

CHAPTER III

FERTILIZER SUBSIDY SYSTEM - AN ANALYSIS

3.1 INTRODUCTION

Pricing is among the most important decision making areas in marketing management.

In the fertilizer industry, the aspect of subsidy has been of great concern and debated at the level of fertilizer manufacturing unit, at the level of the industry association and also at political circles for quite some time. Subsidy has been regarded as the main factor for stimulating fertilizer production and consumption.

This chapter attempts to provide an overview of the subsidy and discusses the vital role it has played in meeting the dual objective of production and consumption growth during the last two decades. The impact of subsidy on fertilizer consumption has also been elaborated. The annual subsidy quantum to the exchequer (Government of India) rose to Rs.6,000 Cr. in 1992-93 compelling withdrawal of the subsidy on phosphatic and potash fertilizers.

3.2 THE SUBSIDY SYSTEM

Fertilizer units producing nitrogenous and complex fertilizers operate under fertilizer pricing system which is administered by the Fertilizer Industry Coordination Committee (FICC) working in the Ministry of Chemicals & Fertilizers. Under this system maximum selling prices of nitrogenous and complex fertilizers produced in the country are fixed by the

Government and the prices that each production unit will get - called the 'Retention Price' - are also fixed in relation to each unit.¹

The objective of subsidy is to dual; to encourage private investment in fertilizer industry by assuring a reasonable return on investment and to stimulate the consumption by holding the consumer prices below the cost of production and marketing. The system which was introduced in 77-78 met both the objectives. The subsidy cost to GOI which was less than Rs.150 Vt in 76-77 went up to Rs.2000 cr in 85-86 and reached a level of Rs.6000 cr in 92-93 when the subsidy on P & K were with drawn (Aug 92). A graph showing the increases in the subsidy level during 76-77 to 1985-86 in page 151a.

Pricing in Fertilizer marketing system had been considered as an important factor for promoting fertilizer usage and motivating the users. Irrespective of the cost of production and marketing of several fertilizer units the farmers price had been fixed by GOI from time to time. The following Statistics gives the price movement of fertilizer in terms of N, P & K:

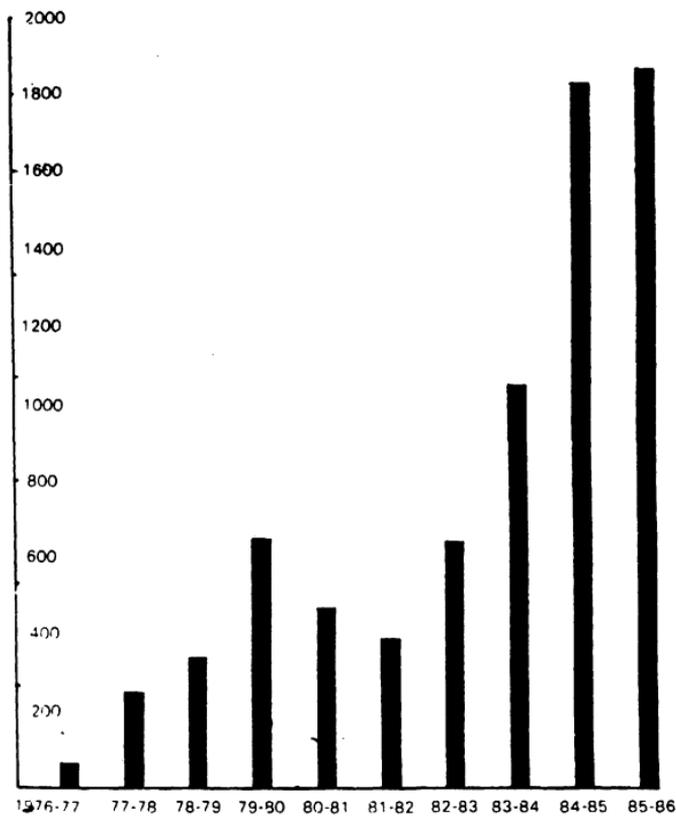
Table No.42
Variation in Fertilizer prices & Impact on consumption

Year	Price/Kg			Consumption (Lakh T)		
	N	P	K	N	P	K
72	2.08	1.89	0.92	18	6	3
75	4.02	4.52	1.97	18	5	3
80	4.35	4.93	1.34	37	12	6
82	5.11	5.83	2.17	42	14	7
91	6.60	7.57	3.03	80	32	13
92	6.00	16.00	7.50	80	33	13
93	6.00	14.00	6.17	84	28	88

Source : FAI Fertilizer Statistics 92-93 page II-2, compiled.

¹ Ramabhadran 1992, 'Impact of subsidy on fertilizer production and consumption', paper presented at FAI seminar.

Increase in fertiliser subsidy 1976-77 to 1985-86
(in crores of rupees)



Source : A Study of the Marketing of Fertilizers in India Dr. V.S. Ramaswamy

The above table indicates that the increase in prices of N & P had little impact on the consumption trends. For marginal increases in prices of fertilizer products the consumption is not significantly affected. However when the price increased consequent to de control of P & K in 92 there was a significant drop in consumption of these nutrients and there was a shift towards N.

3.3 BACKGROUND OF FERTILIZER PRICING

Between 1944 and 1966, the Ministry of Agriculture operated a central fertilizer pool which pooled imported as well as indigenously produced fertilizers and arranged for equitable distribution materials at fair prices to the States. In 1966, the Government enunciated a new fertilizer policy under which complete freedom was given to the industry to price and market their production. However, later in 1975, under the Essential Commodities Act, the Government fixed the maximum selling services for straight nitrogenous fertilizers, viz., fertilizers containing nitrogen only. Single super phosphate was taken out of the purview of such price fixation and responsibility for fixing the price of this was given to the Fertilizer Association of India. In March 1976, maximum selling prices for the introduction of a flat subsidy of Rs.1250 per tonne of phosphoric acid produced and sold in the form of fertilizer. Since the entire requirements of the country of potassic fertilizers are imported and the import and distribution is handled by a Government agency - Indian Potash Limited - the pricing of this commodity has been with the Government.

3.4 NEED FOR RETENTION PRICES

The cost of production of fertilizers varies from unit to unit depending upon the location of the Plant, the initial capital investment, the feed stock, the process used and the age of the Plant. The fixation of a uniform selling price affected the profitability of many of the units adversely. However, it was considered not feasible to close down such unprofitable units because of

the capital investment and time factor involved in setting up new units to compensate for such lost capacity. To examine how the problem of differential returns to the different unit could be sorted out a Committee under the Chairmanship of Dr S.S. Marathi was set up to study the problem and suggest remedial measures. The Committee in its report suggested fixation of a Retention Price i.e. the price to be paid for each product produced by each unit in relation to its cost of production. The Retention Price for each unit was fixed that every unit would get a 12% post-tax return on net worth if the Plant was operated at a certain capacity. On this basis, for some units with a very high cost of production the Retention Prices would be higher than the maximum selling prices. For units with a low cost of production, the Retention Prices would be lower than the maximum selling prices. The FICC would administer the price system by getting payment from the low cost producers and allowing subsidies to the high cost ones. On this basis, the Retention Prices Scheme for nitrogenous fertilizers came into effect from November 1, 1977 and for complex fertilizers from February 1, 1979.

The guidelines used in the fixation of Retention Prices relate to capacity utilization, consumption norms, input cost, conversion cost, depreciation, interest on borrowings and Return on Net worth.

1. Capacity Utilization

Till the end of IV Pricing Period (1985-88), the Retention Prices were so fixed that if the Ammonia Plant is operated at 80% of installed capacity and the Phosphoric Acid Plant at 70% of installed capacity, the unit would be assured of a post-tax return of 12% on its net worth. This into account the time required for annual turnaround and the hourly production rate considering the particular unit's product mix and 6000 hours of working per train per year of complex production.

In order to reduce the mounting subsidy burden on the part of GOI, FICC tightened the above capacity utilization norms, as indicated in the table below:

Table No. 43
Capacity Utilization Norms of FICC

Sl.No.	Period	Gas based Plant	Coal based	Others
i.	First Year	80	60	80
ii.	2nd Year to 10th year	90	60	85
iii.	Over 10 years vintage	85	60	80

Source: Fertilizer Industry Coordination Committee (FICC) New Delhi. (1988)

The capacity utilization of Ammonia and Urea Plants would be worked out on the basis of 330 days in a year and the daily capacity would be per design.

Capacity utilization of Phos Acid Plant (%)

Upto 10 years vintage	75
After 10 years vintage	70

Stream hours for NPK Plants (based on external Phos Acid)

Upto 10 years vintage	6300 hrs/annum/train
Above 10 years vintage	6000 hrs/annum/train

2. Consumption norms

Based upon an In-depth study of actual performance of each unit, the rates of consumption of raw materials are assessed. The norm of efficiency for material usage is 92% for nitrogen and 95% for phosphoric acid

and potash. To give an example, theoretically 165 tonnes of urea can be produced from 92 tonnes of ammonia. In arriving at the consumption norms, 100 tonnes of ammonia will be allowed for the same quantity of urea. As a matter of special dispensation for vintage units, FICC allowed an additional 5% towards specific consumption of feed stock like Naphtha.

3. Input cost

The normal effective period for a particular Retention Price is three years. The prices of inputs are taken at the levels prevailing at the beginning of the period. However, if prices of major raw materials and utilities such as naphtha, phosphoric acid, potash, fuel oil, power and water go up during the pricing period because of government action or budget impact, such escalations are allowed from specific dates, depending upon the inventory norms fixed for the working capital.

4. Conversion costs

This takes into account salaries and wages with an increment of 5% per year, quantities and costs of the different catalysts and their life expectancy, chemicals, repairs and maintenance costs (now actual reimbursed) and other expenses like administration and selling overheads based on actual recorded in the latest published accounts of the Company before the commencement of the pricing period. Bonus at statutory minimum of 8.33% is also allowed. However, recently, at the time to annual review of Repairs & Maintenance expenditure, certain high value items, though strictly revenue in nature, have been classified as deferred revenue, qualifying for reimbursement over a 10 year period. This seriously affects the liquidity position of the Companies.

5. Depreciation

The average depreciation on a straight line method is allowed. This also takes into account the additions to capital equipment approved by the Company's Board of Directors.

One significant change in V Pricing norms recently announced is that the life of Plants commissioned in 1982 and thereafter has been increased from 10 to 15 years thereby reducing the effective allowance of depreciation @ 6.33% p.a.

6. Interest on borrowings

A company has to borrow money to finance its working capital requirements in addition to long term loans secured for Plant & Machinery. The pricing system allows for the interest payable by the company on such borrowings. In regard to working capital, the system follows certain norms to fix the amount required. These norms relate to the inventory of raw materials, spares and finished products that the company has to keep for normal functioning, the amount of credit that is allowed by the company on its own products to its dealers and customers and the credit that is received by the company from its suppliers. The norms are as follows:

Raw Materials Inventory Norms

Naphtha 15 day's consumption

Phosphoric Acid 1 month's consumption

Potash 1.5 month's consumption

Packing materials 1 month's consumption

Catalysts 1 full charge
Spares 75% of 30 month's or
22.5 month's consumption

Chemicals 2 month's consumption

Inventory of finished product

Urea 0.75 month of production
NPK 2 months of production

Subsidy Receivable 1 month

Credit to wholesalers & retailers

Urea 1.25 months of sale
NPK 1.75 months of sale

Liabilities

Phosphoric acid 1 month's consumption
Potash 25 day's consumption

Adopting these norms the normative working capital requirement for each unit is estimated. If the actual working capital of the unit is more than the normative working capital the excess is disallowed from the actual borrowings for calculating interest. If it can be conclusively established that internally generated funds have been used to finance excess working capital, this excess is disallowed from the company's net worth and the balance, if any, from the borrowings. Such an eventuality will arise only when the actual working capital employed is in excess of the actual borrowings.

3.5 RETURN ON NET WORTH

The Net worth of the company is its share capital plus the reserves held. In calculating the Net worth for Retention Prices, expenditure on new projects, investments not directly related to the operations of the unit, deferred revenue expenses carried over from the previous year and accumulated losses are disallowed. In addition, as mentioned under item 6 earlier, excess of the actual working capital over the normative working capital financed from the company's own resources are also deducted from the net worth. However, even if the accumulated loss has eroded the equity, FICC would allow Return at least on the paid up capital. In other words, Return is sought to be protected on the floor level of equity. On the finally adjusted net worth, a return of 20.690% pre-tax or 12% post tax is calculated without taking into account the company's actual tax liability. This amount is then distributed over all the products produced by the company to arrive at the final per tonne Retention Price.

If the Retention Price so arrived at is more than the ex-factory selling price the Government will pay the difference to the manufacturer. If the Retention Price is less than the ex-factory selling price the manufacturer has to pay the difference to the Government.

3.6 MERITS OF THE SYSTEM

- a) The actual net worth of the company barring certain disallowances mentioned earlier, is reckoned for the purpose of computing return.
- b) Freight on finished product are fixed on the basis of actual incurred during the previous year with a suitable escalation to cover current costs and this amount is reimbursed to the unit separately.

- c) **Adjustment in the Retention Prices are allowed as and when there is variation in the cost of major raw materials. However, there is considerable time lag before these adjustments are approved.**
- d) **The consumption norms for raw materials and utilities are being fixed after a thorough study of past performance and with the consent of the particular unit as far as possible.**
- e) **The system encourages efficiency since the profits can be higher if the actual capacity utilization is more than the minimum prescribed for the purpose of pricing. At the same time, sick units are also protected by assuring a 12% post tax return on their paid up share capital even through they might have accumulated losses.**

3.7 NEGATIVE ASPECTS OF THE SYSTEM

- a) **In assessing the net worth, the excess of actual working capital over the theoretically assessed working capital is deducted to the extent the company has utilised its own resources for such financing. This is in a way penalizing the organization for not borrowing money for its working capital requirements. Similarly, expenditure on new projects is not taken into account although the company gets no return on such investments.**
- b) **The net worth once determined at the beginning of the pricing period remains static for the three-year period. In most cases, the net worth of a unit will continue to increase and there is no return on this increased quantum.**
- c) **The fixed rate of return at 12% post-tax may not be adequate to generate sufficient funds for new capacities. This is particularly the**

case when we consider the very steep rise in equipment cost and the uncertainties and risks associated with the industry.

- d) Some of the norms fixed in relation to the finished product inventory and credit period for sale would not reflect the actual situation obtaining for each unit.
- e) FICC fixes hourly output of NPK products, consumption norms of feed stock etc on the basis of average of 3 very high instantaneous rates obtained during selected periods of optimum run even though it is very difficult to achieve these norms on annual basis.
- f) The conversion costs and overheads are fixed on the basis of the latest published accounts prior to the commencement of the pricing period (which will be generally two years earlier) and so does not take into account the effect of inflation which is quite high. Besides, certain statutory levies by State Governments like Turnover Tax which is to be absorbed by the sellers and not to be passed on to the buyers, are not reckoned in the Retention Price build up. This levy over a period of years has assumed alarming proportions, amounting to about Rs 2 Cr per annum. In other words, the industry is denied return of about 2% out of the assumed post-tax return of 12%.
- g) No distinction is sought to be made between vintage plants involving very low capital costs and modern plants involving huge capital costs. While in the case of vintage plants (10 - 15 years old) the break even is achieved usually at a higher level of capacity utilization (say 80%), it is as low as 50% in the case of high cost modern plants, mainly due to the reimbursement in the shape of subsidy towards capital related costs like Depreciation, Interest and Return amounting to about 35% on the substantial investment. In other words, high cost modern units turn profitable at 50% capacity utilization while vintage

plants start earning profits only after achieving 80% high capacity utilization.

One of the ways to compensate vintage plants is to extend advantageous norms in respect of Return, Capacity Utilization, Specific Consumption etc. In line with the above, FICC have relaxed to a certain extent the norms in respect of capacity utilization and specific consumption for feed stock as already indicated.

- h) The latest proposal to reimburse depreciation over a 15 years life span of assets will mean reducing the allowance from the existing 10.56% to about 6% on Plant & Machinery and that too on historical cost. Even the existing provision is highly inadequate in relation to the need to cope with increasing incidence of inflation and technological obsolescence. Reducing this provision any further would completely starve the industry of funds to carry out the minimum replacements apart from long term loan repayment, financing further growth, modernization etc.

One of the major advantages with this system is that the FICC has encouraged free and frank views by the industry and is also very open in relation to its procedures and systems. It may be unrealistic to expect a pricing system like this to operate to the satisfaction of everyone concerned. Adjustment will have to be made based upon experience over a period of time and hopefully the system might be able to provide reasonable satisfaction to the fertilizer industry.

The objective of the subsidy scheme is to make fertilizer available for agricultural purposes at reasonable prices. Since this desired price is lower than the Retention price fixed for the manufacturers, the necessity for the payment of subsidy arises. Since the farmer pays less than the Retention Price, the subsidy may be said to accrue to the farmer, the

ultimate beneficiary. The manufacturers are the chosen conduits, delivering the products to the farmers along with subsidy, in an efficient manner.

It can also be argued that while the farmer enjoys the subsidized product, it is really the manufacturer who is subsidized since the individual Retention Price of a product is determined in relation to the manufacturer's particular capital structure, fixed expenses, vintage etc so as to enable him in netting a 12% post-tax return on his net worth. Thus, if the manufacturer's Retention Price is in excess of the farmer's economic price, there is undoubtedly an element of subsidy to the manufacturer.

Increasing subsidy burden to Government but matched by higher production:

Ever since the introduction of the subsidy scheme, the subsidy burden on the part of Government of India has consistently been going up but of course matched by higher production tonnage either due to higher capacity utilization of existing units or by creation of new capacities. The position is illustrated in table no.40.

Table No.44
Fertilizer Production and Subsidy - Trends

Year	Indigenous production (lakh tonnes)			Subsidy	
	Nitrogens	Phosphatic	Total	Rs.Cr	Rs./T
1980-81	21.64	8.42	30.06	170.00	565
1982-83	34.30	9.84	44.14	550.00	1246
1985-86	43.23	14.30	57.53	1600.00	2781
1987-88	54.65	16.65	71.30	2050.00	2875
1989-90	67.47	17.95	85.42	3771.00	4415

Source: Paper presented by Ramabhadran R. at the FAI Seminar 1992.

While the subsidy outgo for Government of India has been steadily increasing year after year, there has been significant increase in indigenous production of fertilizers, resulting in the overall national perspective of fostering self-reliance in Indian agriculture based on increased fertilizer use.

However, there are some measures that may be initiated by Government to contain the increasing subsidy bill like exemption of fertilizers from levies such as 8% employment surcharge on IT, Consignment Tax and increase in Railway freight, waiver/reduction in Customs Duty for import of Projects and Captive Power Plants, reduction in the input costs of all petroleum products etc.

- Source:
1. Fertilizer Industry Coordination Committee, Government of India, Ministry of Finance, New Delhi.
 2. Paper presented by Ramabhadran, R. General Manager, (Finance) Madras Fertilizer Limited, Madras at FAI Seminar 1992.

3.8 CONCLUSION

Fertilizer subsidy has been an important strategic decision of Government of India with the dual objective of increasing indigenous production of fertilizer and stimulating fertilizer consumption. The subsidy quantum which was less than Rs.170 Cr. in 1980-81 steeply rose to Rs.6000 Cr. in 1992-93. The Government of India decontrolled phosphatic and potash fertilizers with view to bring down fertilizers subsidy.

The fertilizers subsidy met both the purposes of increasing production and increasing consumption. Due to subsidy investment in fertilizer industry from the private sector was possible. It is now time that the industry is allowed to grow on its own strength by gradually withdrawing the subsidy quantum.