AN OVERVIEW OF FERTILIZER SITUATION AND GOVERNMENT POLICY IN INDIA

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INDIAN AGRICULTURE - BASIC FACTS

Total Geographical Area	329 million hectares
• Net Area sown	141 million hectares
• Gross cropped area	191 million hectares
• Cropping Intensity	135 %
• Area under Irrigation	40 %
• Rainfall	
- Average	1100 mm
- Range	300 – 3000 mm
• Operational holdings	121 million
- Small & marginal (< 2 hectares)	82%

INDIAN AGRICULTURE - BASIC FACTS

- 2nd largest producer of rice, wheat, pulses, sugarcane, groundnut and fruits & vegetables

- Largest producer of tea, jute & fibre, mango, banana, spices, cashew, arecanut, papaya, sapota, milk, etc.

Agriculture contributes:

- 18% to GDP
- 11% of total exports
- Livelihood Security of about 600 million people
- Towards Self-sufficiency and Food Security

STRENGTHS

- Rich Bio-diversity
- Large arable land
- Variety climate
- Strong research infrastructure
- Vast knowledge pool

WEAKNESSES

- Fragmented land
- Low productivity
- Low capital formation
- Low technology inputs
- Inefficient water management
- Poor infrastructure
- Inadequate credit from formal sources
- Inadequate risk management

OPPORTUNITIES / GROWTH DRIVERS

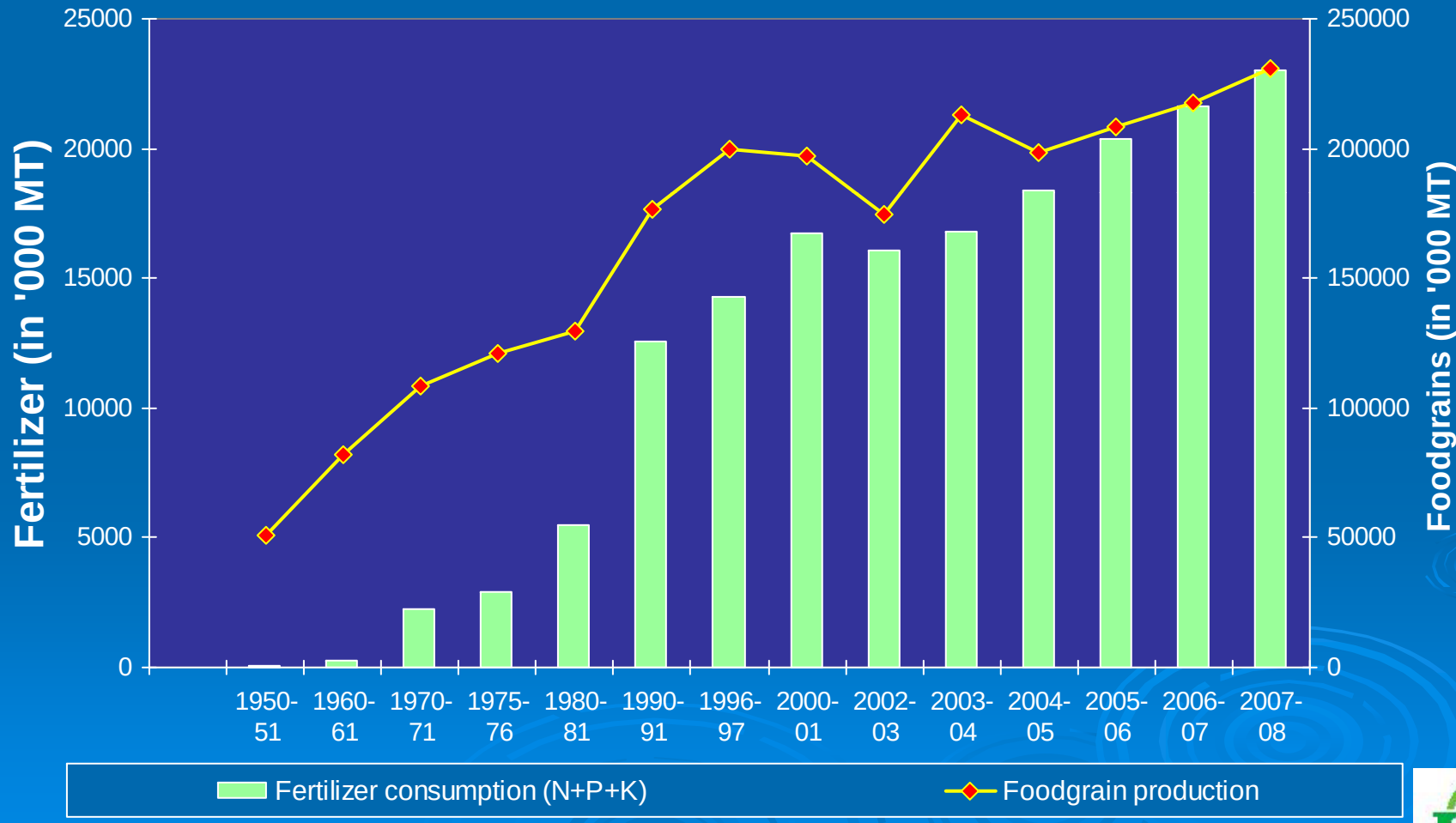
- Bridgeable yield gaps in food crops
- Vast potential for :
  - Cash crops
  - Horticulture crops
  - Allied agriculture (fisheries, livestock, poultry, piggery, etc.)
- Huge potential for value addition and agro- processing
- Building infrastructure for marketing
- Export opportunities
- Organic farming for domestic and exports
- Risk mitigation

RECENT INITIATIVES BY G.O.I

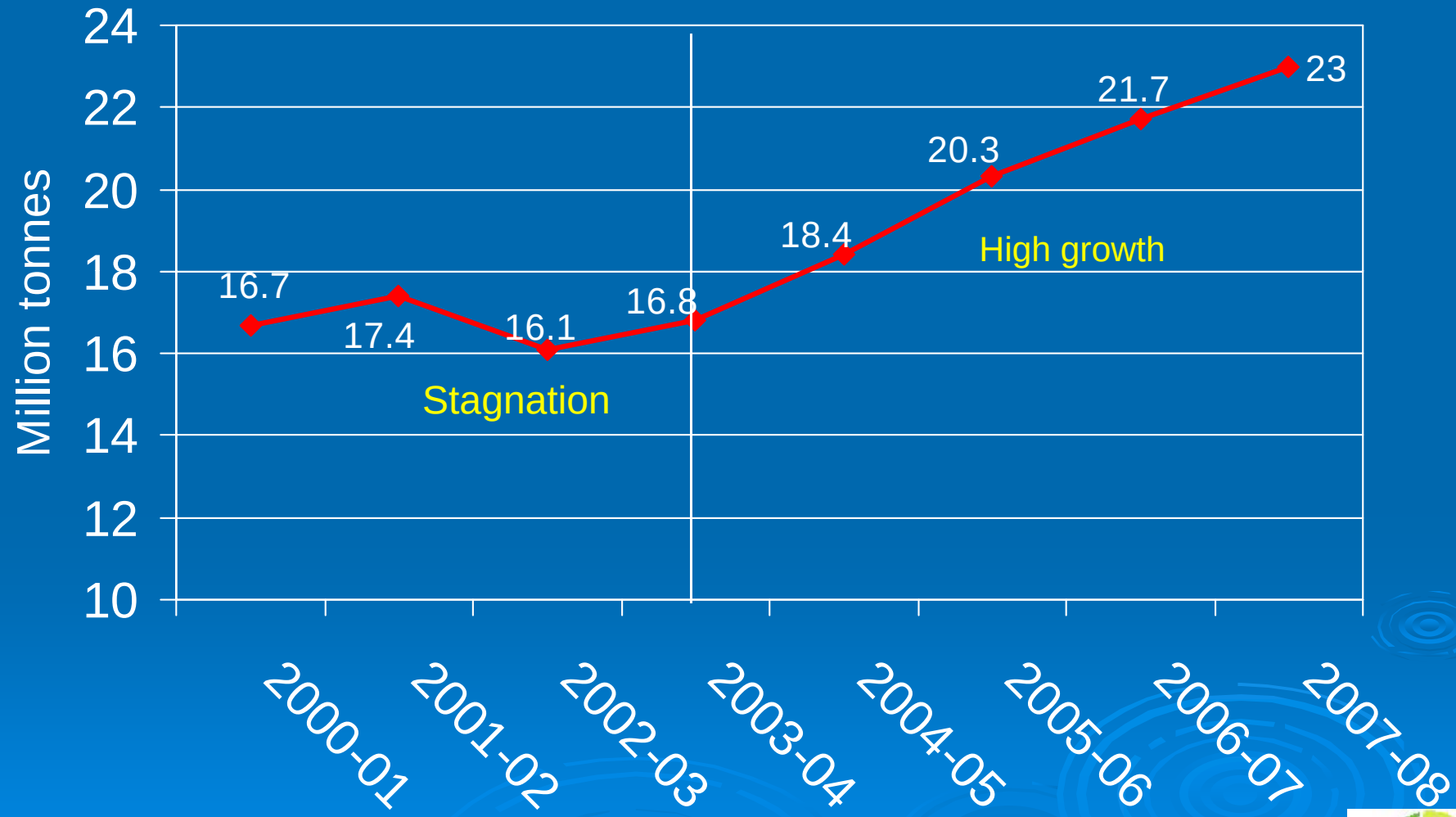
- National Food Security Mission launched with an outlay of over one billion dollar for XI Plan to increase the production of rice by 10 million te, wheat by 8 million te and pulses by 2 million te by 2011-12
- National Agriculture Development Programme with an outlay over 5 billion dollar for holistic development of agriculture sector
- National Horticulture Mission, Cotton Mission, Oilseeds and Pulses Mission
- Increase in agricultural credit through formal sources
- Steep increase in the minimum support prices
- Additional area of 10 million hectares under assured irrigation
- Infrastructure for soil and fertilizer testing
- Infrastructure for marketing and agro-processing

FERTILIZER CONSUMPTION & FOOD GRAIN PRODUCTION

India has accorded high priority to use of fertilizers for achieving self-sufficiency in foodgrains production and stipulated growth in other crops.



RECENT TREND IN FERTILIZER CONSUMPTION (N+P+K)



DEVELOPMENT OF FERTILIZER INDUSTRY IN INDIA

EVOLUTION OF DOMESTIC FERTILIZER INDUSTRY

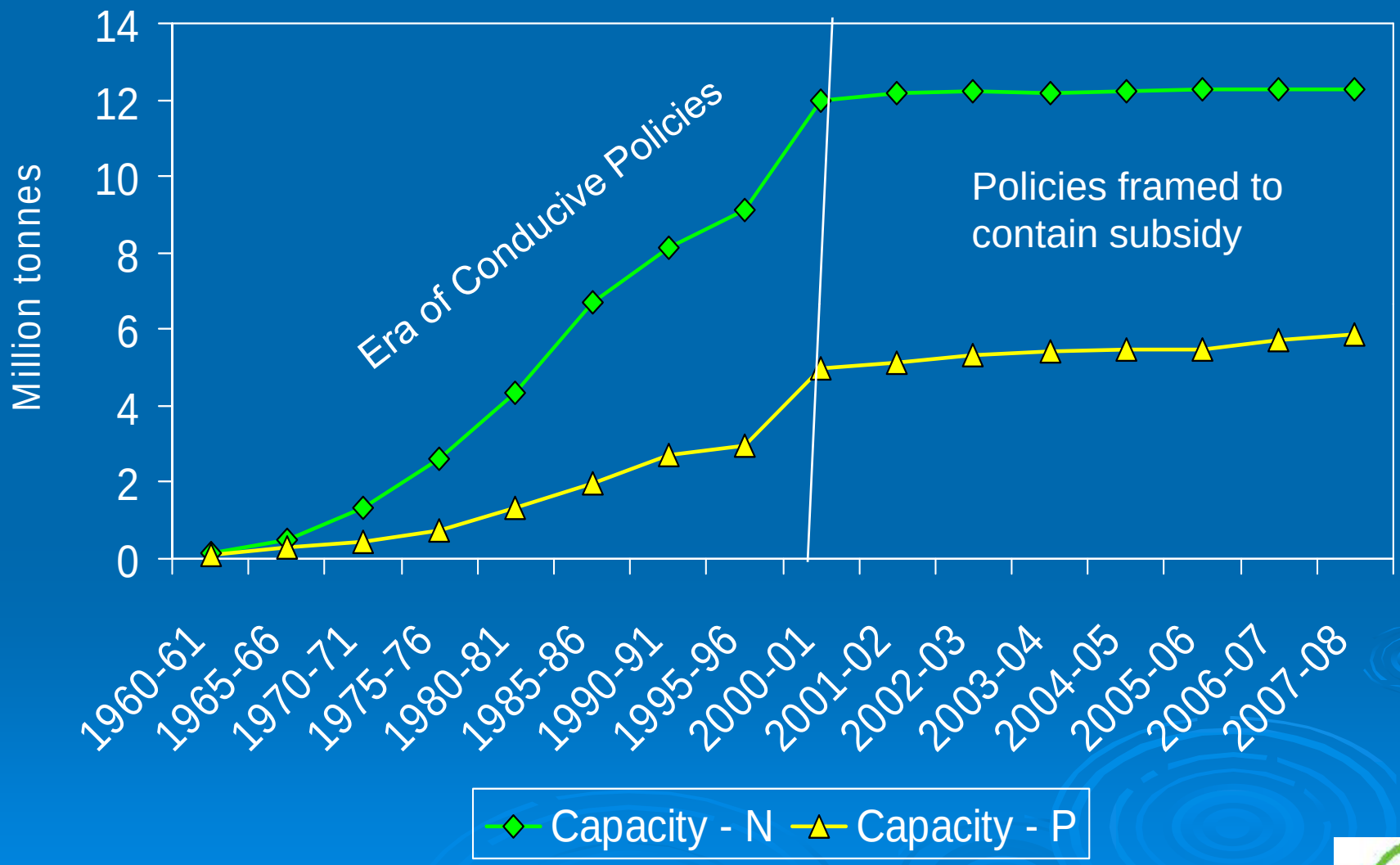
- First Fertiliser (SSP) factory in 1906 at Ranipet.
- First large scale Urea Plant, of 500 TPD in 1966 at Neyveli.
- First DAP Plant, 1967, GSFC, Baroda
- Conducive Policy Environment favoured the build up of capacity both for N and P fertilisers in 1970's and 1980's
- Lack of Policy Direction in 1990's rendered the sector unattractive for investment resulting in stagnant Capacity and Production.

EVOLUTION OF CAPACITY

(Million te)

Year	Urea	DAP	NP/NPKs	SSP	N	P_2O_5
1951-52	-	-	-	0.13	0.02	0.02
1961-62	0.02	-	0.02	0.65	0.25	0.11
1971-72	1.79	0.11	1.03	1.38	1.51	0.53
1981-82	8.24	0.11	3.08	1.84	4.74	1.39
1991-92	14.70	2.31	3.37	4.97	8.28	2.81
2001-02	21.08	6.10	4.15	8.00	12.17	5.11
2007-08	21.04	6.97	6.27	7.49	12.28	5.86

STAGNATION IN DOMESTIC CAPACITY IN RECENT YEARS

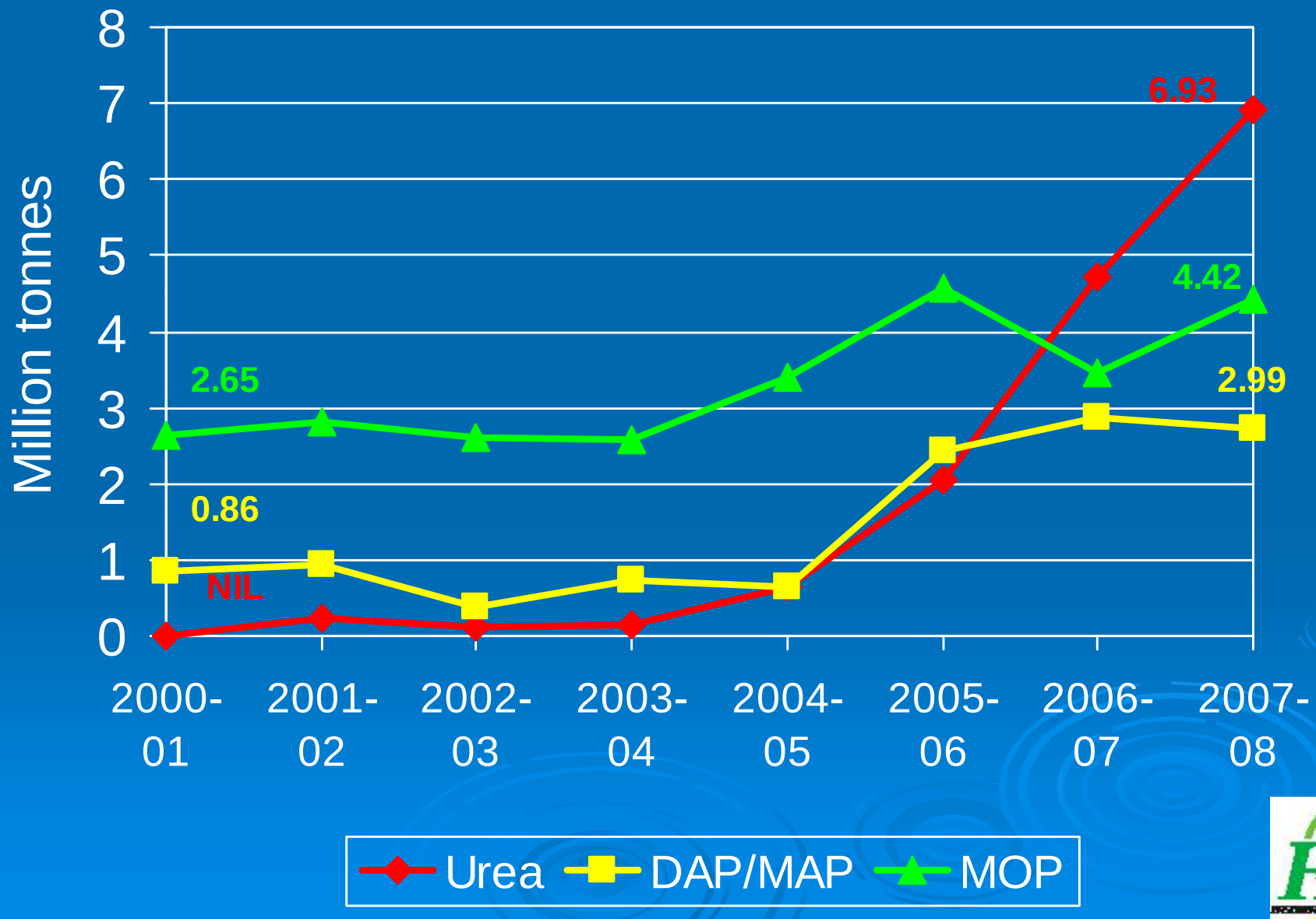


TRENDS IN PRODUCTION OF FERTILIZERS

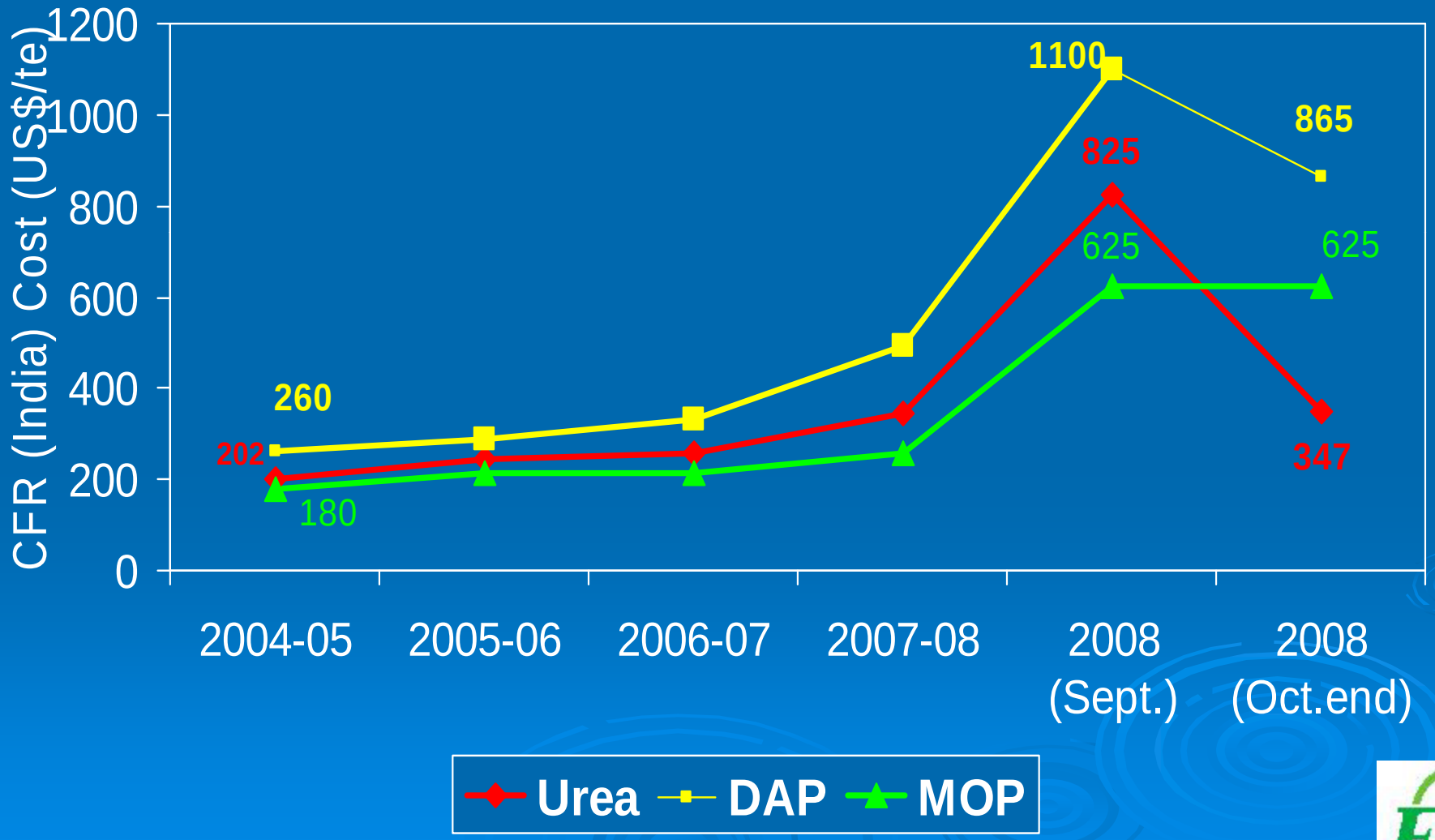
(Million te)

Year	Urea	DAP	NP/ NPKs	SSP	N	P_2O_5
1951-52	-	-	-	0.06	0.03	0.01
1961-62	0.01	-	0.01	0.39	0.15	0.07
1971-72	1.24	0.05	0.61	0.77	0.95	0.29
1981-82	5.38	0.28	2.59	1.20	3.14	0.95
1991-92	12.83	2.87	3.49	2.98	7.30	2.56
2001-02	19.00	5.09	4.90	2.50	10.69	3.84
2006-07	20.27	4.71	7.31	2.97	11.52	4.44
2007-08 (Provisional)	19.84	4.21	5.83	2.25	10.90	3.71

GROWING IMPORTS



ESCALATING COST OF IMPORTS : FERTILIZERS



FEEDSTOCK/ INTERMEDIATES / RAW MATERIALS

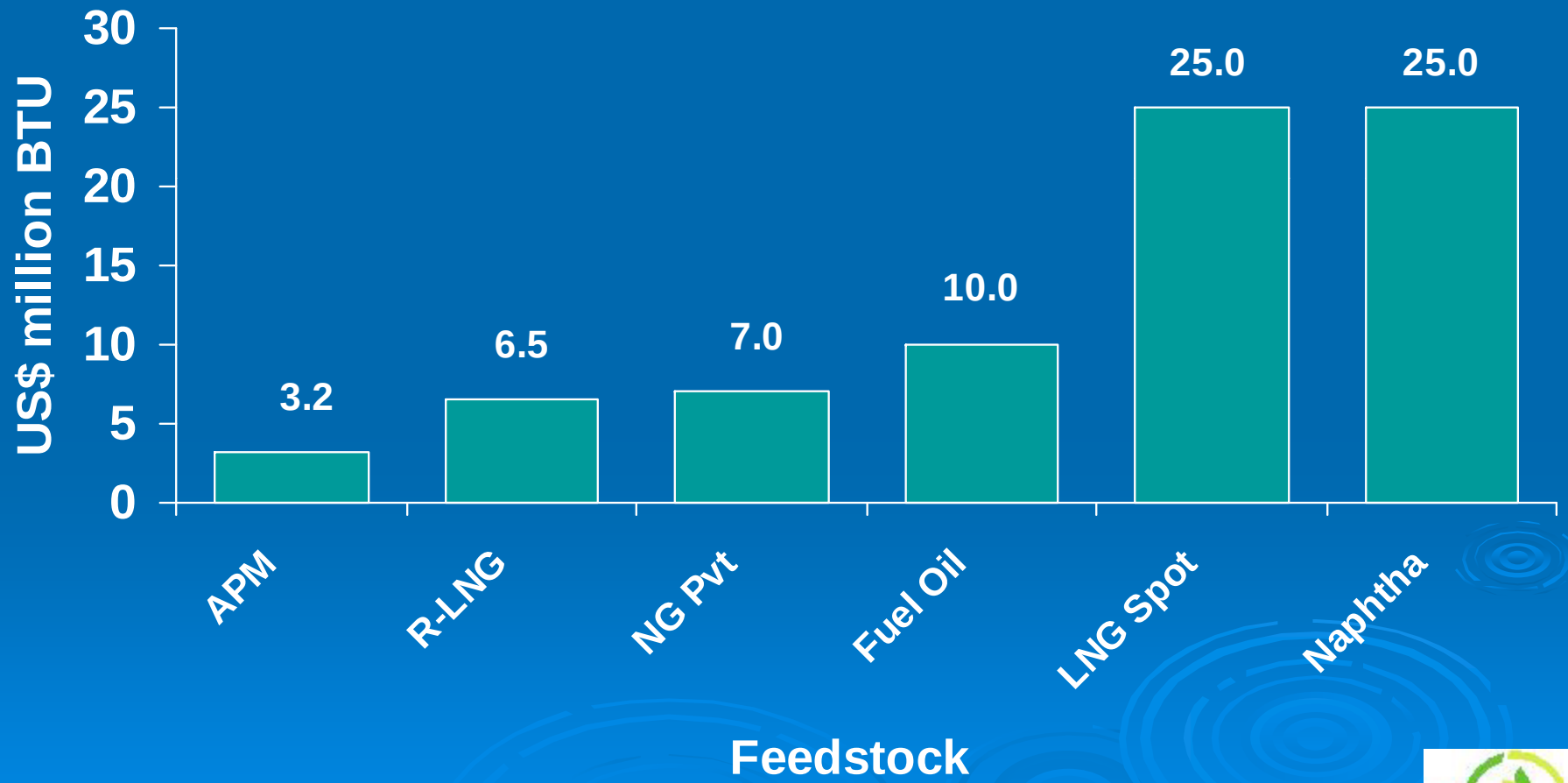
FEEDSTOCK-WISE INDIAN AMMONIA CAPACITY (MILLION MT)

Feed Stock	2007-08		
	Capacity	Production	Share % in Production
Natural Gas	9.6	9.9	81.1
Naphtha	2.3	0.9	7.4
F.O.	1.4	1.4	11.5
Total	13.3	12.2	100.0

PRESENT NATURAL GAS (NG) SCENARIO FOR INDIA

N G from Domestic sources	84 MMSCMD
Re-Gasified LNG	18 MMSCMD
Total	102 MMSCMD
Supply to Fertiliser units	28 MMSCMD

DELIVERED PRICE OF VARIOUS FEEDSTOCK (FOR FERTILIZER) IN INDIA (SEPTEMBER 2008)



GAS REQUIREMENT FOR PRODUCTION OF UREA

	MMSCMD
1. For Present Gas Based Capacity	42
2. De-bottlenecking	04
3. For Feedstock Change to Gas	10
4. Total For Existing Capacity (1+2+3)	56
5. Additional Supply Required for New Capacity	16
6. Total Requirement of Gas by 2013-14 (4+5)	72
7.Present Supply of Gas	28
8. Additional Gas Required by 2013-14 (6-7)	44

AVAILABILITY OF ADDITIONAL DOMESTIC NATURAL GAS IN INDIA

Field	Quantity	Likely Time
K.G.Basin	40-60 MMSCMD	Early 2009
Coal Bed Methane	13 MMSCMD	2-3 years

LNG TERMINALS IN INDIA

Company	Port	Quantity (million Tonnes)	Status
1. Petronet LNG	Dahej	5.0	In operation
2. Shell	Hazira	3.0	In operation
3. Petronet LNG Expn.	Dahej	5.0	2009
4. Dhabol Power Gas	Dhabol	5.0	Expected in 2009
5. Petronet LNG	Kochi	2.5	Planned for 2011

SHARE OF RAW MATERIALS IN P PRODUCTION - 2006-07

Raw Material	Quantity (MMT)	Share (%)
Indigenous Rock Phosphate	0.46	10.36
Imported Phosphate Rock	1.62	36.49
Imported Phos Acid (P_2O_5)	2.36	53.15
Total	4.44	100.0

JT.VENTURES FOR PHOSPHORIC ACID

Existing

- SPIC + JPMC in Jordan
- GOI + IFFCO + SPIC +ICS in Senegal
- Tata + Chambal + OCP in Morocco
- Coromandal +PHOSKOR in South Africa

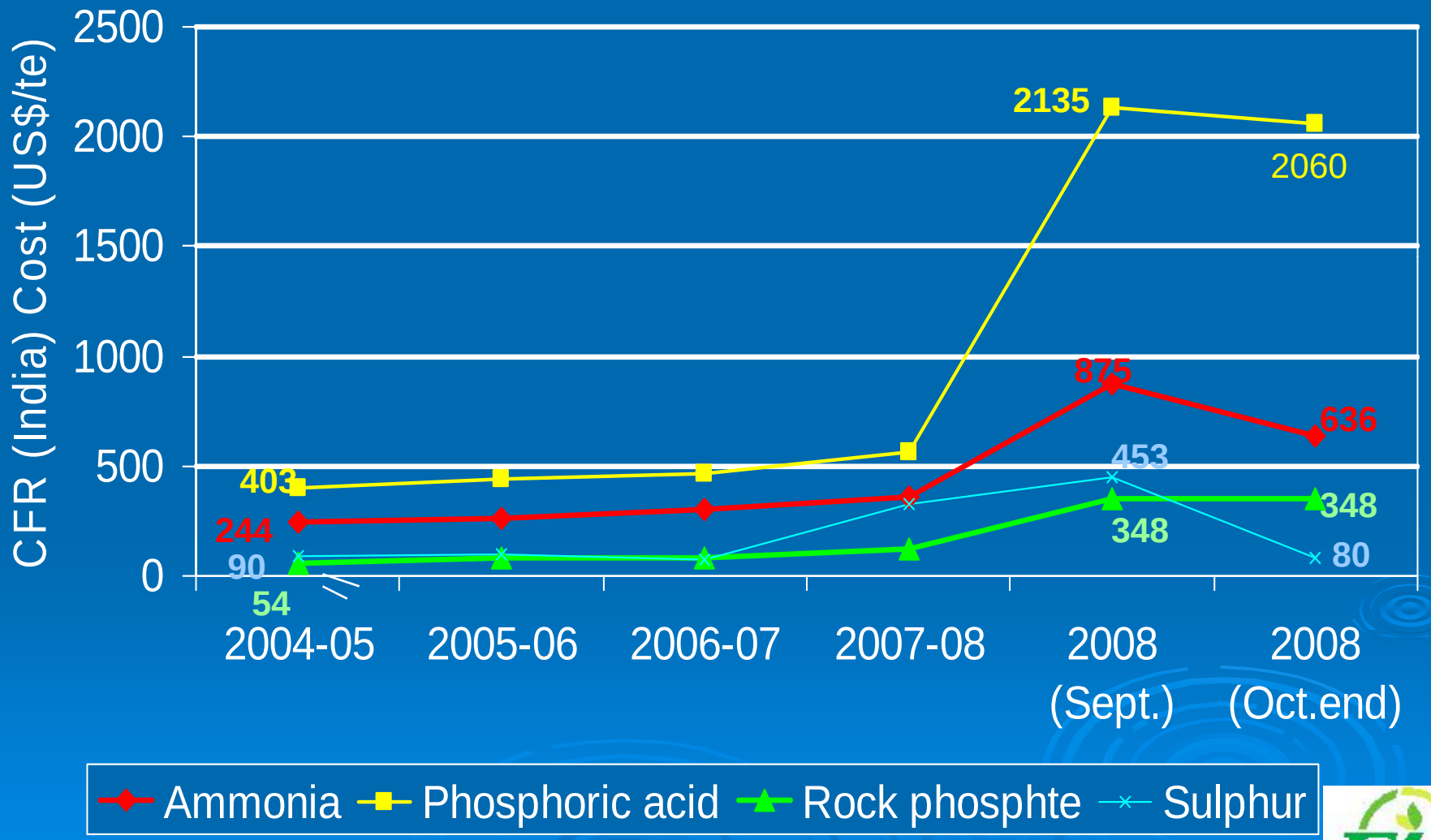
Under Implementation / Planned

- GSFC + COROMANDAL + GCT in Tunisia
- IFFCO in Jordan

AVAILABILITY OF SULPHUR

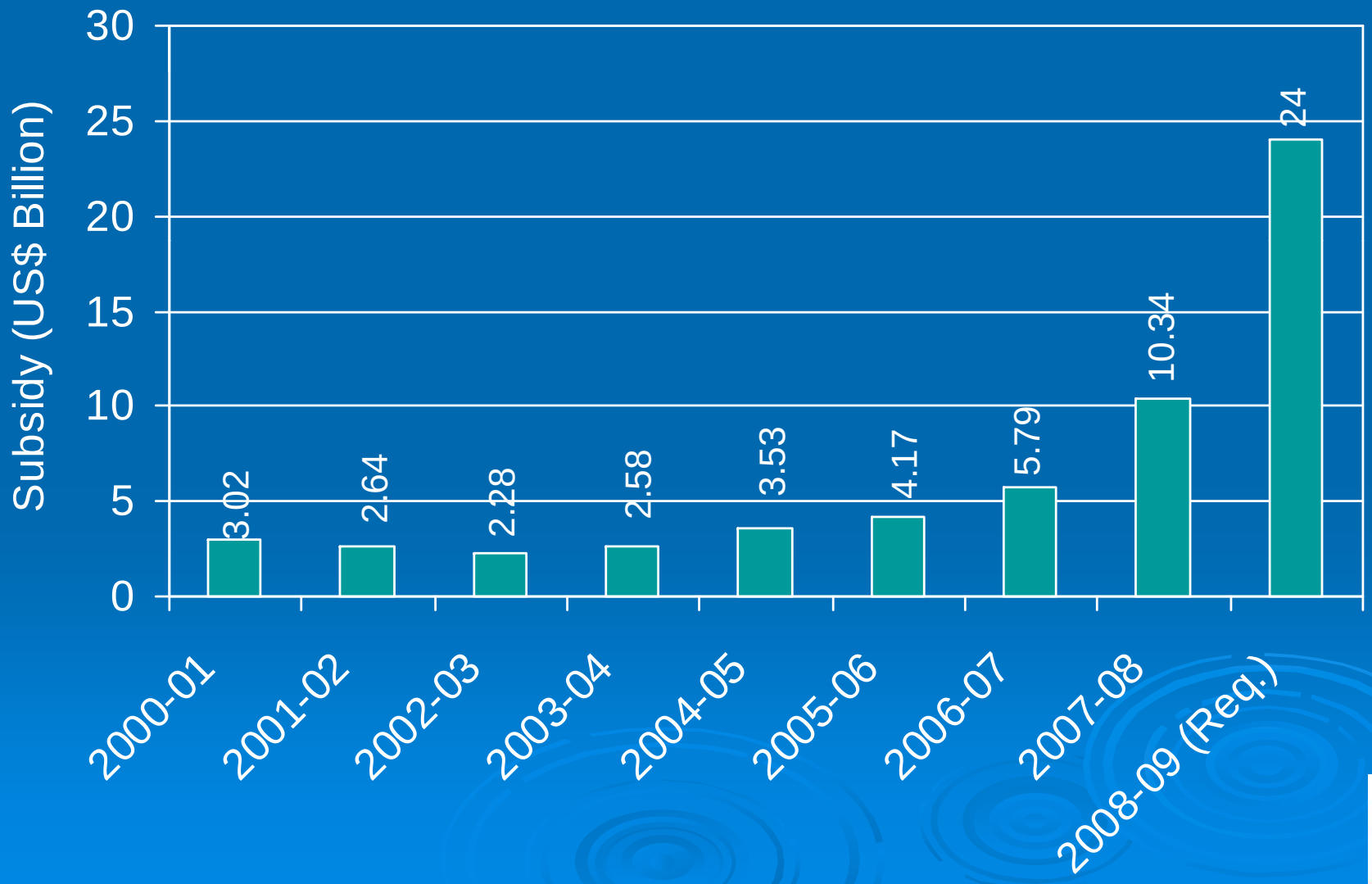
Requirement of Sulphur	2 MMT/Annum
Domestic Availability/Annum ➢ Copper Smelters (HINDALCO + Sterlite) ➢ Recovered Sulphur From Oil Refineries	 0.2 MMT 1.0 MMT
Imported Sulphur	Balance

ESCALATING COST OF IMPORTS: RAW MATERIALS/ INTERMEDIATES



SUBSIDY ON FERTILIZERS

High import cost of finished fertilizers, raw materials/ intermediates escalated the Subsidy bill significantly in recent past



CURRENT ISSUES

- Stagnation in domestic capacity and production
- Resultant increasing imports of raw materials / finished fertilizers at exorbitant prices
- Unsustainable level of subsidy burden
- Imbalance in fertilizer use
- Widespread deficiency of secondary and micro nutrients
- Deterioration in soil health causing decline in crop response to fertilizer use

RECENT POLICY CHANGES

- New Investment Policy on Urea
- Pricing policy for concession on P & K fertilizers
- Policy on SSP
- New products included
- Customised fertilizers
- Nutrient based pricing
- Coated and fortified fertilizers
- Sulphur recognised as a nutrient

INDUSTRY'S POSITION

- Volatile market raises issues for Industry
- Fertilizers may be provided to the farmers at retail prices lower than delivered cost, without involving the Industry
- If through industry, then subsidy be nutrient based with open MRP


ThankYou