

Chapter 5

Prices and Profitability of Fertilizers

PRICES OF FERTILIZERS

As fertilizer is an essential input for agricultural production, the Government's objective is to make this critical input available to the farmers at affordable prices. Until 24th August 1992, the prices of all the fertilizers were controlled, the Government setting the maximum retail prices of various fertilizers. With effect from 25 August 1992, the prices of phosphate and potash fertilizers were decontrolled. The prices of urea continued to remain under control. Following decontrol, the prices of phosphatic and potassic fertilizers rose sharply. Since 1997/98 the Government has fixed indicative maximum retail prices of decontrolled fertilizers, uniform throughout the country. Tables 15 and 16 show the maximum retail prices of fertilizers for the last 5 years.

TABLE 15
Maximum retail prices of fertilizers, by product

Fertilizer	2000/01	2001/02	2002/03	2003/04	2004/05
	(Rs./tonne product)				
DAP	8 900	8 900	9 350	9 350	9 350
MOP	4 255	4 255	4 455	4 455	4 455
SSP	2 500-3 500	2 500-3 500	2 600-3 500	2 600-3 500	2 600-3 500
Urea	4 600	4 600	4 830	4 830	4 830
10-26-26	7 880	7 880	8 360	8 360	8 360
12-32-16	7 960	7 960	8 480	8 480	8 480
14-28-14	7 820	7 820	8 300	8 300	8 300
14-35-14	8 100	8 100	8 660	8 660	8 660
15-15-15	6 620	6 620	6 980	6 980	6 980
16-20-0	6 740	6 740	7 100	7 100	7 100
17-17-17	7 680	7 680	8 100	8 100	8 100
19-19-19	7 840	7 840	8 300	8 300	8 300
20-20-0	6 880	6 880	7 280	7 280	7 280
23-23-0	7 540	7 540	8 000	8 000	8 000
28-28-0	8 520	8 520	9 080	9 080	9 080

TABLE 16
Maximum retail prices of fertilizers, nutrient basis

Fertilizer	Price per kg of nutrient	Prices				
		2000/01	2001/02	2002/03	2003/04	2004/05
		Rs/kg nutrient				
Urea	N	10.0	10.0	10.5	10.5	10.5
SSP	P ₂ O ₅	15.6–21.9	15.6–21.9	16.3–21.9	16.3–21.9	16.3–21.9
DAP	P ₂ O ₅	15.4	15.4	16.2	16.2	16.2
NP/NPKs	P ₂ O ₅	16.3–28.1	16.3–28.1	17.6–29.7	17.6–29.7	17.6–29.7
MOP	K ₂ O	7.1	7.1	7.4	7.4	7.4

PRICES OF AGRICULTURAL PRODUCTS

The Government of India fixes procurement / minimum support prices (MSPs) of essential agricultural products for the crop / marketing year in order to keep prices stable. Table 17 shows procurement / support prices of agricultural products for the last 5 years.

Table 18 shows the relationship between fertilizer nutrient prices and output prices. Farmers have to sell more kilograms of paddy rice to buy 1 kg of P₂O₅ than for N and K₂O. In 2004/05, farmers had to sell 2.95 kg of paddy rice to buy 1 kg of P₂O₅ through DAP. In the case of P₂O₅ through SSP and complex fertilizers, the ratio was still higher. The farmers had to sell 1.91 kg of paddy rice to buy 1 kg of N through urea, and 1.35 kg of paddy to buy 1 kg of K₂O through MOP.

PROFITABILITY OF FERTILIZER USE

The profitability of fertilizer use has been calculated on the basis of the value of crop output and the cost of the input (fertilizer). The profitability of P₂O₅ and K₂O use has declined significantly after the decontrol of the

TABLE 17
Procurement/minimum support prices of agricultural products

Crop	2000/01	2001/02	2002/03	2003/04	2004/05
	(Rs/kg)				
Gram	11	12	12.2	14	14.3
Groundnut	12.2	13.4	13.6	14	14.3
Paddy	5.1	5.3	5.3	5.5	5.5
Sorghum	4.5	4.9	4.9	5.1	5.1
Sugar cane	0.6	0.6	0.7	0.7	-
Wheat	6.1	6.2	6.2	6.3	6.4

TABLE 18
Physical returns

	kg of paddy rice required to buy 1 kg of nutrient				
	2000/01	2001/02	2002/03	2003/04	2004/05
N through urea	1.96	1.89	1.98	1.91	1.91
P ₂ O ₅ through DAP	3.03	2.91	3.06	2.95	2.95
P ₂ O ₅ through NP/NPKs	3.20–5.51	3.08–5.30	3.32–5.61	3.19–5.40	3.19–5.40
P ₂ O ₅ through SSP	3.06–4.29	2.95–4.13	3.07–4.13	2.95–3.98	2.95–3.98
K ₂ O through MOP	1.39	1.34	1.40	1.35	1.35

prices of these fertilizers in 1992. However, with the steady increase in the procurement / support prices of crops over the years and almost stable fertilizer prices, the profitability has increased in the past few years in the cases of all the three nutrients (Table 19).

Among the four crops listed in Table 19, in the cases of N and P₂O₅, the value cost ratio is highest for gram, followed by wheat, paddy rice and sorghum. In the case of K₂O, the value-cost ratio is highest for gram, followed by sorghum, wheat and paddy rice.

FERTILIZER SUBSIDY

Over the years, the aim in India has been to become and remain self-sufficient in foodgrain production. Fertilizer is the key input that has made this goal achievable. Historically, the prices of fertilizers have been kept below the cost of production and importation. The prices of fertilizers in India, particularly of urea, are lower than in developed and neighbouring developing countries. The objective behind the low prices is to maintain a favourable input:output ratio. The aim of the Government has been to ensure that the farmer receives a price that makes fertilizer use acceptable and remunerative. The Government provides a fertilizer subsidy to fill the gap between the cost of production / import cost plus distribution of fertilizers, and their retail prices. The objective of the introduction of the fertilizer subsidy was: (i) to provide foodgrains to the people at affordable prices; (ii) to insulate farmers from variations in production costs and to ensure reasonable returns from fertilizer use; and (iii) to ensure a reasonable return to the fertilizer industry.

TABLE 19
Profitability of mineral fertilization for selected crops 2004/05

Nitrogen				
	Yield increase in per kg of N (kg)	Value of yield increase (Rs)	Cost of N through urea (Rs/kg)	Value/ cost ratio
Gram	8.0	114.0	10.5	10.9
Paddy rice	12.0	66.0	10.5	6.3
Sorghum	5.6	28.3	10.5	2.7
Wheat	12.0	76.8	10.5	7.3

Phosphate				
	Yield increase per kg of P ₂ O ₅ (kg)	Value of yield increase (Rs)	Cost of P ₂ O ₅ through DAP (Rs/kg)	Value/ Cost Ratio
Gram	5	71.2	16.2	4.4
Paddy rice	7	38.5	16.2	2.4
Sorghum	4	20.2	16.2	1.2
Wheat	7	44.8	16.2	2.7

Potash				
	Yield increase per kg of K ₂ O (kg)	Value of yield increase (Rs)	Cost of K ₂ O through MOP (Rs/kg)	Value/ cost ratio
Gram	11.5	163.9	7.4	22.1
Paddy rice	5.0	27.5	7.4	3.7
Sorghum	11.5	58.1	7.4	7.8
Wheat	5.0	32.0	7.4	4.3

The subsidy on fertilizers is given to the farmers by routing it through fertilizer manufacturers. The Government of India introduced the Retention Pricing Scheme (RPS) on urea in 1977 and on complex fertilizers in 1979. Under the RPS, a normative cost of production was worked out for each company. The difference between the normative cost of production plus the distribution cost and the retail price represents the subsidy to the farmers. Effective from August 1992, P and K fertilizers were decontrolled. This led to high prices of these fertilizers. The Government introduced a concession scheme to mitigate the increased cost of production. However, urea continued to be under the RPS until 31 March 2003. Effective from 1 April 2003, the RPS on urea was replaced

TABLE 20

Subsidies on fertilizers

Year	Indigenous urea	Imported urea	Concession on decontrolled fertilizers	Total
	(Rs million)			
2000/01	94 800	10	43 190	138 000
2001/02	80 440	473	45 040	125 953
2002/03	77 900	-	32 250	110 150
2003/04	81 390	10	36 560	117 960
2004/05	101 432	4 730	50 460	156 622

by the Group Pricing Scheme (GPS). The normative cost of production is now worked out on the GPS basis. Table 20 shows the amount of subsidy provided by the Government on urea and on the concession on P and K fertilizers in the last 5 years.

