

Resilience, rains, risks and returns

CRISIL Ratings webinar on fertiliser sector

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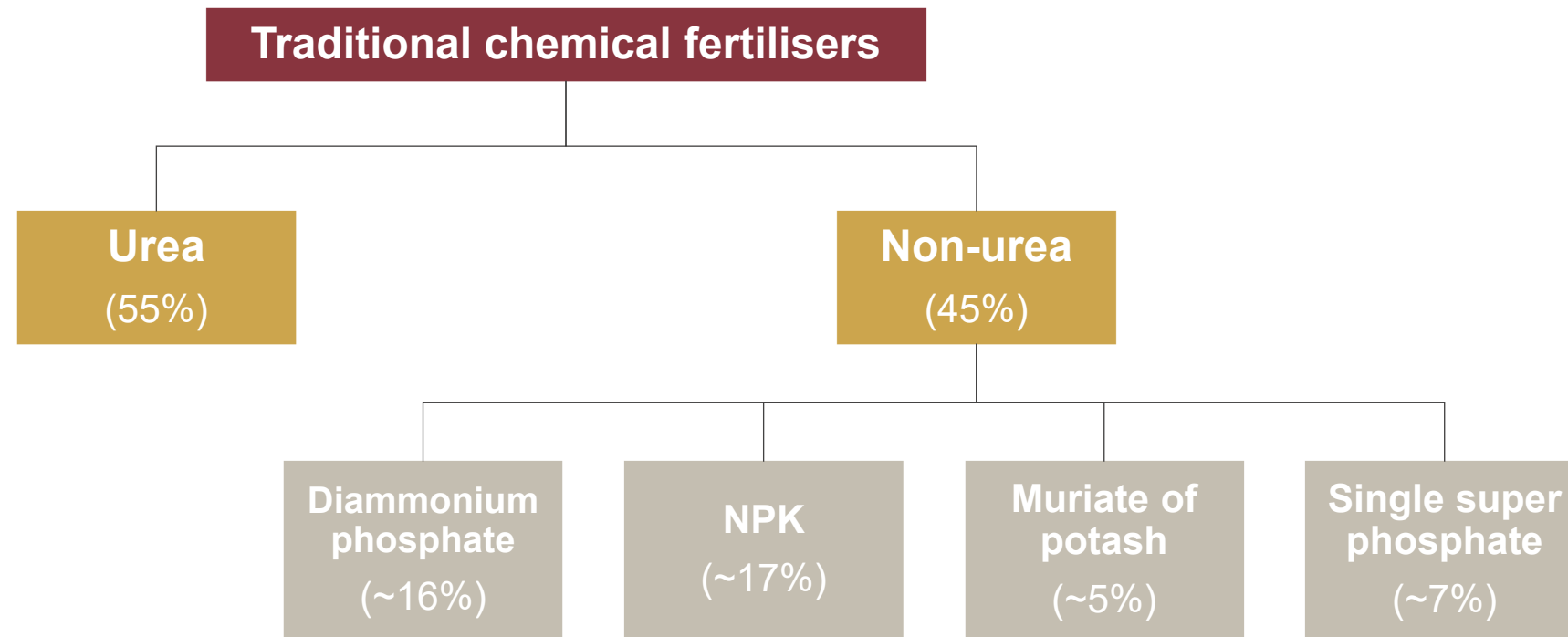
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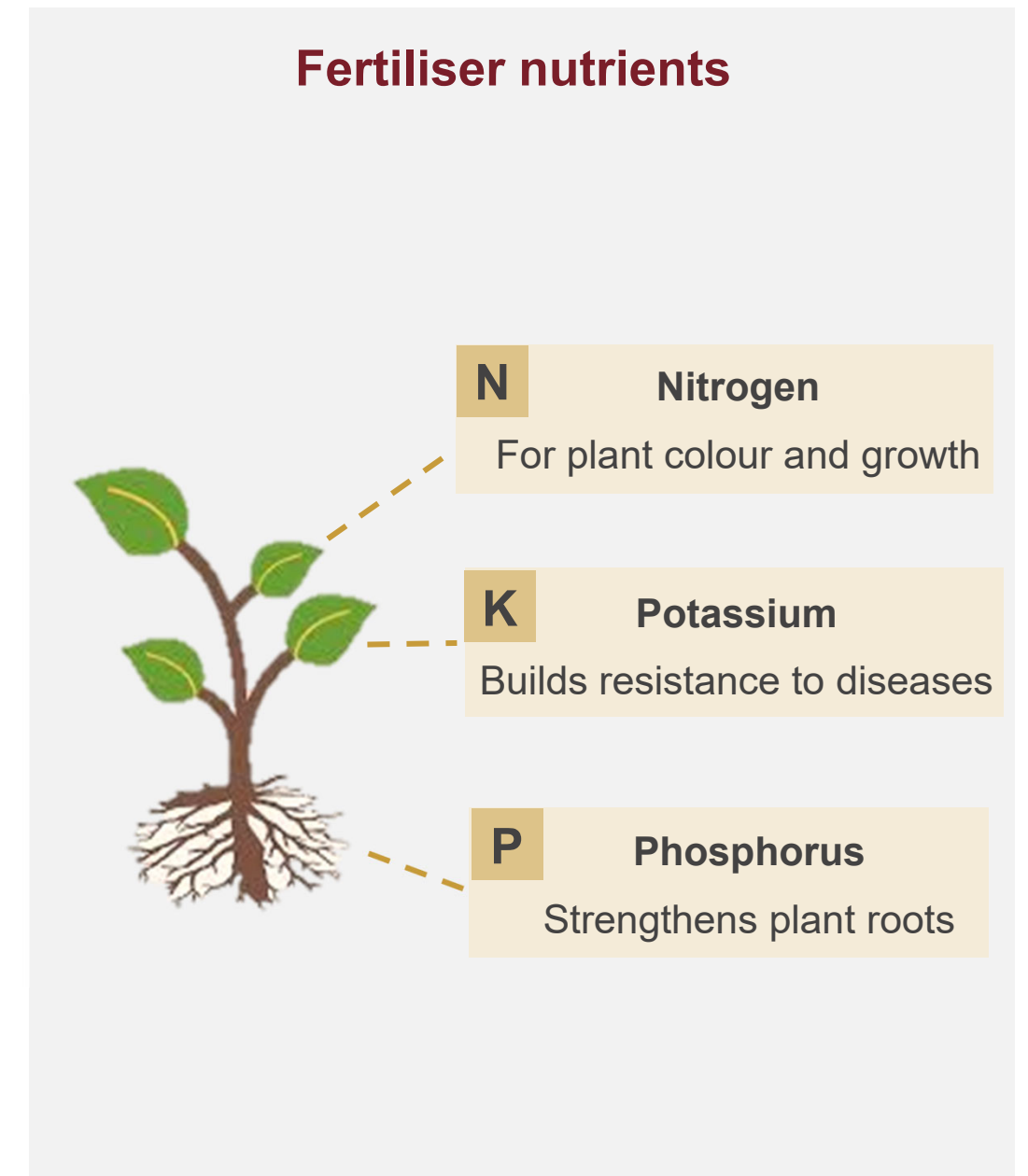
Key messages

Demand	<ul style="list-style-type: none">• Rose 2% on-year last fiscal, with the government compensating higher input costs through bigger subsidy payouts• Growth outlook remains flattish this fiscal, amidst the evolving threat of El Niño
Supply	<ul style="list-style-type: none">• Despite ~8 million tons of capacities commissioned between fiscals 2017-23, 20% of urea requirement will need to be imported• 35-40% of non-urea requirement to be imported, with continued high import dependence on the key raw materials• Nano technology, an emerging trend, could replace imports — its efficacy and pace of adoption will be critical
Profitability	<ul style="list-style-type: none">• Urea, while immune to volatility in gas prices in the recent past, will see range-bound margins due to tighter energy norms and under-recovery of fixed costs• Adequate Nutrient-Based Subsidy (NBS) and easing global prices will keep profits of non-urea segment comfortable
Subsidy receivables	<ul style="list-style-type: none">• Given allocations for kharif season, requirements may surpass the budget allocation of Rs 1.75 lakh crore this fiscal• Additional budgetary allocations is likely for this fiscal; in line with past trend of timely governmental support
Credit profile	<ul style="list-style-type: none">• Timely subsidy payouts and no major capital expenditure (capex) plans will keep credit profiles comfortable

Fertiliser ecosystem in India



	Urea	DAP	NPK	MOP	SSP
N	●	●	●		
P		●	●		●
K			●	●	



Subsidy regime

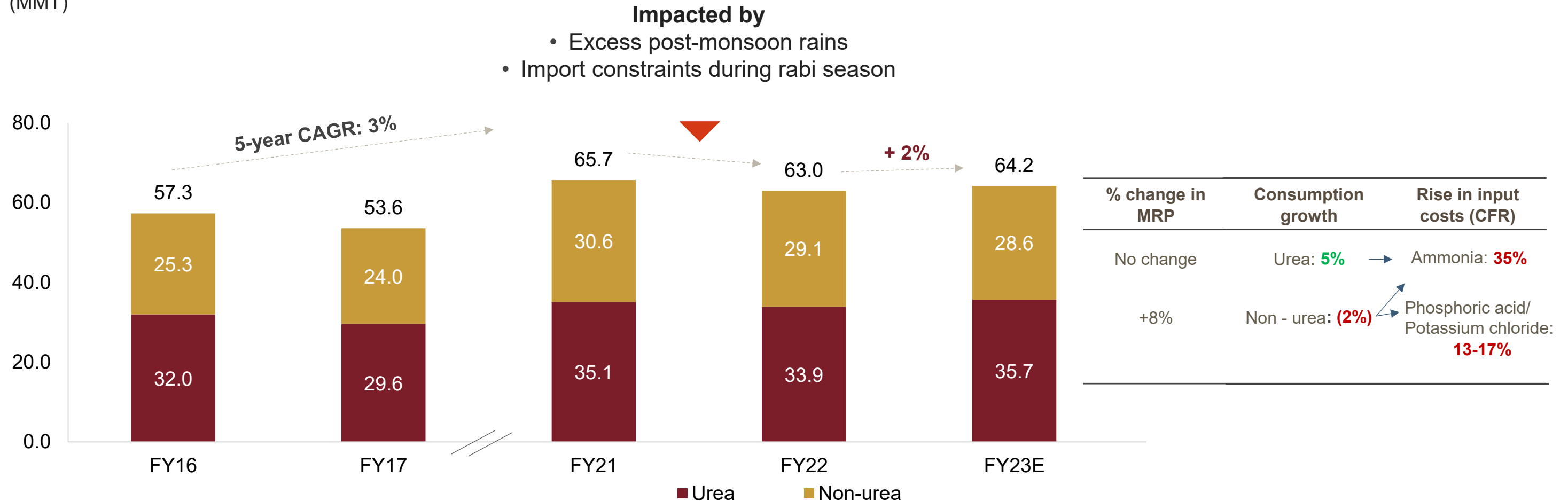
Urea: Fixed MRP and variable subsidy			Non-urea: Fixed subsidy and variable MRP				
(Rs per tonne)		FY16-22	FY23E		FY16-22	FY23E	
	Total price (production cost + returns)	Rs 21,000-35,000	~Rs 53,180		Total price* (production cost + returns)	~Rs 39,510	~Rs 76,110
	=				=		
Fixed	MRP	Rs 5,647	Rs 5,647	Subsidy* (basis NBS announced)	~Rs 13,820 (~35% recovery through subsidy)	~Rs 49,300 (~65% recovery through subsidy)	
	+				+		
Variable	Subsidy	Rs 15,350-29350 (75-85% recovery through subsidy)	~Rs 47,530 (~90% recovery through subsidy)	MRP*	~Rs 25,690	~Rs 26,815	

*Computed for diammonium phosphate. MRP: Maximum retail price
Source: Department of Fertilisers, CRISIL Ratings

Demand and supply dynamics

Fertiliser sales resilient to steep rise in input costs, growth seen flattish

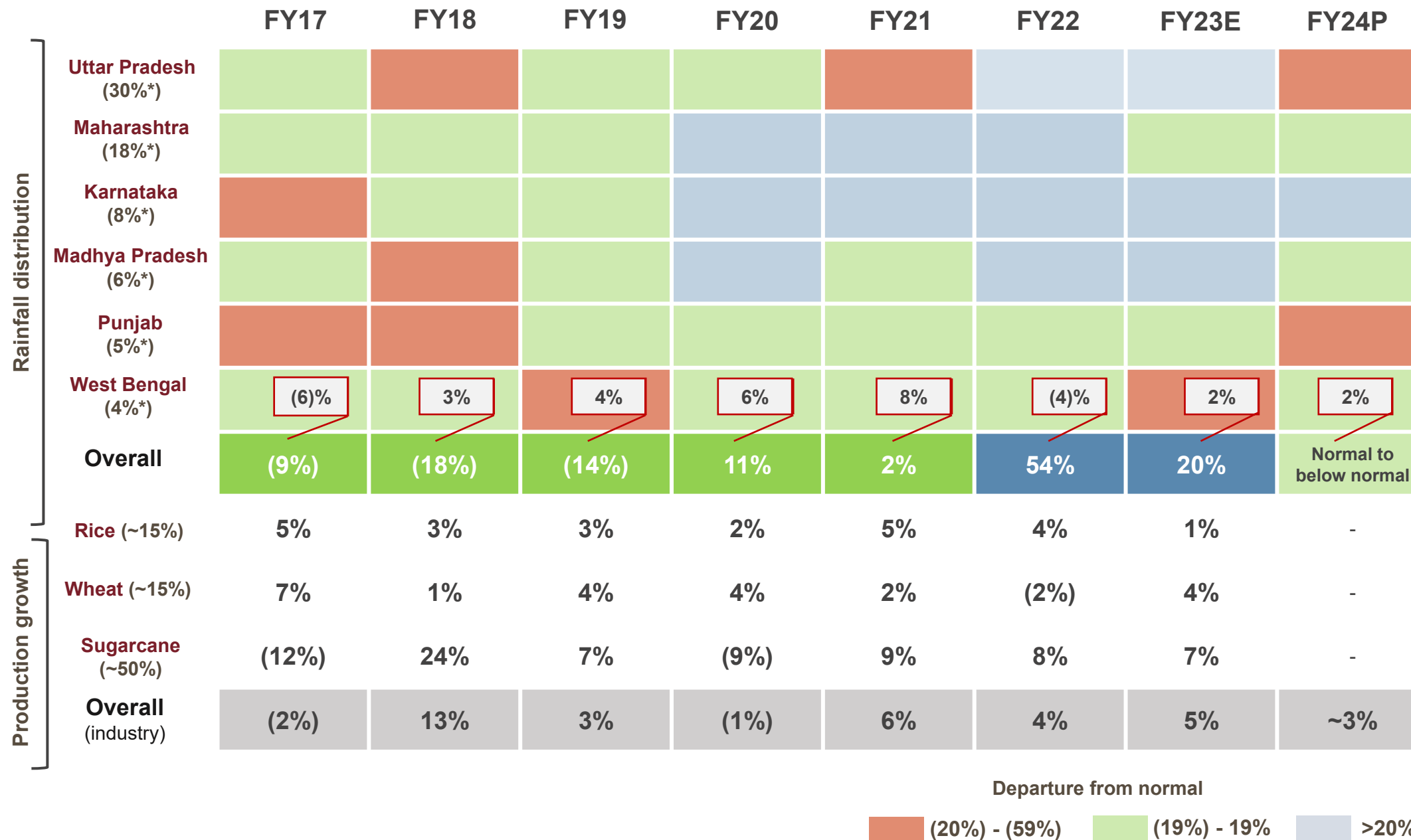
(MMT)



- Overall, fertiliser consumption grew 2% on-year last fiscal, despite the steep rise in input costs, as MRPs remained largely unchanged with the government compensating through increased subsidy payouts
- Growth outlook for this fiscal depends on rainfall amidst the evolving threat of El Niño
- The government's aim to improve land productivity would support higher growth of non-urea in the long run

Source: Department of Fertilisers, CRISIL Ratings
CFR: Cost and freight; MMT: Million metric tonne

Likely normal monsoon to support agriculture, threat of El Niño looms

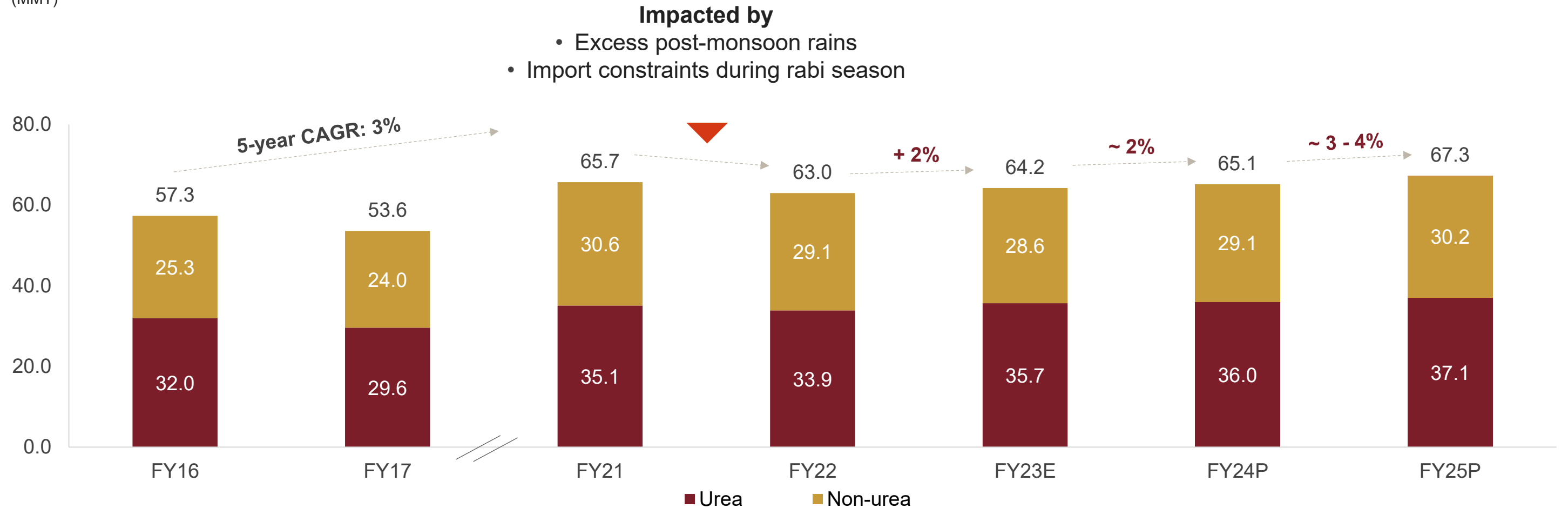


- Estimates for 2023**
- IMD estimates 'normal' monsoon
 - Skymet, however, predicts 'below normal' monsoon, citing probability of El Niño
 - Intensity and occurrence of El Niño and ultimate impact of the positive phase of IOD could alter estimates
 - While states such as Uttar Pradesh, Punjab, Haryana have good irrigation facilities, other major crop-producing states, such as Rajasthan, Maharashtra and Karnataka, depend on rains

*Share in agricultural output – based on state-wise area production for fiscal 2021 (provisional)
 Crop production data is on FY basis, rainfall statistics are on CY basis
 Source: Directorate of Economics & Statistics, Ministry of Agriculture & Farmers Welfare, IMD, CRISIL Ratings
 IMD: India Meteorological Department; IOD: Indian Ocean Dipole

Fertiliser sales resilient to steep rise in input costs, growth seen flattish

(MMT)

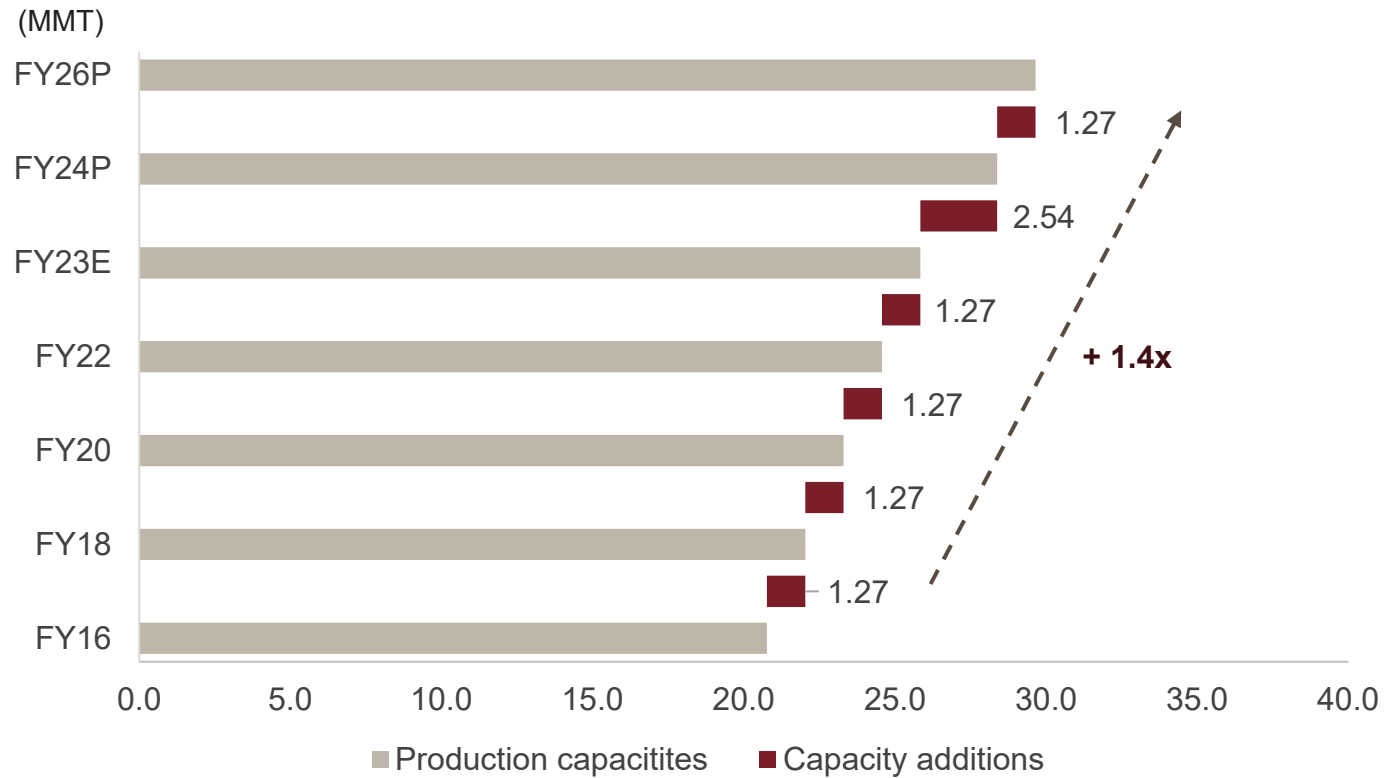


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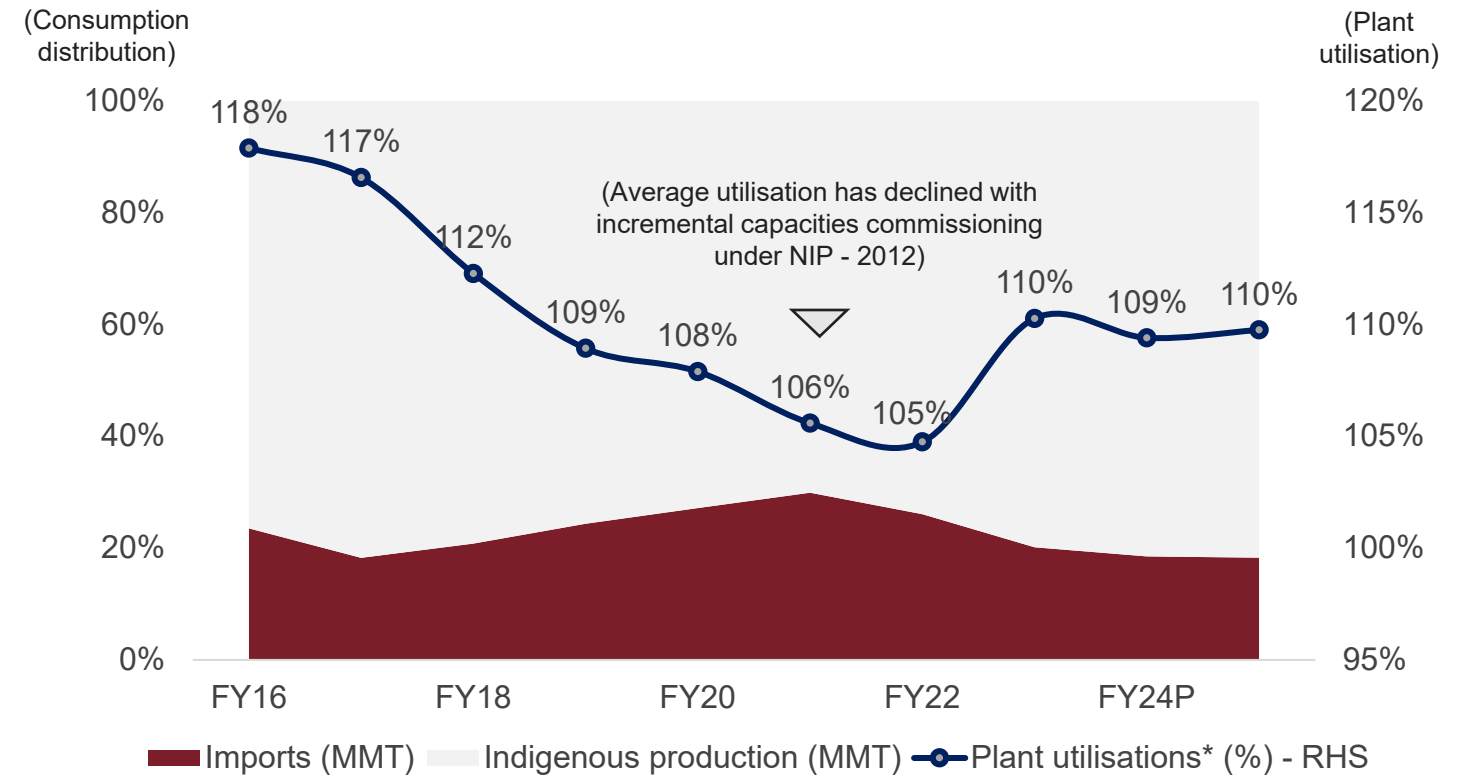
Source: Department of Fertilisers, CRISIL Ratings
CFR: Cost and freight; MMT: Million metric tonne

Urea: Import dependency to continue ~20%, despite 8MT of capacity addition

While urea capacities have commissioned over past fiscals....

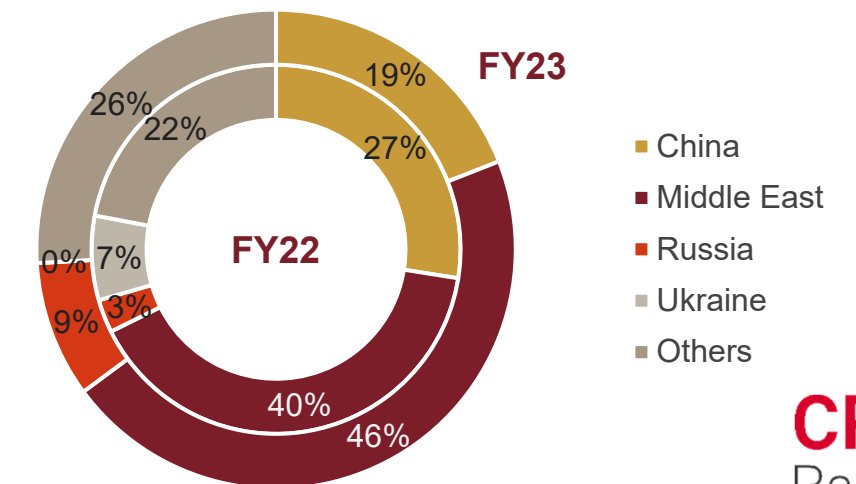


.... ~20% of requirement continues to be imported



- Excluding the Talcher unit expected to resume operations in 2024/25, no greenfield/brownfield projects planned over the medium term
- Globally, trade is limited to only 30% of urea consumption
- India & China lead in terms of consumption, while major exports are by Middle East & China

Russia & Middle East's share in Indian imports increased, as China restricted exports

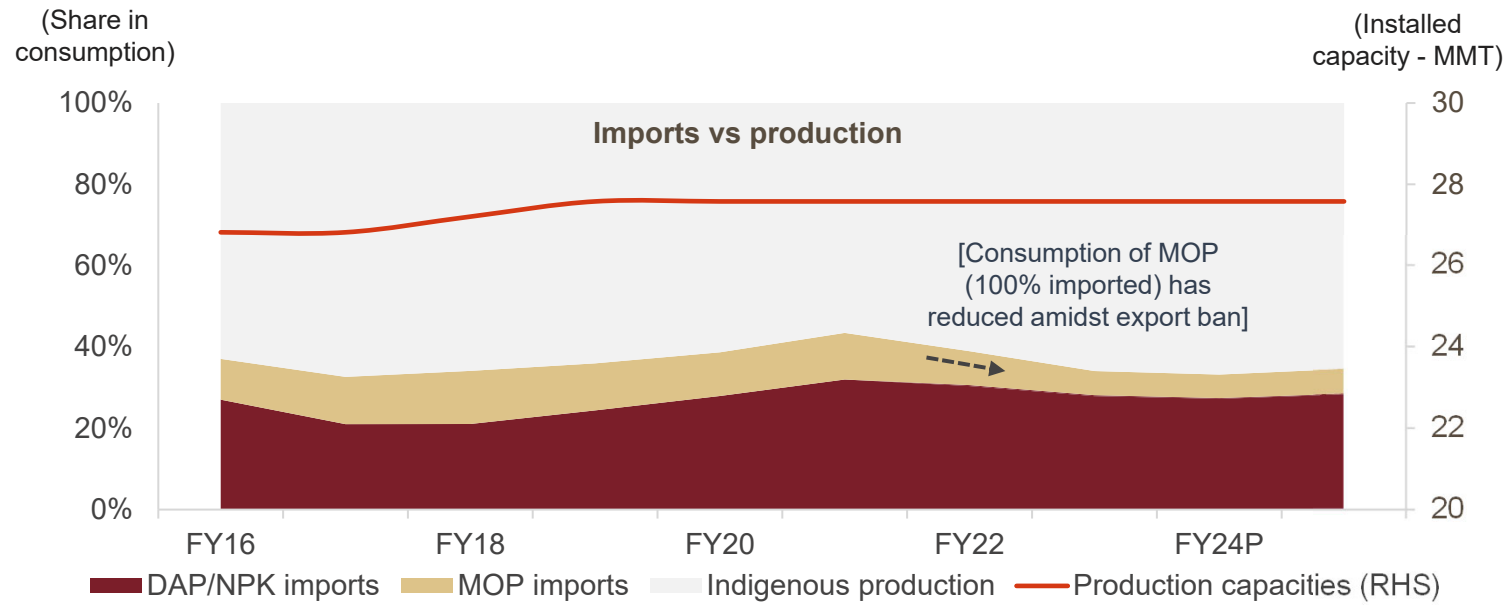


*For capacities commissioned in a year, its utilisation is factored in the next year of operations

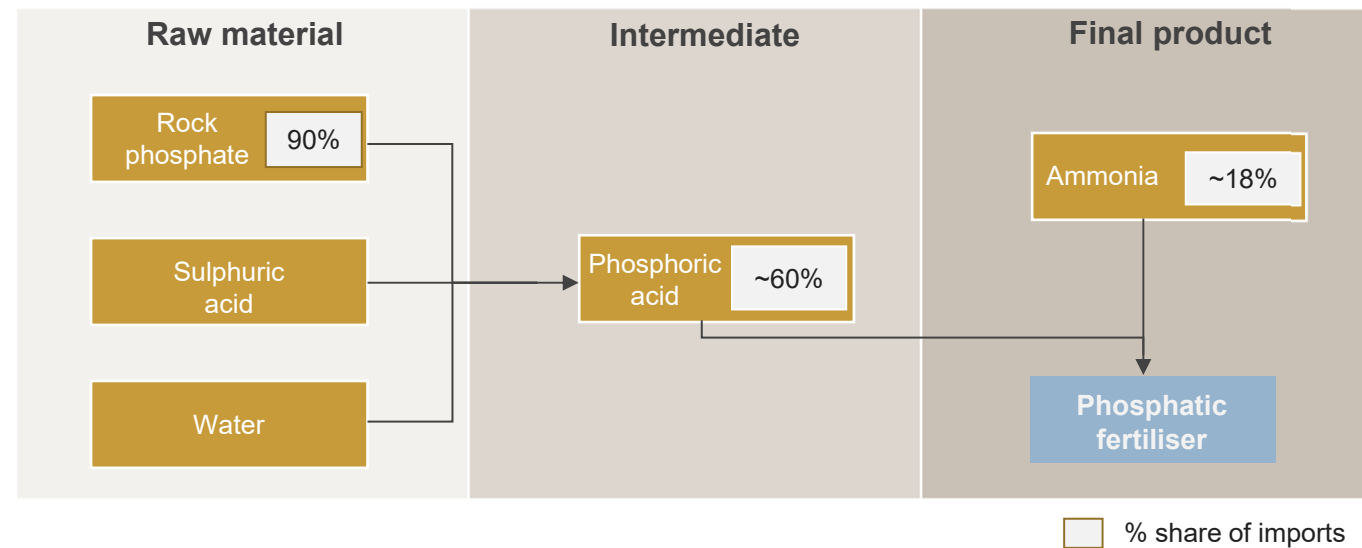
Source: Company reports, Department of Fertilisers, Ministry of Commerce & Industry, CRISIL Ratings

HURL: Hindustan Urvarak & Rasayan Ltd, RFCL: Ramagundam Fertilizers & Chemicals Ltd., NIP: New Investment Policy, MT: million tonne

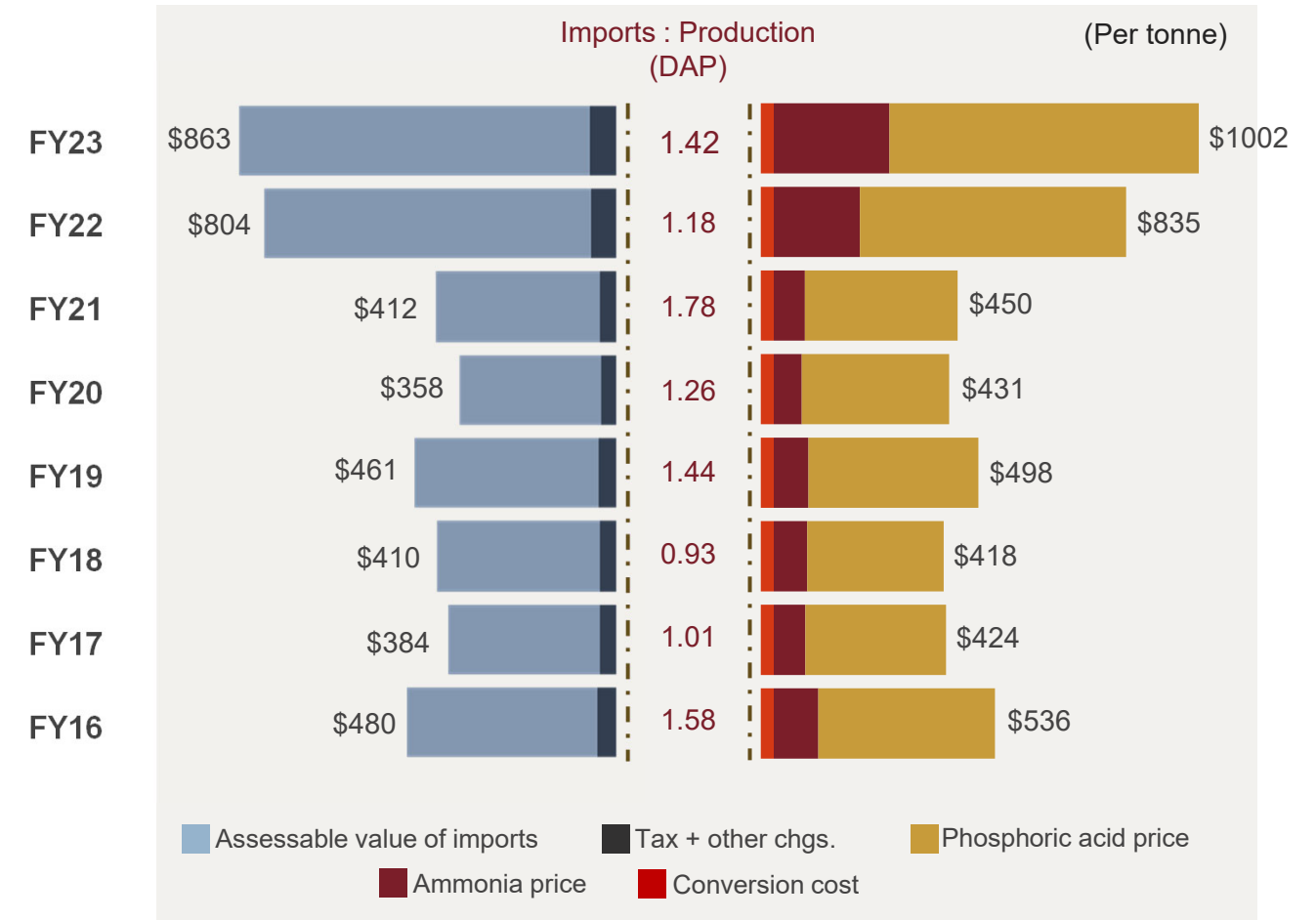
Non-urea: 35-40% of consumption imported, no new capacity planned



India largely dependent on imports for raw material/intermediates...



... Higher raw material prices make finished products' imports cheaper than domestic produce, discouraging capacity expansion

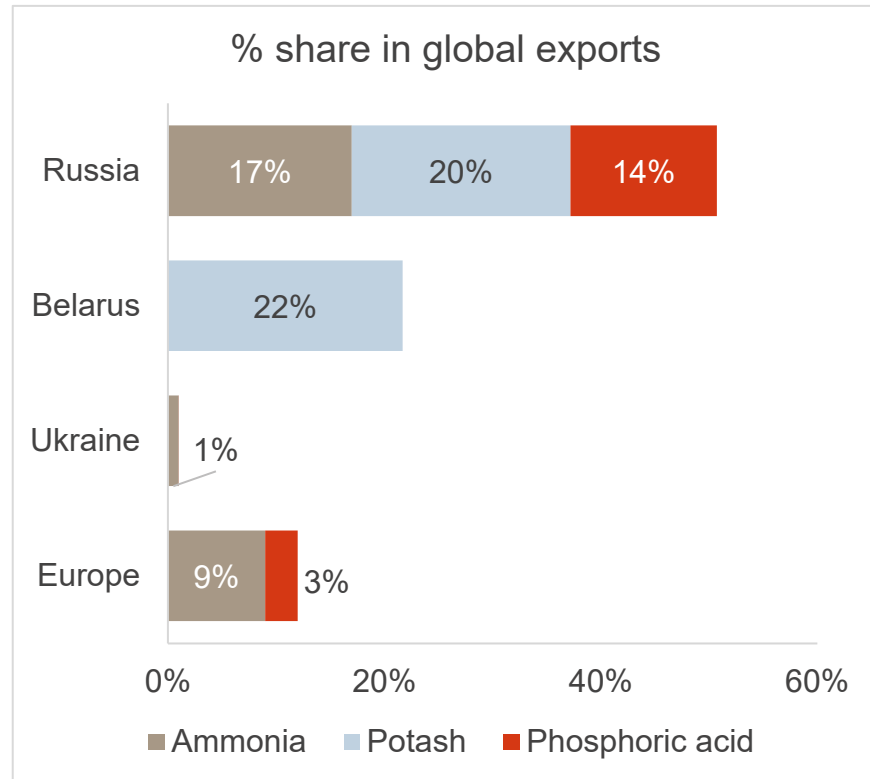


- While MOP continues to be entirely imported, DAP/NPK production plants in India have been operating at 85% of capacity
- To maintain competency vis-à-vis imports, companies continue to invest in backward integration to secure raw material sourcing

Source: Company reports, Department of Fertilisers, FertiliserIndia, CRISIL MI&A Research, CRISIL Ratings
MOP: Muriate of potash, DAP: Diammonium phosphate, NPK: Nitrogen, Phosphorus, Potassium, RM: raw material

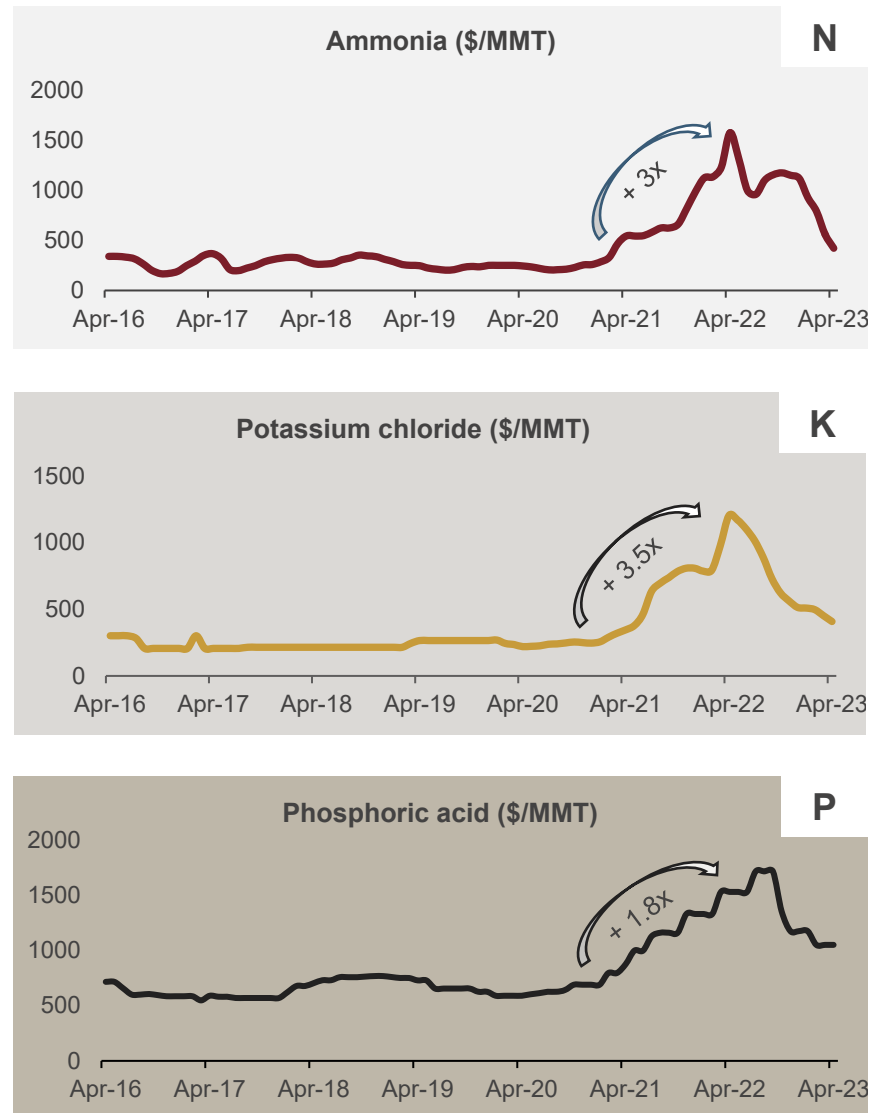
Easing demand-supply gap has improved global availability of DAP

Russia and Belarus have been key contributors to global fertiliser exports

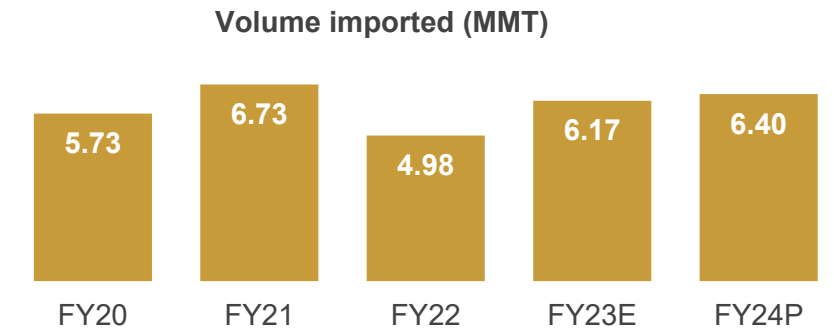


- While the sanctions on Russia excluded the agricultural sector, potash from Belarus and Russia was banned
- 'N' rates soared due to disruptions in natural gas supply amid the Russia-Ukraine war

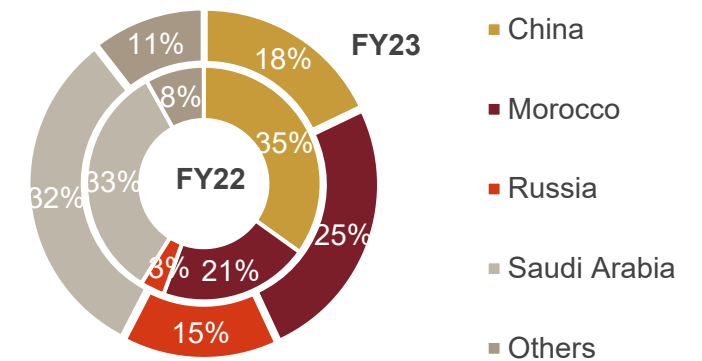
Softening raw material prices follow easing concerns of demand-supply mismatch



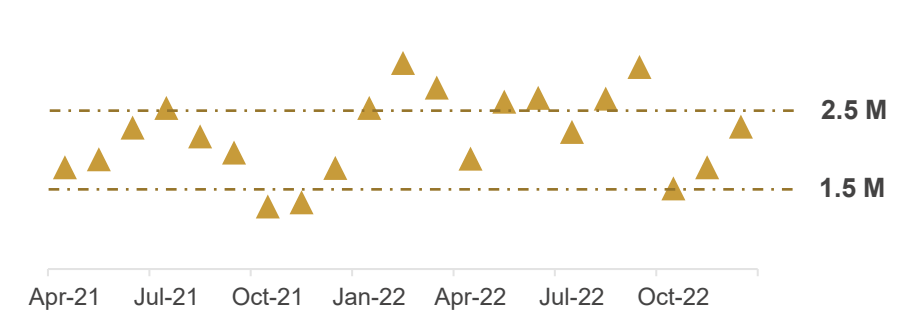
Domestic requirements were met through alternative arrangements



Imports to India



Availability to sales ratio

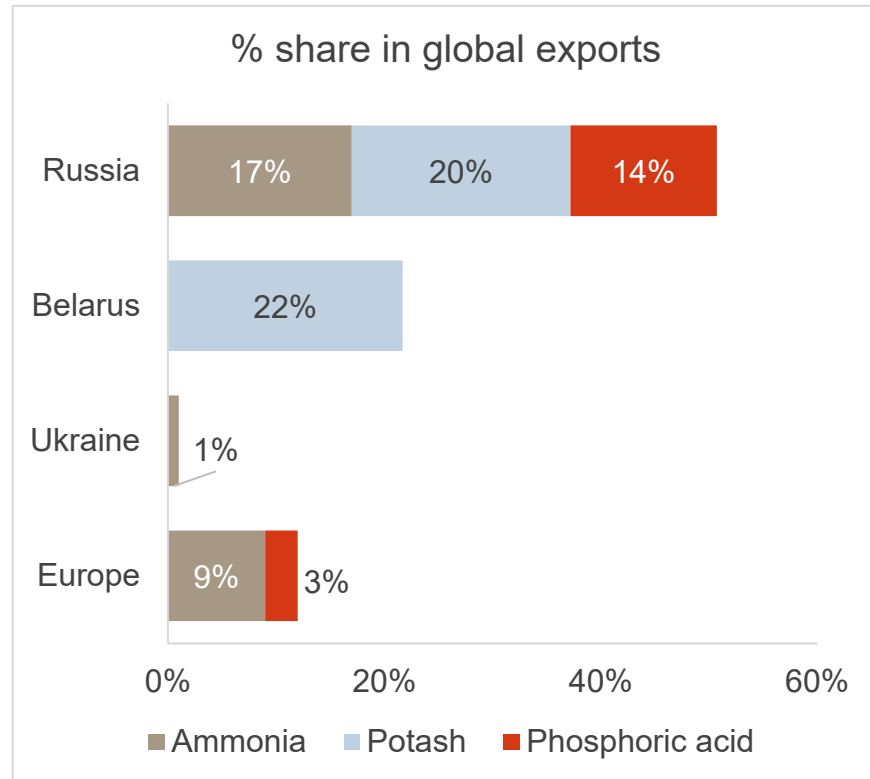


DAP: Diammonium phosphate

Source: Company reports, Department of Fertilisers, Ministry of Commerce & Industry, World Bank, Government of Canada, oec.world, CRISIL Ratings

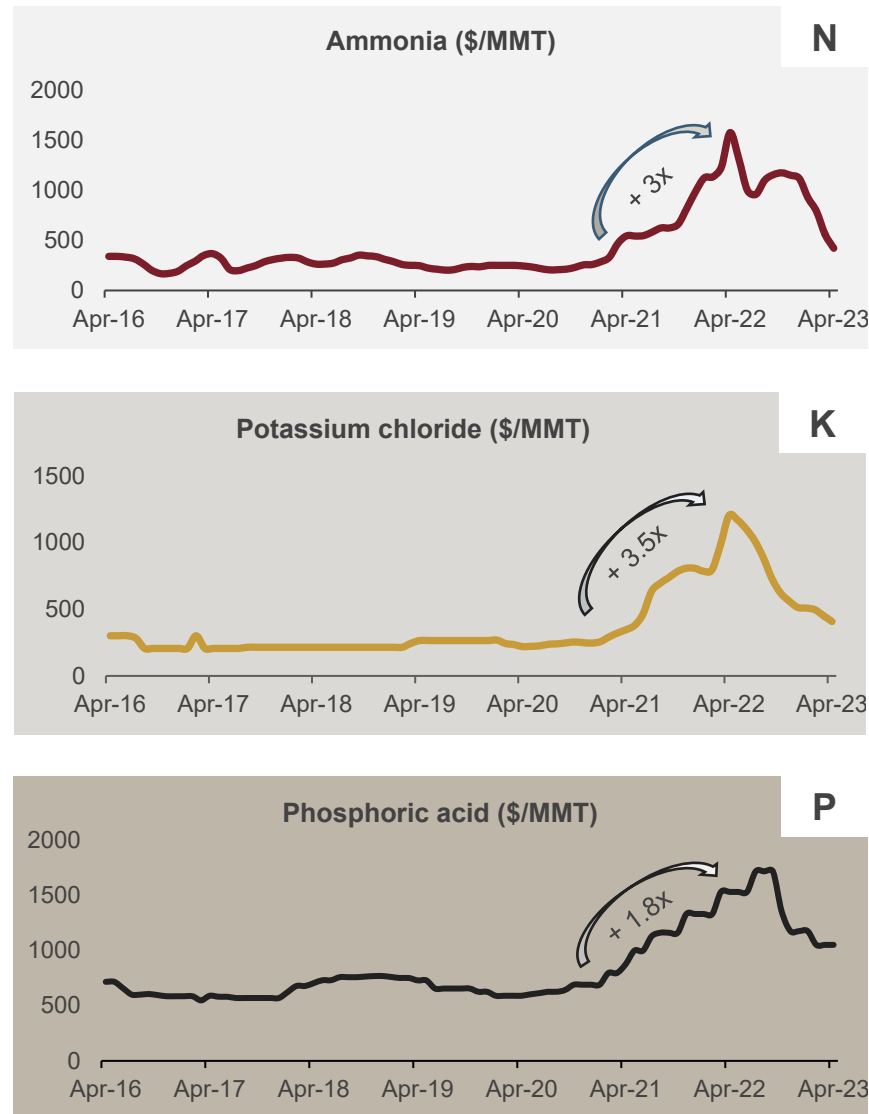
MOP imports to remain subdued amid continued export sanctions

Russia and Belarus have been key contributors to global fertiliser exports

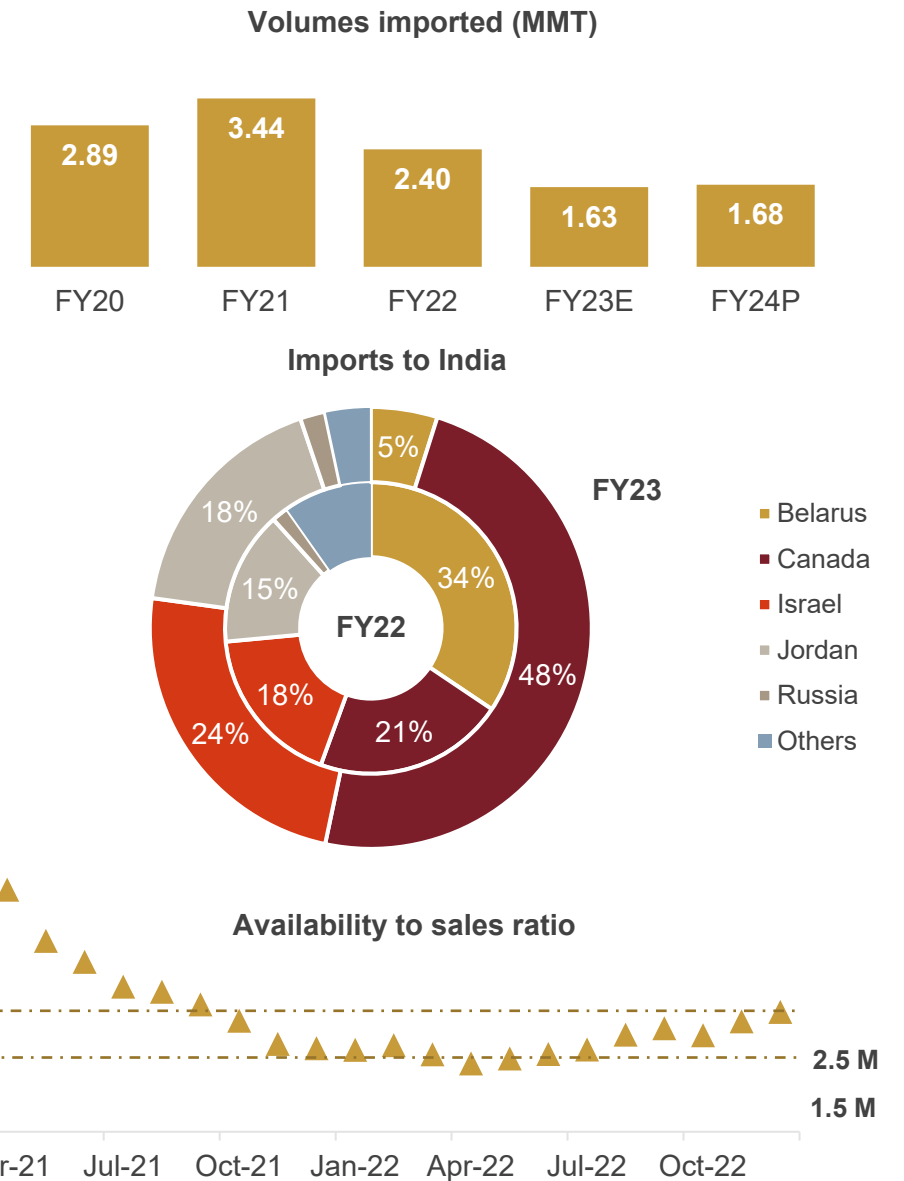


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Domestic requirements were met through alternate arrangements



MOP: Muriate of potash

Source: Company reports, Department of Fertilisers, Ministry of Commerce & Industry, World Bank, Government of Canada, oec.world, CRISIL Ratings

Nano fertilisers in focus, could replace imports

While a potential game changer, its efficacy and adoption pace is critical



Made of nano particles that contain nutrients

Replacement

1 bottle nano fertilizer = 45/50 kg bag of conventional fertiliser

MRP vs conventional:

- Urea: comparable
- DAP: ~50% cheaper

Potential benefits : Farmers

Reduction in input cost

- Lower input cost
- Better efficiency

Higher crop yield

No subsidy

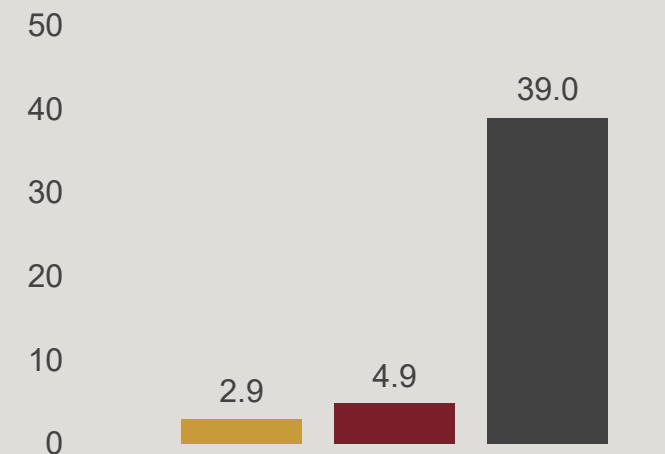
No subsidy to be given factoring low production cost



Initiated with urea, currently nano-DAP is produced too

Estimated production growth

(crore bottles)



*~39 crore urea bottles ≈ 18 mn tonne
[hence can replace imports]*

Budgeted investment

- Investment: ~Rs. 2500 crore
- Nano plants: 10-11, with a mfg. capacity of 5-6 crore bottles/year



Technology at its nascency of validation

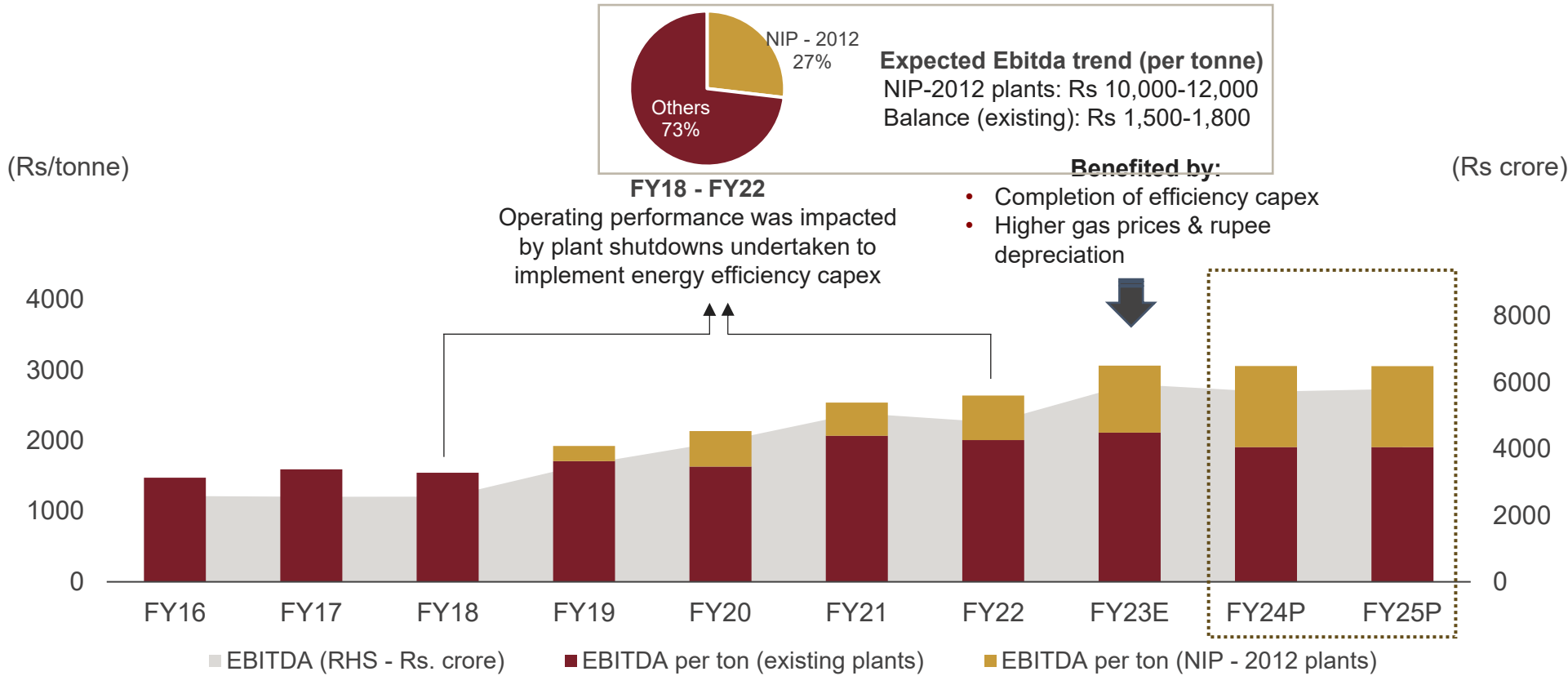
Mainly can be used only as a foliar spray

Traction of farmers adopting, given requirement of drones for effective use

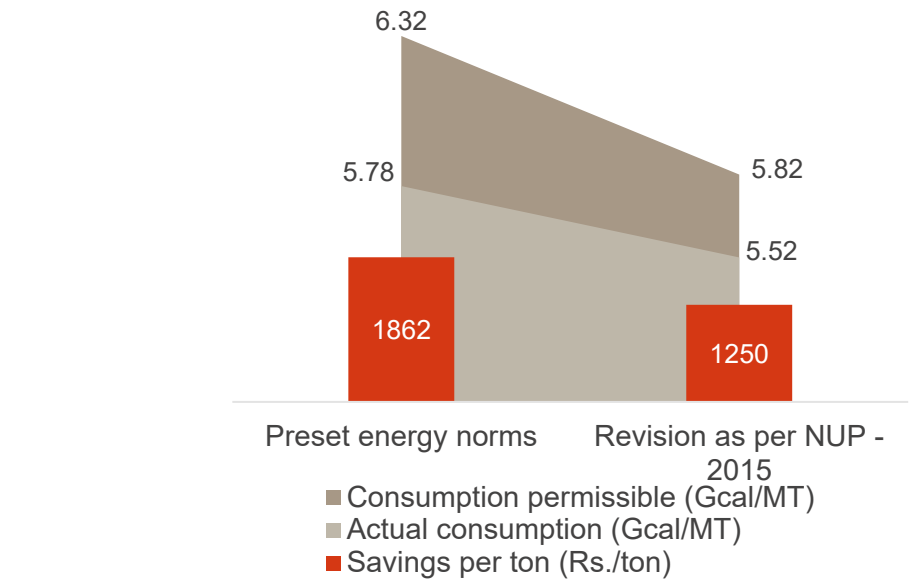
Source: Industry publications, CRISIL Ratings

Trend in operating profits

Urea: Profitability to remain range-bound

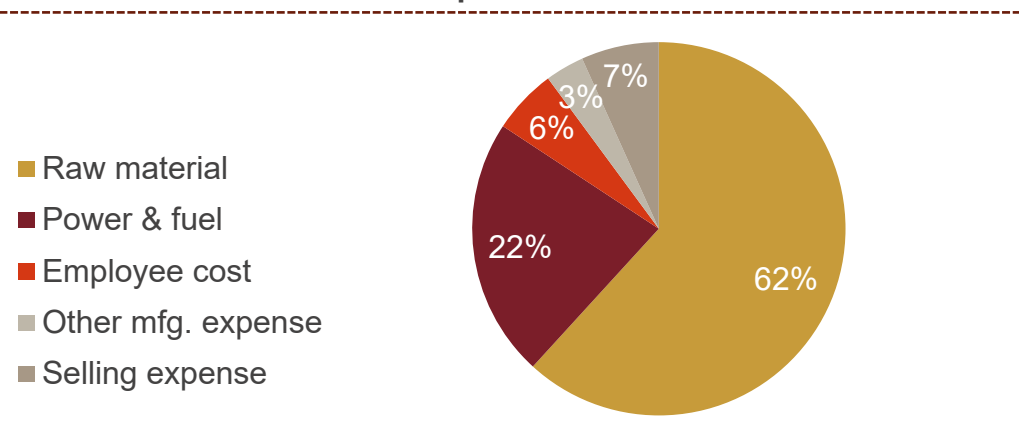


Profitability drivers for urea players:
 (A) Lower energy consumption compared with permitted norms
Delta declined, with tightening of energy norms



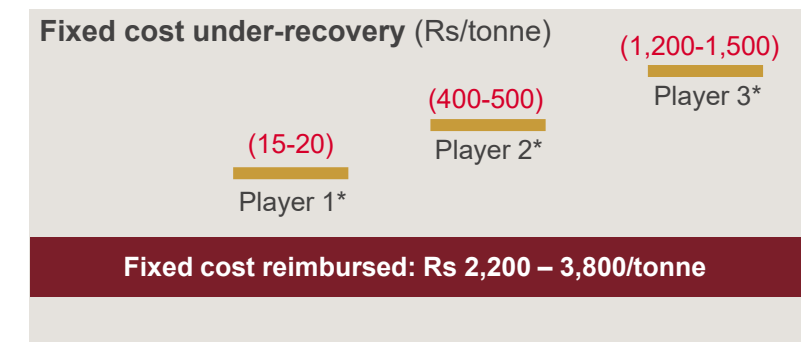
[Above is a weighted average computation based on reassessed plant capacities, at a gas cost of \$17/MMBtu and exchange rate of Rs 83/\$]

Cost break-up for urea manufacturers



- Profits were immune to the rise in gas prices last fiscal since the increase was compensated through higher subsidies
- With increased subsidy-dependence to recover costs, profits remain susceptible to policy changes
- Better profits are expected under NIP-2012 policy, with a minimum committed RoE of 12%

(B) Adequately reimbursed for fixed costs, at 12% RoE
Significant lag in cost revisions has resulted in under-recoveries



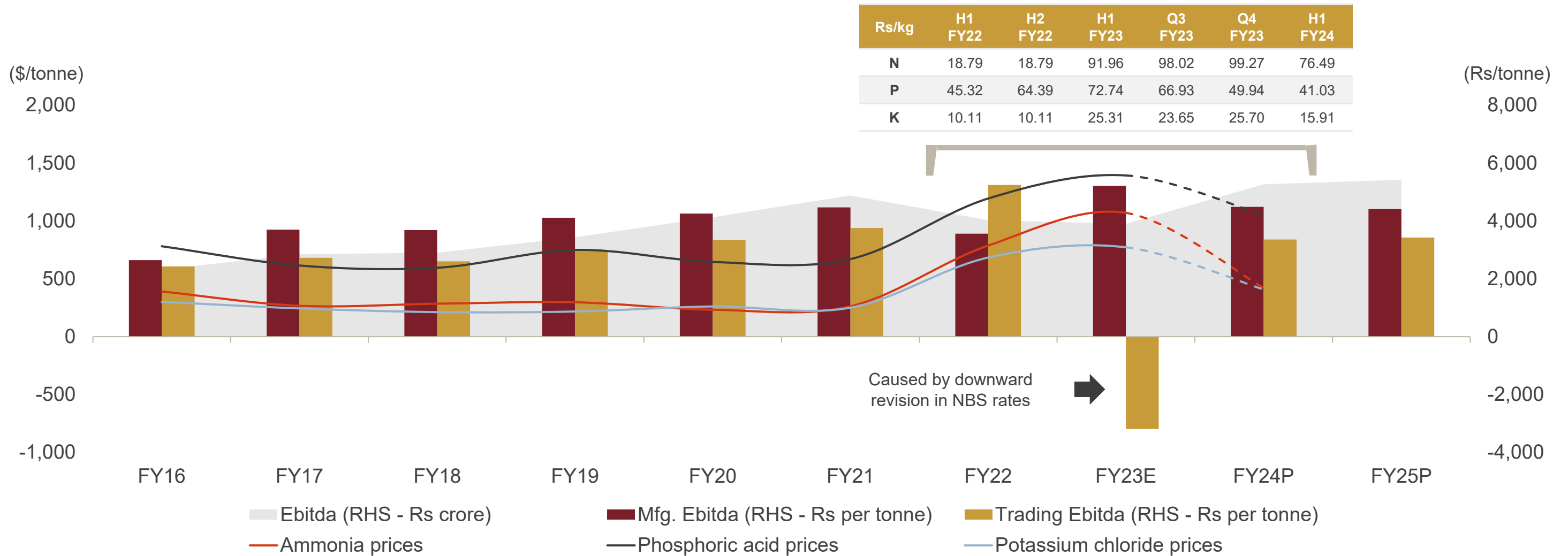
*Computed based on fixed cost over past three years

RoE: Return on equity, NUP: New Urea Policy, NIP: New Investment Policy, MMBtu: Metric million British thermal unit

Assessment covers ~55% of domestic urea capacity

Source: Company reports, Department of Fertilisers, CRISIL MI&A Research, CRISIL Ratings

Non-urea: Easing global prices, adequate NBS to support profitability



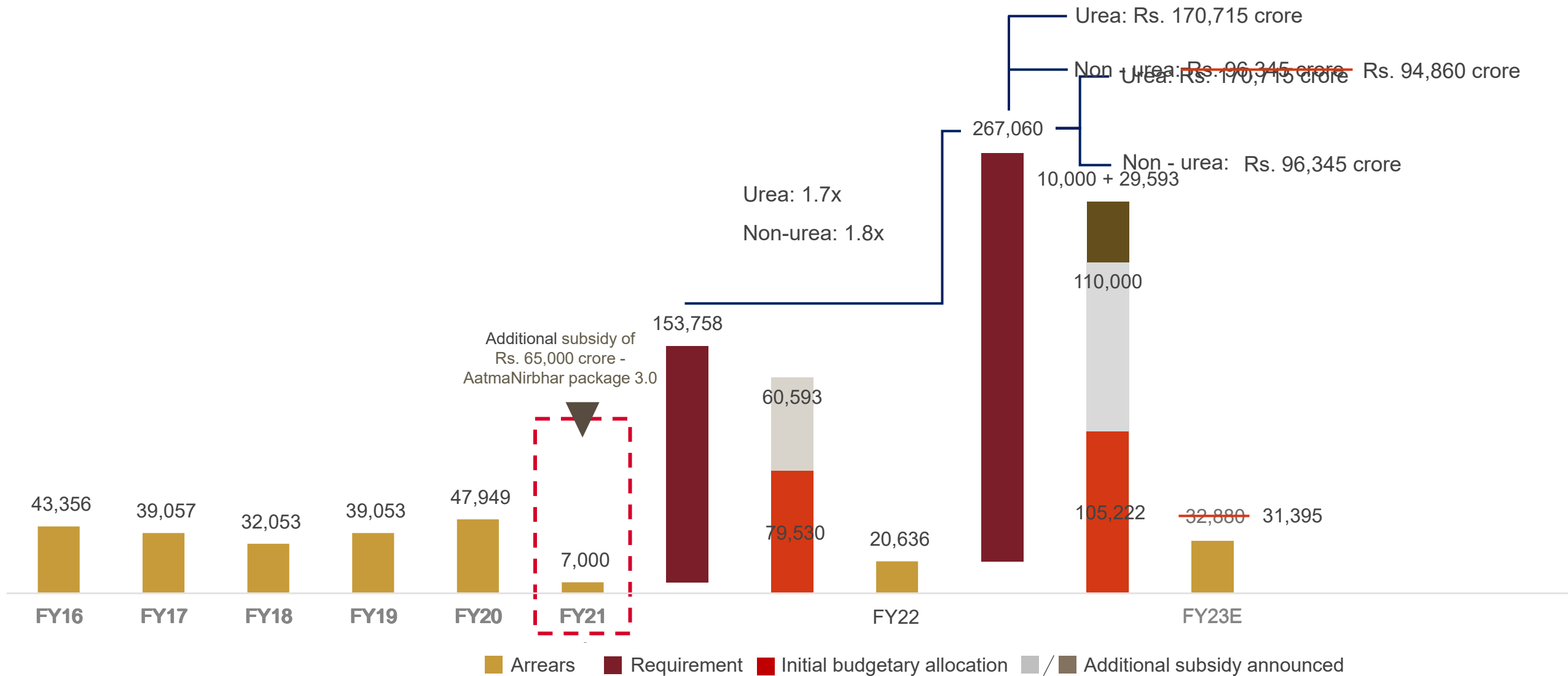
- Backward integration over the years has helped improve profitability of manufacturing operations
- Imports contribute to ~35% of non-urea consumption, proportion increases with fluctuation in raw material prices

NBS: Nutrient Based Subsidy
 Assessment covers ~45% of non-urea manufacturing operations and ~20% of trade
 Source: Company reports, CRISIL Ratings

Subsidy receivables, expected credit profiles

No major subsidy build-up last fiscal despite ~2x rise in requirement

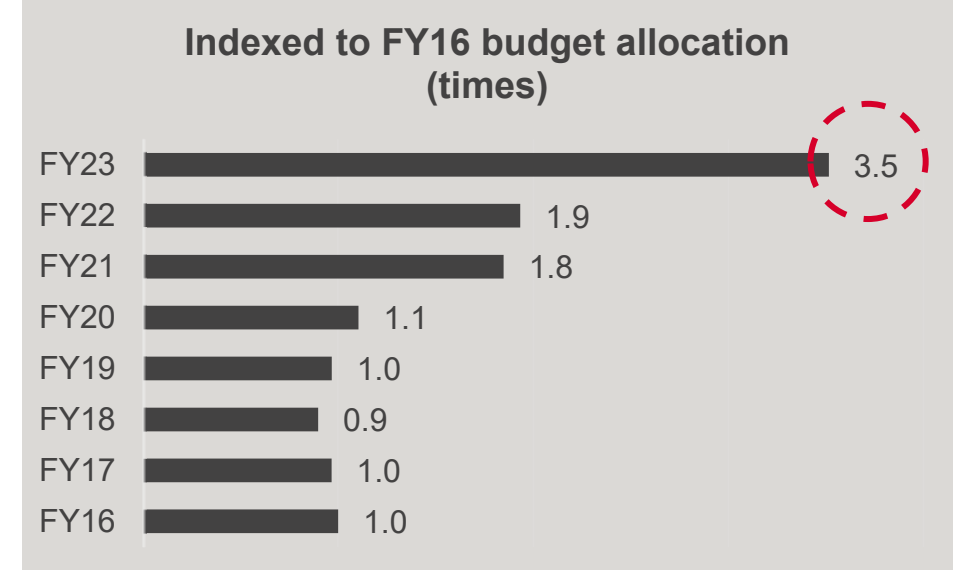
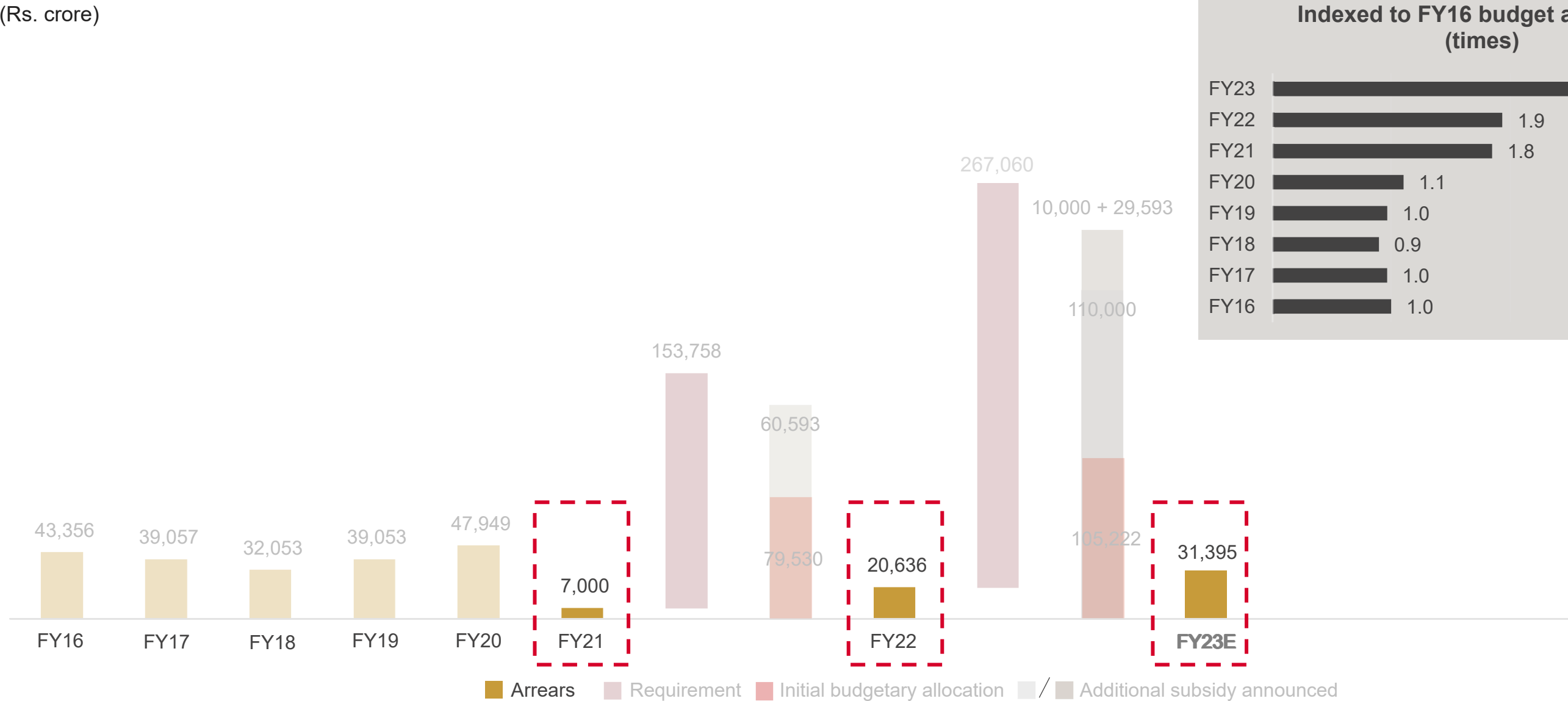
(Rs. crore)



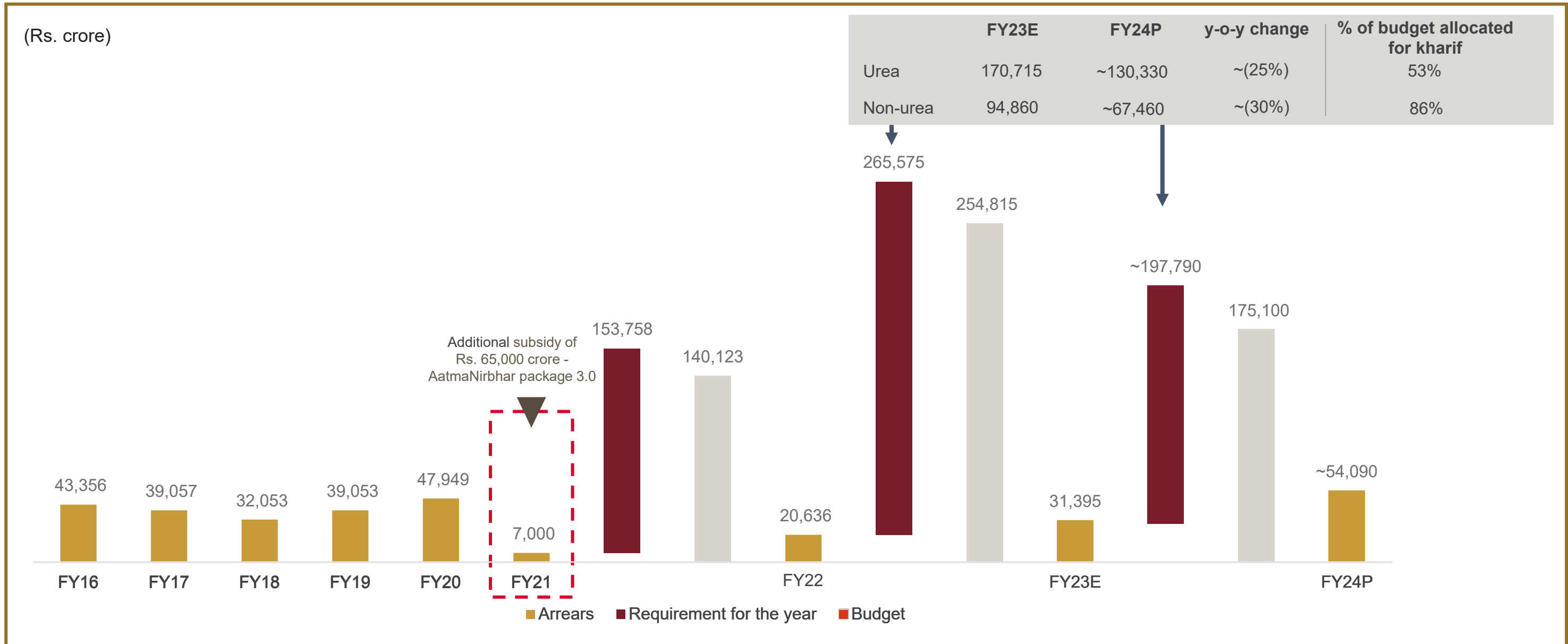
- Subsidy requirement rose ~2x last fiscal, as MRPs largely remained unchanged; compensated through increased subsidy payouts
- Continued government support through additional subsidy allocation has secured outstanding receivables

Last fiscal saw the highest budgetary allocation

(Rs. crore)

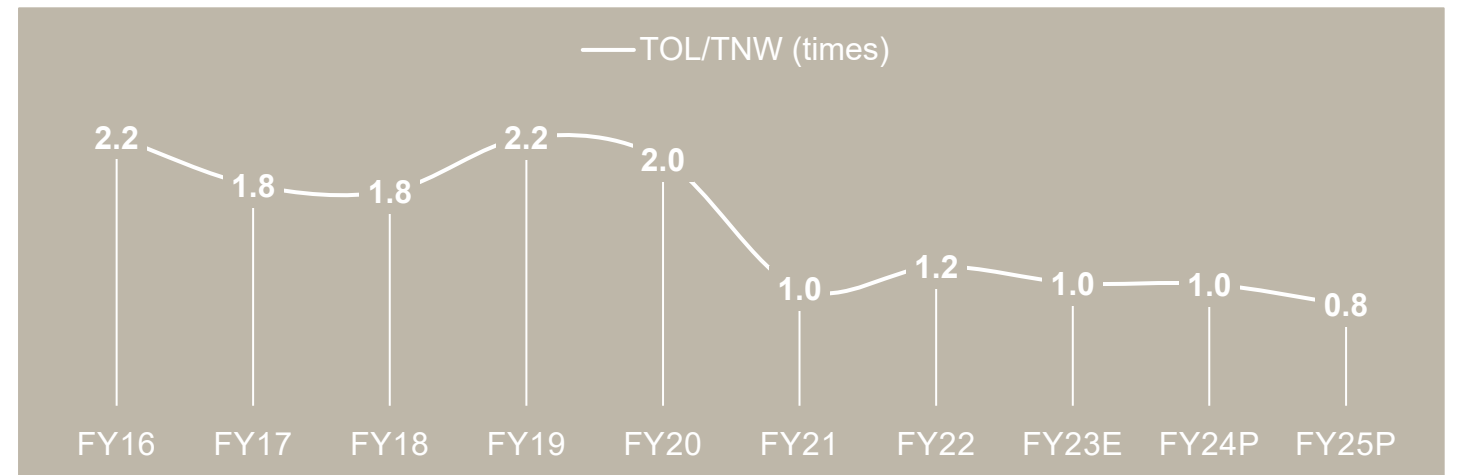
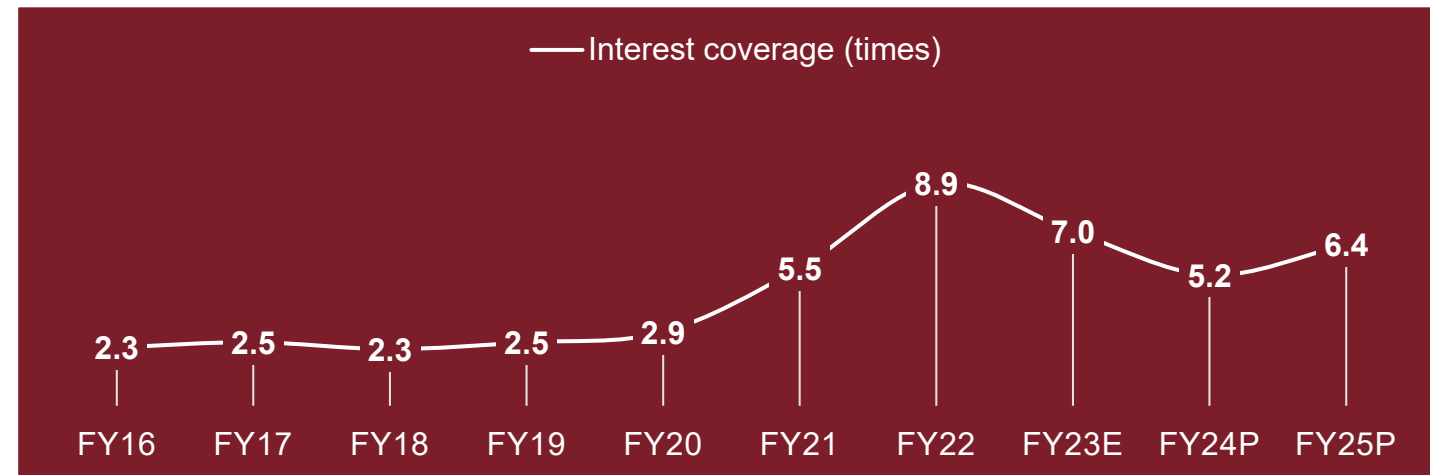
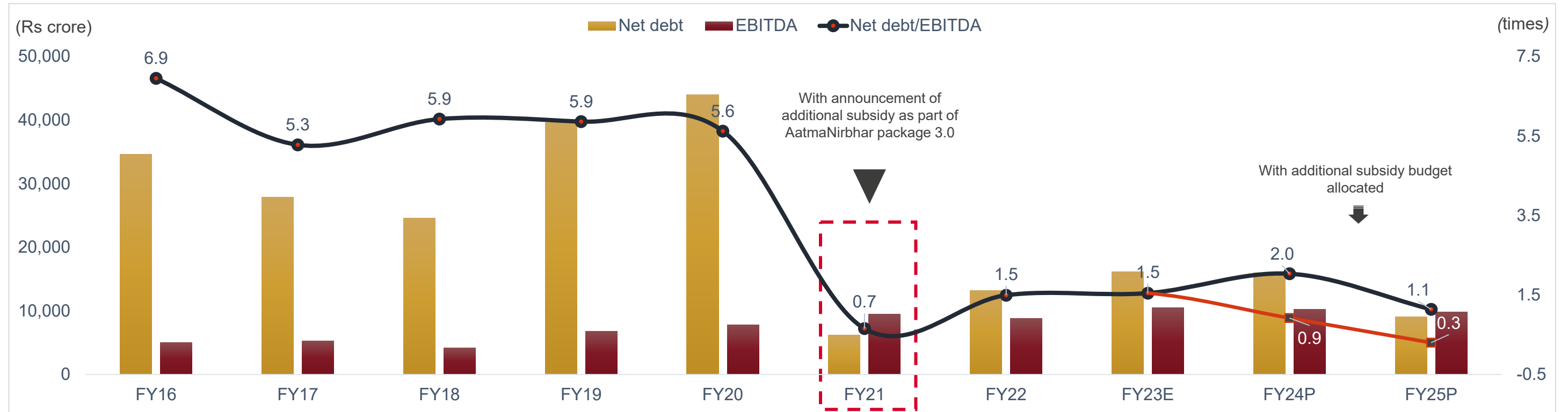


Additional budgetary allocation likely to meet this fiscal's requirements



- Given ~60% of the initial budget is already allocated for the kharif season, additional budgetary allocation is likely for this fiscal; in line with past trend of timely governmental support

Credit profiles to stay comfortable



Assessment covers 50-60% of domestic urea & non-urea capacity

Source: Company reports, CRISIL Ratings

The way ahead

Growth outlook

- Fertiliser consumption expected to grow at 3-4% CAGR over the medium term
- Players are diversifying into crop protection, industrial chemicals

Investments

- **Nano-technology:** With no investments planned for conventional fertilisers, focus is on replacing imports through nano technology
- **Emerging trend of green ammonia**
 - Scope to decarbonise the food value chain by replacing grey with green ammonia
 - Costing may be a hindrance without adequate financial/subsidy support

Key risks and monitorables

- Demand remains susceptible to weather patterns along with spatial distribution of rains.
- With higher dependence on subsidy to recover operating costs, profits remain susceptible to policy changes
- Timely and adequate subsidy disbursements will be critical to maintain credit profiles of players
- Technological development (introduction of nano fertilisers) or cheaper finished product imports could impact throughputs of existing fertiliser plants, which are already facing fixed cost under-recoveries

Thank you

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