

Impact of Policy Regime  
On  
Health of Indian Fertiliser Industry

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## *Fertiliser – Core Sector*

- ❑ **Agriculture has very important place in Indian economy which contributes 24% in GDP.**
- ❑ **India is the Third Largest Producer and Consumer of Fertilisers in the World.**
- ❑ **Industrial Policy of GOI, 1956 recognised Fertilisers as the Core sector for investment.**

## *Production and Consumption of Fertilisers*

- ▶ Urea is most widely used nitrogenous Fertiliser Worldwide.
- ▶ Urea constitutes about **80% of 'N'** produced in India.
- ▶ **32 Urea manufacturing** units in operation in India.
- ▶ Installed capacity of 21 million tonnes per annum.

## *Production and Consumption of Fertilisers*

- **Installed Capacity of 5.2 million tonnes per annum  $P_2O_5$  Fertiliser**
- **Significant increase in Fertiliser consumption**
- **26% growth in food grain production decade-wise**

## Decade-wise Growth in Capacity of Urea & DAP/NPK

	1970-71	1980-81	1990-91	2001-02
<b>Urea Capacity (`000 t)</b>	1581	7525	14695	20849
<b>%age Growth</b>	-	376	95	42
<b>DAP/NPK Capacity (`000 t P<sub>2</sub>O<sub>5</sub>)</b>	433	1334	2751	5248
<b>%age Growth</b>	-	208	106	91

***Production of Foodgrain and Consumption of Nutrients***

<b>Year</b>	<b>Foodgrain Production (million tonne)</b>	<b>Consumption of Plant Nutrients (kg/ha)</b>
<b>1961-62</b>	<b>83</b>	<b>2</b>
<b>1971-72</b>	<b>105</b>	<b>16</b>
<b>1981-82</b>	<b>133</b>	<b>34</b>
<b>1991-92</b>	<b>168</b>	<b>70</b>
<b>2001-02</b>	<b>211</b>	<b>91</b>

## ***Nutrient Consumption : Scope in Demand***

- # Nutrient consumption level in India : 91 kg per hectare.**
- # Nutrient Consumption in Developed Countries : 300 kg per hectare.**
- # This leaves further scope in the demand of fertiliser.**

## *New Indigenous Urea Plants*

- No new urea plant set up in India after 1999 due to :
  - ▶ Stagnation in the consumption levels.
  - ▶ Limitation of feed stock availability.
  - ▶ Lack of clarity on fertiliser pricing policy.

## ***New Indigenous Urea Plants***

- Joint Venture urea project in Oman by IFFCO & KRIBHCO, and Oman Oil Company takes off on 15<sup>th</sup> August, 2002 and is scheduled for completion within 35 months.
  
- Recent discovery of NG in Krishna-Godavari would result in setting up of more Urea plants in India.

## Farms Subsidies in Developed Countries Vs. India

Country	Total subsidy (in US\$ billion)	As %age of Gross Domestic Product from Agriculture (AGDP)
EC	122.95	45
Japan	49.96	62
USA	48.44	22
India	6.71	6.8

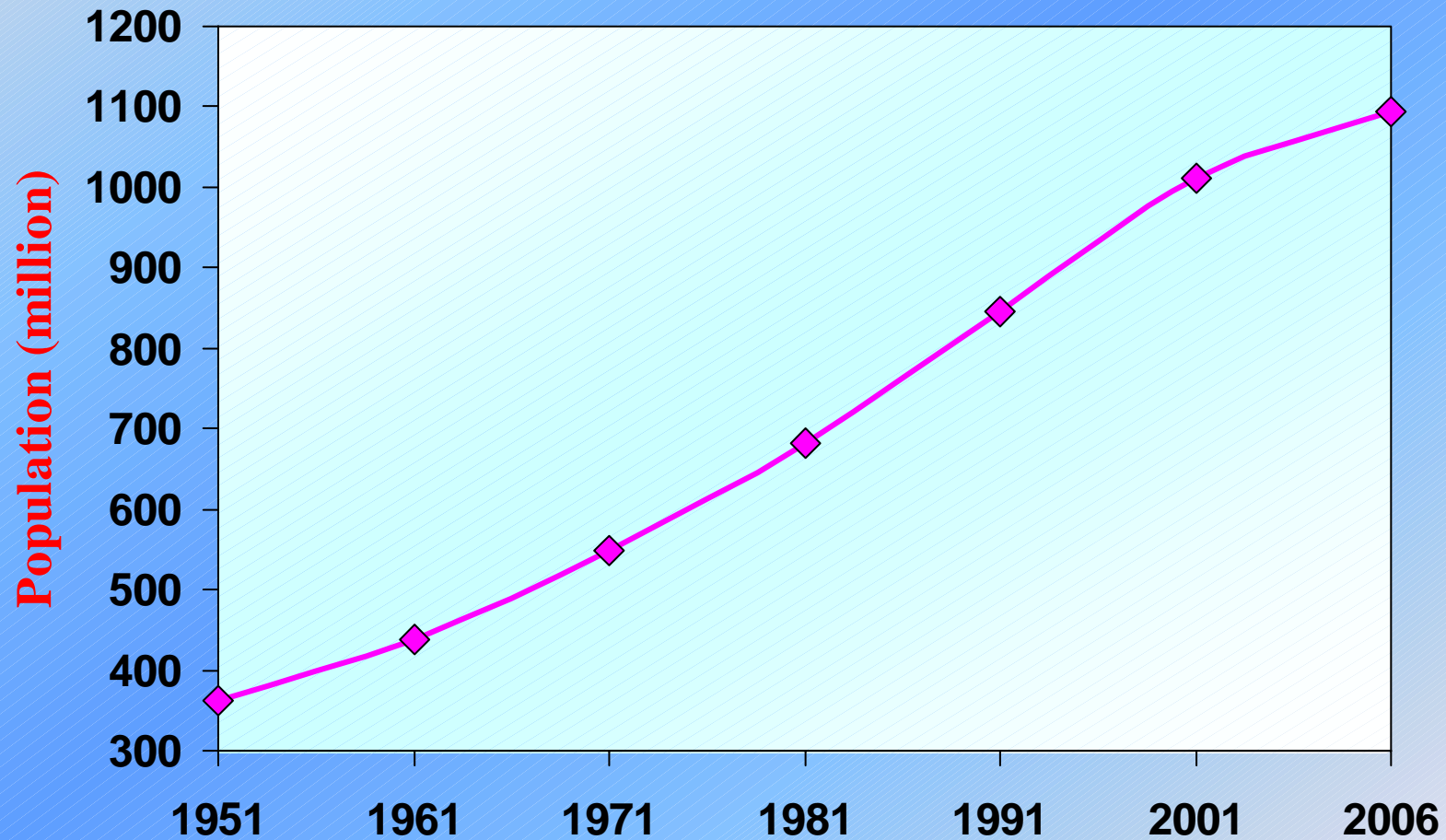
## *Impact of Fertiliser Pricing Policy in Foodgrain Production*

- Pricing pattern determines the capacity to afford Chemical Fertilisers, as most of the farmers are marginal and small.
- Decontrol of Phosphatic and Potassic fertilisers in 1992-93, resulted in drop in consumption of these fertilisers.

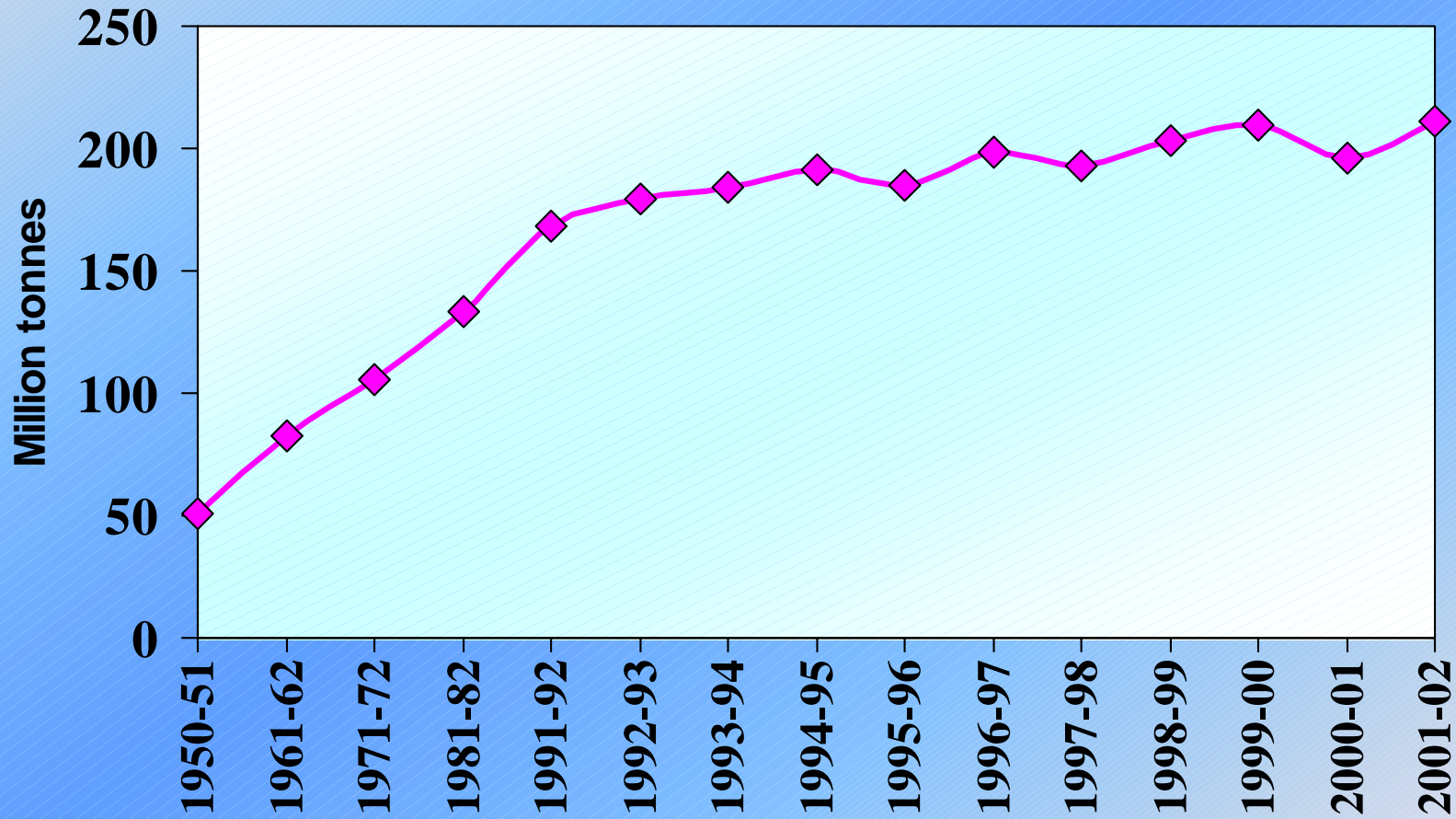
*Impact of Fertiliser Pricing Policy in Foodgrain Production*

- **Increase in consumption of Phosphatic and Potassic Fertilisers after introduction of Ad-hoc Concession Scheme.**
- **Fertiliser consumption has to increase to achieve the future target of 337 million tonne foodgrain production in 2011-12 from present level of 200 million tonne.**

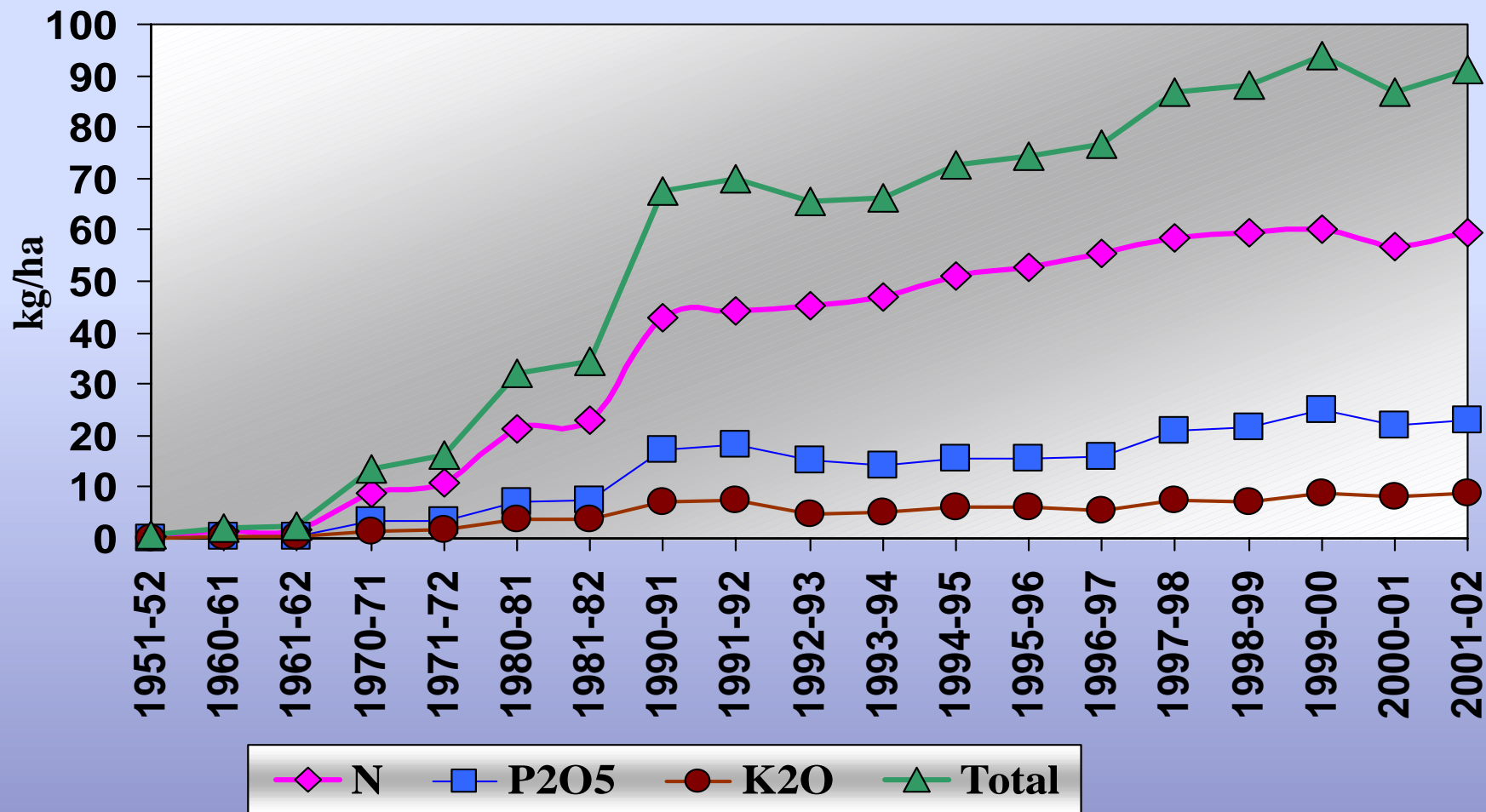
# Population of India (million)



# Food grain production in India



## Nutrient consumption in India (Kg/ha)



## ***Nutrient Consumption Ratio***

- ⊕ **NPK Nutrient consumption ratio is governed by the price of urea vis-a-vis those of the phosphatic and potassic fertilisers.**
- ⊕ **Ideal NPK consumption ratio of 4:2:1 is yet to be achieved by Indian Agriculture.**
- ⊕ **NPK consumption ratio, distorted to 9.5:3.2:1 at the time of decontrol of phosphatic fertilisers in 1992-93.**

## ***Nutrient Consumption Ratio (Contd..)***

- ⊕ **NPK consumption ratio has gradually improved to 6.7 : 2.6 : 1 in 2001-02.**
- ⊕ **Present Response ratio of nutrients at 6.5 needs to be augmented to at least 8.0.**

## ***Efficient Fertiliser Use***

- + More efforts required to increase nutrient use.**
- + Balance use of fertilisers.**
- + Fortification by micronutrients.**
- + Use of bio-fertilisers, green and organic manures.**

## ***Efficient Fertiliser Use...***

- + Use of Granulated and Coated Fertilisers, etc.**
- + Favorable policy for value addition to the feritilisers and recovery of additional cost of value addition.**

## ***Impact on Social Role of Fertiliser Manufacturers***

- # Encouragement to the Indigenous Fertiliser Manufacturers by way of Pricing Policy indirectly benefits the Rural Population.**
- # IFFCO provides various services to the farmers to uplift them educationally, socially and economically.**

*Impact on Social Role of Fertiliser Manufacturers...*

- # **CORDET (Cooperative & Rural Development Trust) founded and funded by IFFCO.**
  - **Trained about 75,000 farmers during the last 10 years.**
  - **Undertook production and distribution of bio-fertilisers, seeds, plant saplings, etc.**

*Impact on Social Role of Fertiliser Manufacturers...*

- # **IFFDC (Indian Farm Forestry Cooperative Ltd.) promoted by IFFCO.**
  - **Projects in Farm Forestry and Waste Land Development at the village level to help the poor for self- sustenance.**
  
- # **IFFCO has sponsored 16 Chairs for coordinated research work in various Universities/Institutes.**

*Impact on Social Role of Fertiliser Manufacturers...*

- ## Integrated Rural Development Programme through IFFCO Plants encourages village adoptions for providing basic necessities and environmental awareness.
- ## IFFCO founded 'Kisan Sewa Fund' undertook rehabilitation / reconstruction work in earthquake affected villages in Kutch region of Gujarat.

## *Impact on Social Role of Fertiliser Manufacturers...*

- # About 800 totally destroyed houses have been re-constructed.
- # About 450 partially damaged houses have been repaired.
- # Construction of infrastructure facilities in 20 affected villages.

*Impact on Social Role of Fertiliser Manufacturers...*

- # Indian Fertiliser Companies should invest in production of bio-fuel from non- edible oil seeds such as Jatropha. This will provide employment to poor and marginal farmers.**

## *Urea Pricing and Subsidy*

- ◆ **Selling Price of urea is under the control of GOI right from inception.**
- ◆ **Retention pricing scheme (RPS) Introduced in 1977-78 for subsidy.**
  - ▶ **At time of introduction of RPS, the weighted average RP was similar to C&F prices of imported urea.**
  - ▶ **Retention prices were also in consonance with the Farmgate Prices fixed by GOI.**

## Urea Pricing and Subsidy

### ◆ *Late 80s :*

- ▶ RPs started increasing compared to a marginal increase in the imported urea prices.
- ▶ Farmgate prices more or less remained same resulting into increase in Subsidy outgo.

### ◆ *Early 90s :*

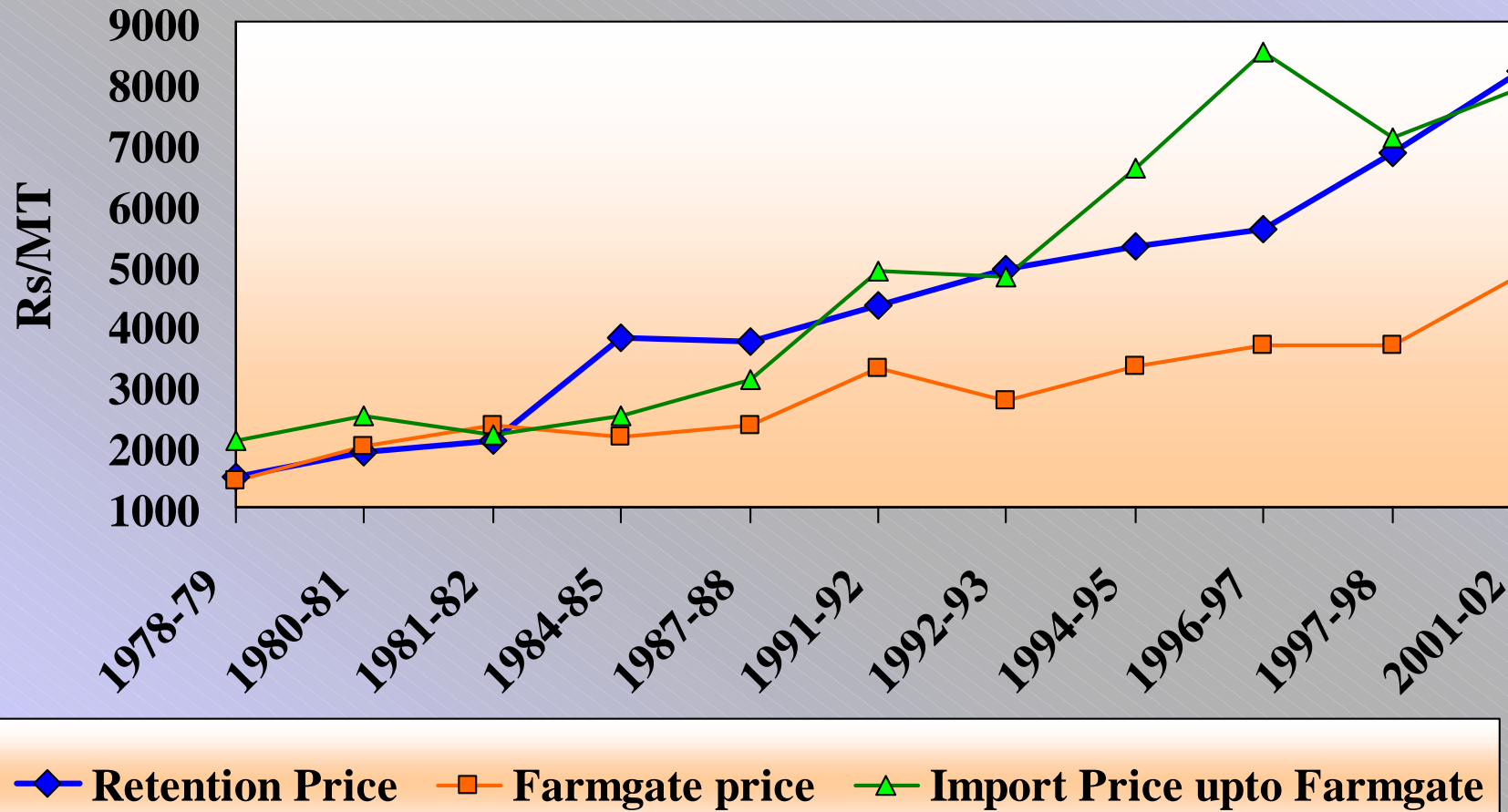
- ▶ RPs were higher than the imported urea price .

### ◆ *Middle 90s :*

- ▶ Imported urea prices increased to around Rs.8500/MT
- ▶ Weighted average RP of Rs. 5500/MT.

# Urea Pricing and Subsidy

## Trend of Urea Prices



## *Urea Pricing and Subsidy*

- ◆ **Retention prices in 2000-01**
  - ▶ **Typical Naphtha based plant : Rs. 11,500/MT**
  - ▶ **Typical Gas plant : Rs. 6,000/MT**
  - ▶ **Weighted average RP: Rs. 8,700/MT**
- ◆ **Substantial increase in RPs based on naphtha feed-stock after dismantling of Administered Pricing Mechanism for Petroleum Sector.**
- ◆ **The Gap between retention price & Farmgate price of urea increased as urea price were not increased in tandem with RP.**

## Urea Pricing and Subsidy

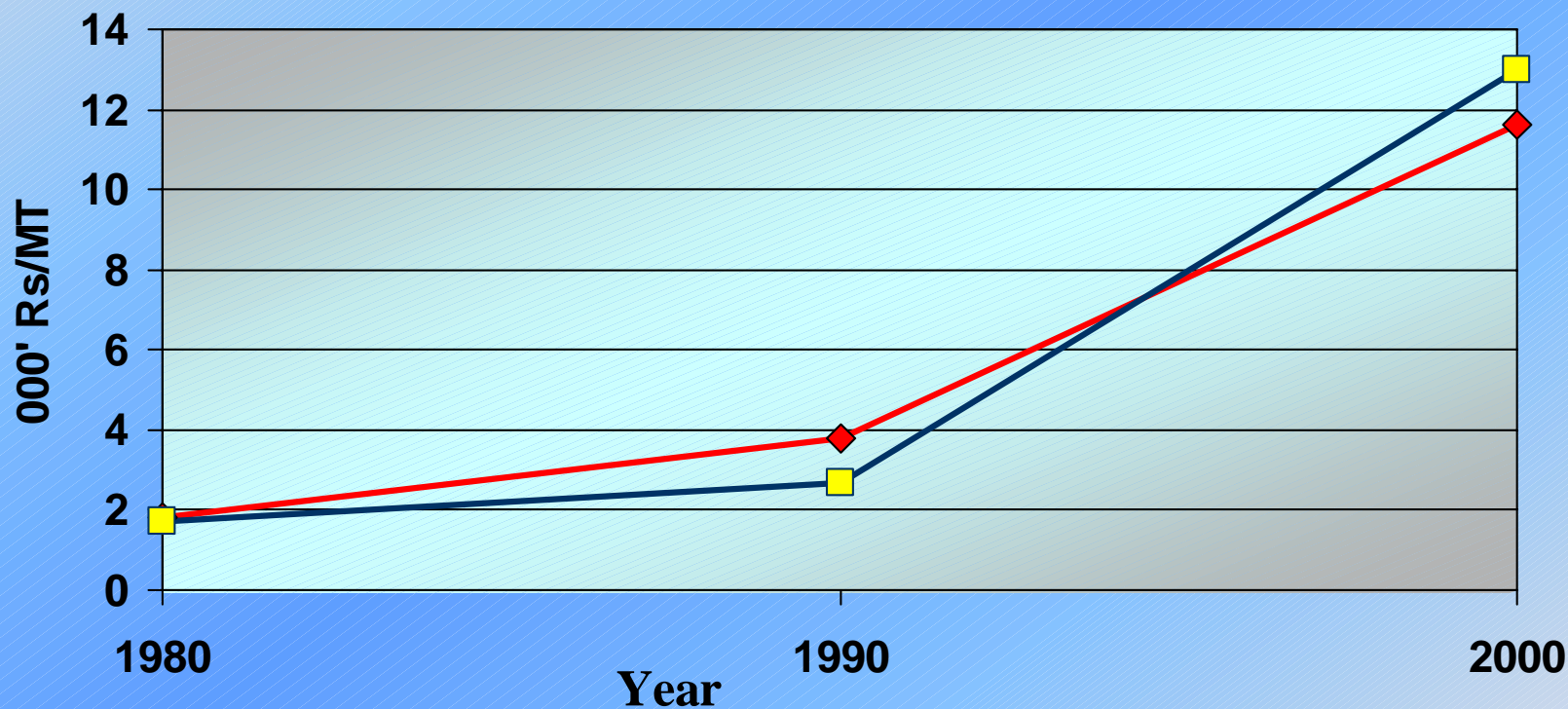
### Increase in Feed-Stock Prices

**Basic ceiling price for Naphtha, Furnace Oil and Natural Gas (excluding royalty, taxes and statutory levies)**

Year	Furnace Oil (Rs/KL)	Naphtha (Rs/t)	Natural Gas (HBJ) (Rs/000 M <sup>3</sup> )
1981	1,274	1,723	NA
1991	1,815	2,726	2,400
2000	8,000	13,000	4,000

# Urea Pricing and Subsidy

## Trend of Retention Price vs Naptha Price

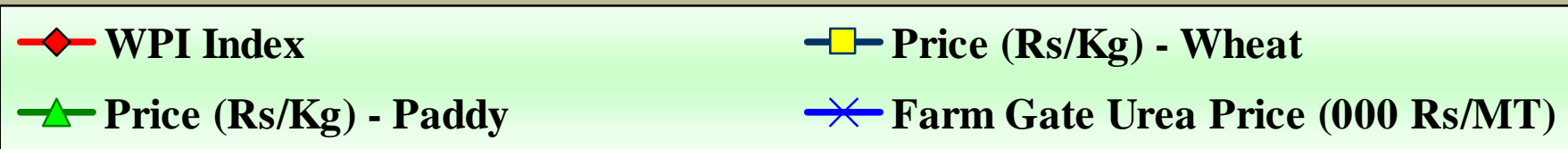
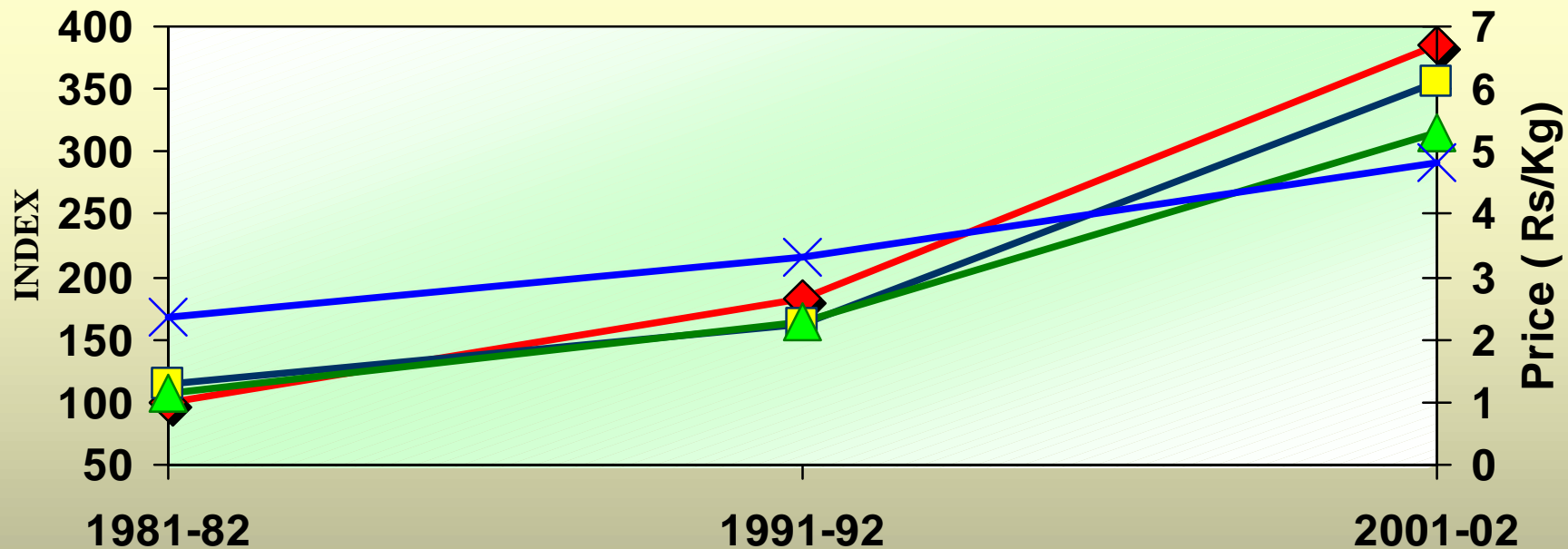


◆ Retention Price ( 000 Rs/MT)    ■ Naptha Price ( 000 Rs/MT)

## *Urea Pricing and Subsidy*

- ◆ **Subsidy Bill of GOI for Fertilisers increased from Rs 0.6 billion in 1976-77 to Rs 120 billion in 2000-01.**
- ◆ **Substantial increase in procurement prices of Paddy & Wheat and also in wholesale price index but marginal increase in farmgate prices of urea.**

## Farm Gate Price Vs Wholesale Price Indices and Procurement Price



## *Urea Pricing and Subsidy*

**With Subsidy bills burgeoning, Economic liberalisation and Reforms in offing, the GOI has to come out with a solution satisfying**

- ▶ **The Fertiliser Industry**
- ▶ **Farmers**
- ▶ **GOI exchequer**
- ▶ **WTO norms**

## *Review of Urea Pricing Policies*

- ◆ **Right from 1957 onwards, selling prices of fertilisers have been fixed by GOI. The Pricing Policies have paid dividend by attaining self-sufficiency in foodgrain production.**
- ◆ **Committees were set up from time to time to review the subsidies on fertilisers and suggest alternative broad based scientific and transparent methodology.**

## *Review of Urea Pricing Policies*

### **Impact of VII Pricing Policy - effective July, 1997**

- ▶ **Reduction in Vintage Allowance in Capacity Utilisation and Norms**
- ▶ **5% Vintage Allowance allowed in VI Pricing reduced in phases to 0% by April 2000**
- ▶ **Reduction in allowable catalyst expenditure by 40%.**

## *Review of Urea Pricing Policies...*

### **Impact of VIII Pricing Policy - effective Apr.,2000**

- ▶ **No Vintage allowance from April 2000**
- ▶ **Reassessment of capacities as per Alagh Committee Recommendations**
- ▶ **Normative Capacity Utilisation increased by 5% for all units w.e.f. April 2002**

## *Review of Urea Pricing Policies...*

### **Impact of VII and VIII Pricing Policy on Urea**

- ▶ **Steep reduction in Retention Prices**
- ▶ **Significant negative impact on old units due to removal of Vintage Allowance**
- ▶ **Pay-back of large amounts of subsidies resulting in liquidity problems**

## *New Urea Pricing Policy - effective Apr., 2003*

### **Group Pricing Scheme**

- + Six groups for all Units w.e.f. April 2003:**
  - Pre-1992 gas based units**
  - Post-1992 gas based units**
  - Pre-1992 naphtha based units**
  - Post-1992 naphtha based units**
  - FO based units**
  - Mixed feed units**

## *New Urea Pricing Policy...*

- + Weighted Average Group Retention Price or Actual Retention Price (RP), whichever is lower for all Units in Stage-I.**
- + For Units with RP higher by more than 20% of Group Average, additional concession equal to 50% of the difference between their RP and Group Average Price.**

## *New Urea Pricing Policy...*

- Escalation / De-escalations to be based on the VIII<sup>th</sup> pricing consumption norms in stage-I and on the target energy consumption fixed for each unit in stage-II.**
- 75% & 50% of production outside ECA allocations in Kharif 2003 & Rabi 2003-2004 permitted to sell in stage-I. Urea distribution to be totally decontrolled in stage-II.**
- Sales Tax on Inputs on actual basis.**

## *New Urea Pricing Policy...*

- ◆ **No special treatment for outliers in Stage - II.**
- ◆ **No capping on the production of Urea Sale of byproducts like Ammonia, CO<sub>2</sub> permitted if considered surplus.**
- ◆ **Sale of Urea to Phosphatic and Complex Fertiliser manufacturers at Import parity prices or export, subject to no receipt of subsidy on this quantity.**

## *New Urea Pricing Policy...*

- ◆ **Production of urea up to 115% of the reassessed capacity may be allowed provided the concession on this quantity is financially efficient.**
- ◆ **Lower Freight Subsidy by Rs. 100 per t for non-ECA portion of Urea sold for fertiliser use.**

## *New Urea Pricing Policy...*

### **Major implications of New Urea Pricing Policy**

- ◆ **Subsidy Outflow will decrease or remain at same levels.**
- ◆ **More competition in the vicinity of units to reduce freight costs.**
- ◆ **Tendency to sell within state on account of discriminatory Sales Tax.**

## *New Urea Pricing Policy...*

### **Major implication...**

- ◆ **Pre-92 Naphtha based units at disadvantage for having to sell farther away from the plant and additional funding for modernization for Stage-II.**
- ◆ **Future capital additions or economy measures can be undertaken on basis of cost-benefit analysis.**

## *New Urea Pricing Policy...*

### **Suggestions on New Policy**

- ◆ **No restrictions on by-product sales below reassessed capacity also.**
- ◆ **Simultaneous import and export may be permitted.**
- ◆ **Natural Gas availability on priority basis.**
- ◆ **Interest-free recoverable subsidy advance for modernisation activities.**

## *New Urea Pricing Policy...*

### **Compatibility with WTO norms**

- ▶ **Custom Duty on imported urea will decide the viability of indigenous urea.**
- ▶ **Custom duty can be increased by the GOI at any time under the WTO norms.**

## *New Urea Pricing Policy...*

### **Compatibility...**

- ▶ **In order to make the Fertilisers Policy WTO compatible, the GOI has allowed import of urea only through designated State Trading Enterprises.**
- ▶ **The Indian fertiliser industry has to formulate its strategies compatible to WTO regime.**

## *New Urea Pricing Policy...*

### **Implications of Feedstock and Energy**

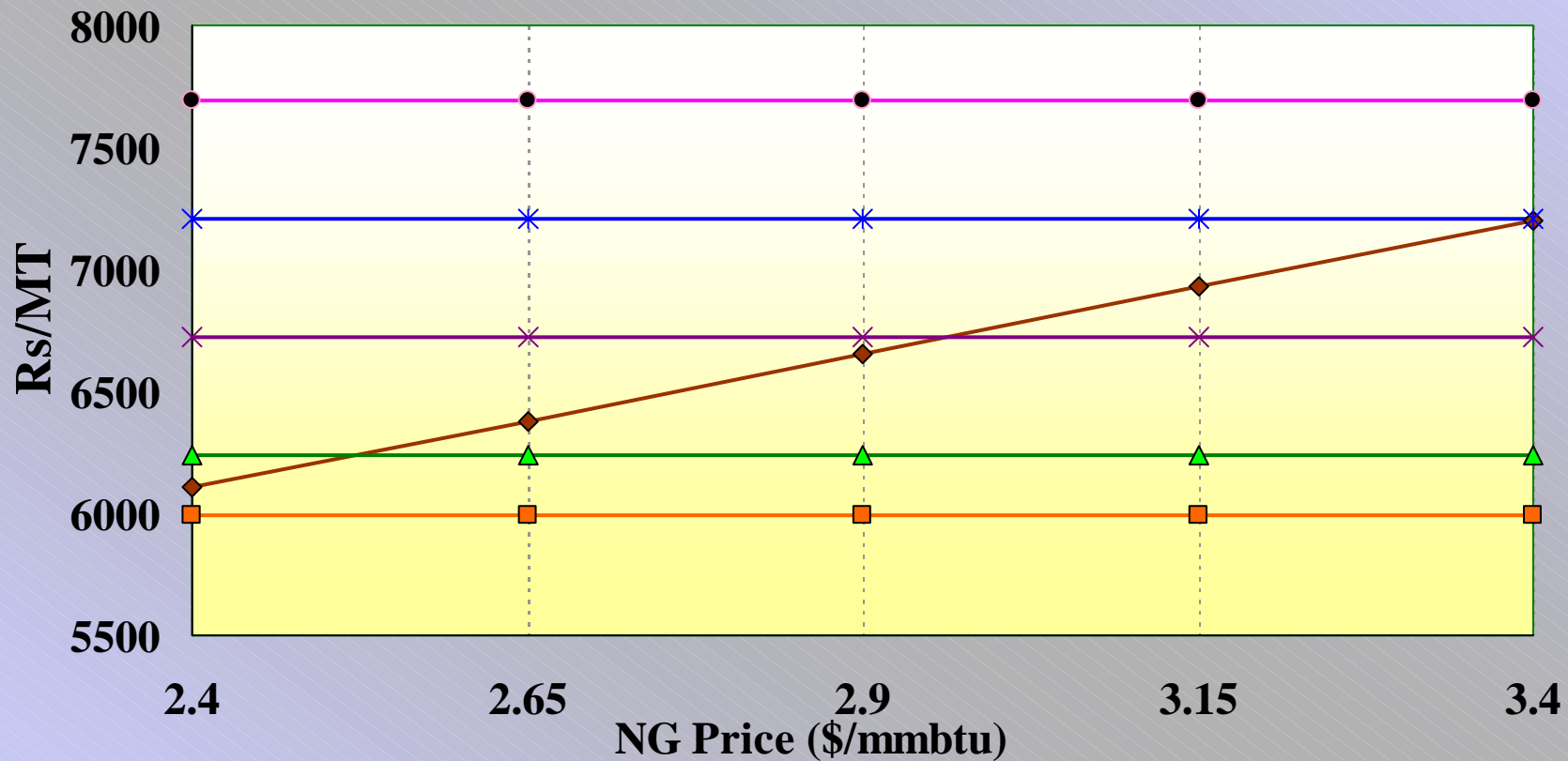
- ▶ **Emphasis on shift to cheaper fuel such as LNG/NG from Naphtha.**
- ▶ **Encouragement to set up new Urea Units based on Natural Gas.**
- ▶ **Rethinking of LNG for Fertiliser use due to new discoveries of NG.**

## *New Urea Pricing Policy...*

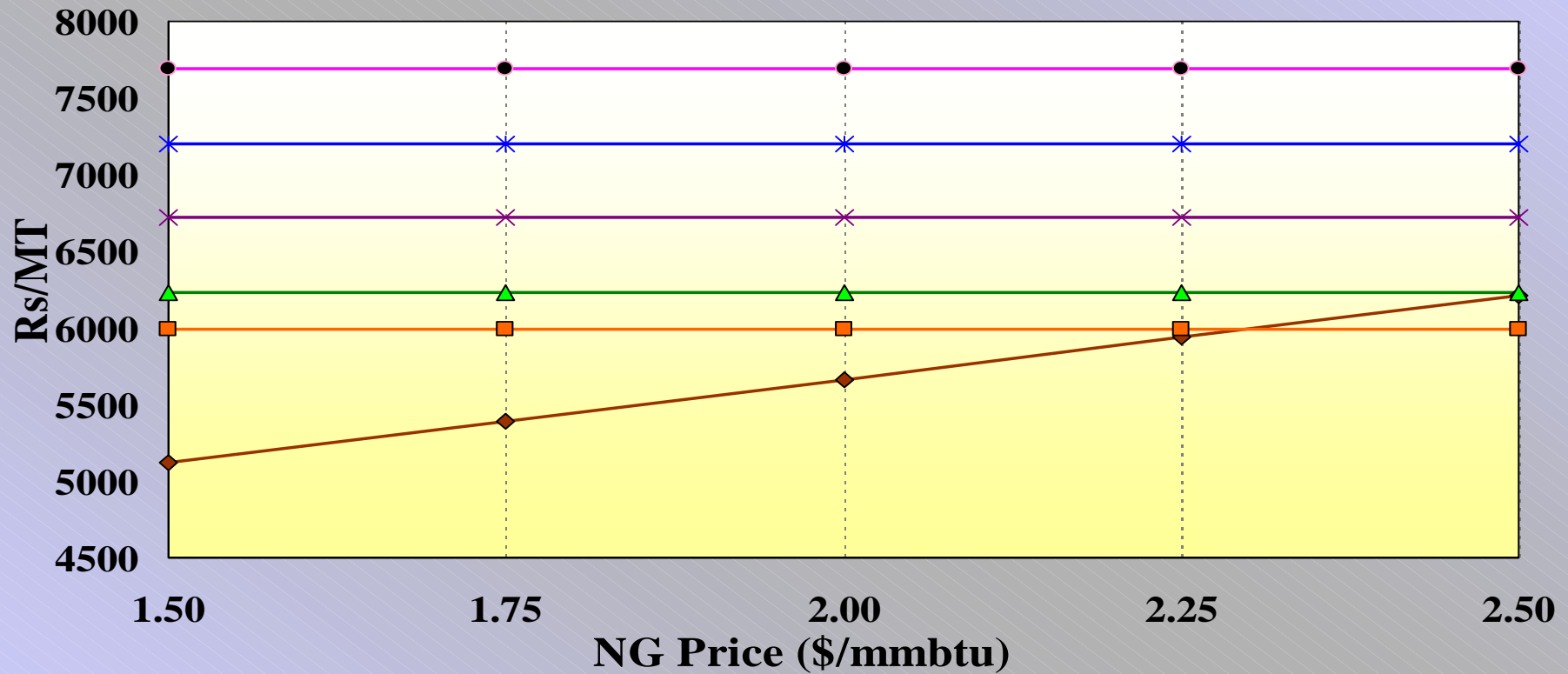
### **Implications of Feedstock...**

- ▶ **Shift in trend to setup Fertiliser Plants in India as against Joint Ventures abroad.**
- ▶ **Grassroots Fertiliser Projects will be competitive with imported Urea at 110\$/t C&F if gas is available at US\$ 2.5/MMbtu.**
- ▶ **If Naphtha. LSHS and FO are replaced by NG in IFFCO units at cost of USD 3/MMBtu, operating cost will reduce by Rs. 8.5 billion per annum.**

## Comparison of COP of Urea-Inland Location



## Comparison of COP of Urea-Coastal Location



- ◆ Total COP incl. RoE
- ▲ Imported Urea Price (110 \$/MT)C&F
- ◆ Imported Urea Price (105 \$/MT)C&F
- × Imported Urea Price (120 \$/MT)C&F
- \* Imported Urea Price (130 \$/MT)C&F
- Imported Urea Price (140 \$/MT)C&F

## *New Urea Pricing Policy...*

### **Feedstock Price Vs Imported Urea – Level Playing Field**

- ▶ **Maximum delivered cost of feedstock should be limited to US\$ 3/MMBtu for all urea plants.**
- ▶ **Custom Duty should be linked to C&F Price of Imported Urea.**
- ▶ **Price of Feedstock should be linked to Imported Urea Prices if Customs Duty is to be kept low.**
- ▶ **Energy Pricing regulator to be in place.**

## *Review of Phosphatic Fertiliser Policies*

- **In Feb.1979 Phosphatic fertiliser brought under RPS cover.**
- **Phosphatic & Potassic Fertilisers decontrolled w.e.f. 25th August 1992 based on recommendation of Joint Parliamentary Committee.**
- **Consumption of Phosphatic Fertiliser declined suddenly after decontrol due to increase in price.**

## *Review of Phosphatic Fertiliser Policies*

- **Adhoc subsidy of Rs.1000/t on DAP & MOP introduced w.e.f. from Oct. 1992.**
- **Huge disparity in prices of Urea & Phosphatic Fertilisers resulting in distortion in consumption ratio of N,P&K.**
- **Concession on Phosphatic & Potassic fertilisers kept on varying from time to time.**

## *Review of Phosphatic Fertiliser Policies*

- **In 1996 the concession on Phosphatic & Potassic Fertiliser raised to Rs. 3000/t.**
- **In May 1999, concession on indigenous DAP raised to Rs. 4600/t & Rs. 3200/t on imported DAP.**

## *New Phosphatic Fertiliser Policy*

### **Tariff Commission Report:**

**Tariff Commission studied cost - price of DAP & MOP, submitted its report in Jan 2003. All the manufacturer, based on imported ammonia use, were divided in 2 groups.**

- Group I - Units using captive Phosphoric Acid**
- Group II - Unit using imported Phosphoric Acid**

## *New Phosphatic Fertiliser Policy...*

### **Tariff Commission Report...**

- **Group weighted average price of P<sub>2</sub>O<sub>5</sub> fixed for each group based on the cost of raw materials.**
- **Prices to be adjusted with the variation in prices of raw materials based on a formula.**

## *New Phosphatic Fertiliser Policy...*

### **Tariff Commission Report...**

#### **Complex Fertiliser:**

**The complex fertiliser manufacturing units have been divided in the group.**

- Group - I - Having Gas based captive Ammonia Plant / Imported Ammonia**
- Group - II - Having Naphtha based captive Ammonia Plant**

## ***Suggestions for Growth of Fertiliser Industry***

**The Industry has to meet challenges with positive frame of mind and some Suggestions in this regard are as under:**

- **Reduce Cost of Production by:**
  - **Reduction in Energy Consumption**
  - **Optimisation of use of Resources**
  - **Pooling of Catalysts and Spares**

## ***Suggestions for Growth of Fertiliser Industry***

- **Major revamps for energy efficient route**
- **Cheaper energy sources – conversion of Naphtha / FO to NG**
- **Retrofitting Schemes based on Cost-Benefit analysis**

## ***Suggestions for Growth of Fertiliser Industry***

- **Long Term Fertiliser Policy for at least 15 years**
- **Compensation for value addition in fertilisers**
- **WTO compatible Pricing Policy for making indigenous fertiliser industry competitive**
- **Interest of small and marginal farmers to be kept in mind**

## ***Suggestions for Growth of Fertiliser Industry***

- **Long Term Energy Pricing vis-a-vis Fertiliser Pricing Policy including logistics for supply of feedstocks and sale of fertilisers**
- **FCO specification for various fertilisers to include micro-nutrients**
- **Rationalisation of multiple and differential taxes by different states**
- **Encouragement of social role of indigenous fertiliser manufacturers**

## *Conclusion*

- **GOI and Industry should remain partners in the Fertiliser Sector, for national pride of food security.**
- **Fertiliser Policy should be farmer friendly and economically viable for the Industry.**

## *Conclusion*

- **GOI should ensure raw materials at reasonable price and proper quality.**
- **Fertiliser Industry should be efficient, modern and vibrant and be ready to face the economic liberalisation and reforms.**

**GOOD LUCK TO ALL**

**THANK YOU**