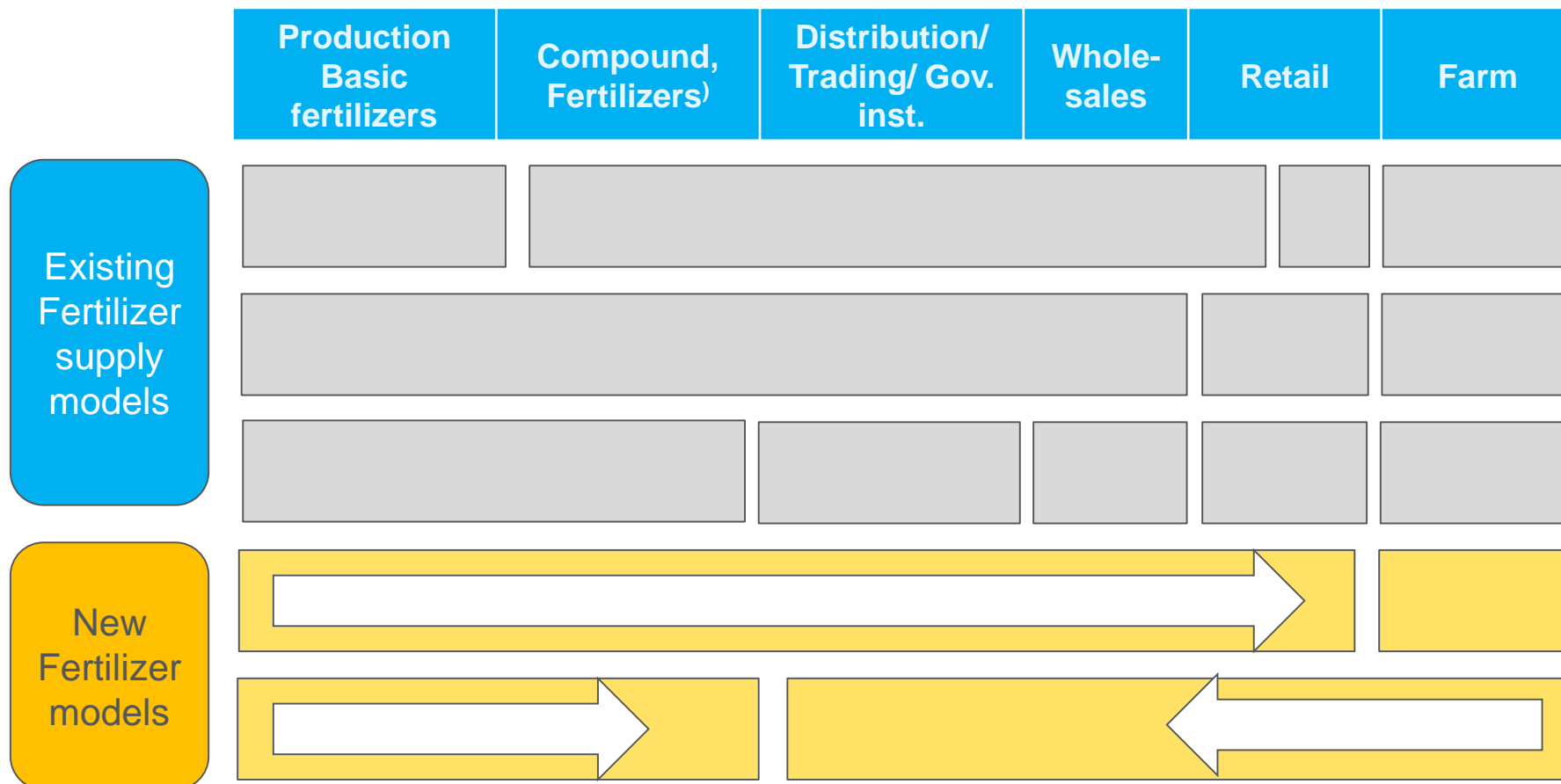
Solution for farmer to utilize “big data”



➤ Site Specific/ crop specific balance dosing of Fertilizers

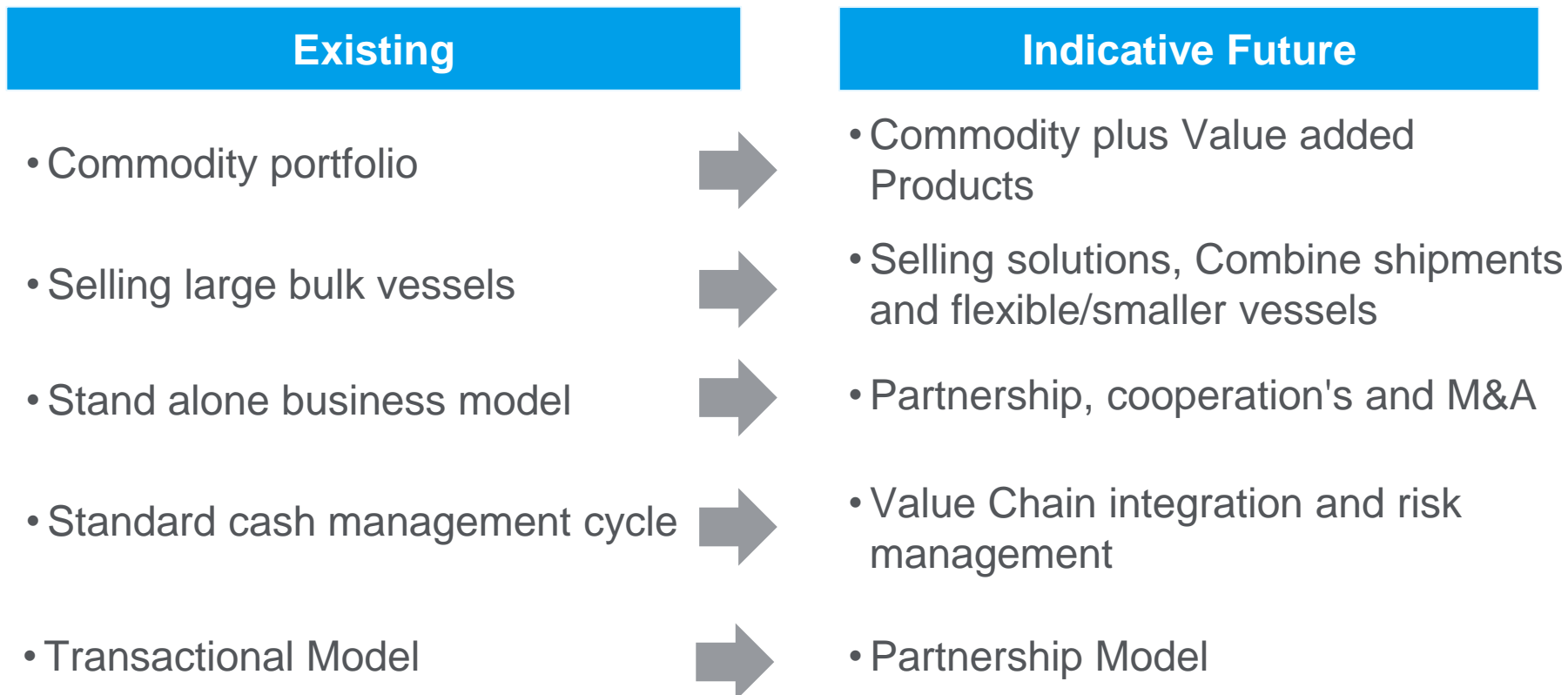
SUPPLY MODELS WOULD EVOLVE

Value Chain Integration Fertilizers



IMPLICATIONS ON GCC PRODUCERS

Major Changes in Fertilizer Supplier Model



THANK YOU