This is not the case in reality. To illustrate, one set of data derived from the report of the Committee on Input Subsidy is presented in Table 10. This source is chosen because this was used as the basis for the August 1979 revision of fertilizer prices. To identify the beneficiary of subsidy shown in Table 9b, the following should be noted :

Table 10. Cost, sale price and subsidy on different types of fertilizers, 1974/75 to 1977/78

(Taka per ton)

Year	Procurement cost			Distribution cost	Total price	Sale price	Subsidy
	Foreign	Local	Average[a]				
				Urea			
1974/75	3210	762	2301	545	2846	1341	1505 (53)[b]
1975/76	4471	962	1867	572	2439	1341	1098 (45)
1976/77	2682	1734	1771	557	2328	1609	719 (28)
1977/78	2590	1734	2180	408	2588	1877	711 (27)
				TSP			
1974/75	2556	2032	2441	545	2986	1072	1913 (64)
1975/76	3006	2585	2940	572	3512	1073	2439 (69)
1976/77	2015	4350	3726	557	4283	1287	2996 (70)
1977/78	3008	4350	3370	408	3778	1475	2303 (61)
				MP			
1974/75	522	—	522	545	1067	805	262 (25)
1975/76	2408	—	2408	572	2980	805	2175 (73)
1976/77	1845	—	1845	557	2402	1073	1329 (55)
1977/78	1672	—	1672	408	2080	1207	873 (42)

a. Weighted average of total locally procured and quantity received from abroad.
b. Figures in the parentheses are percentages of subsidy in different years.

1. All imported fertilizers have been costed using C & F price at official exchange rate. Fertilizers are imported under the following arrangements (i) cash purchase by the government, (ii) purchased under tied/untied credit, (iii) grant aid. Currently nearly 75 per cent of total fertilizers (40 per cent of Urea, 70—80 per cent of TSP and 100 per cent of Potash) distributed in Bangladesh come from abroad and nearly 85 per cent of those are received as grant aid. For grant aided fertilizers the government sometimes has to pay only the shipping cost but usually the shipping cost is either included in the original grant or separate grant is available to cover shipping cost. All imported fertilizers are purchased through international tenders. Prices paid for cash purchased, tied credited and grant aided fertilizers are not available. Import prices of commodities purchased with tied credit and grant aid are generally found higher than world market prices.[17] If the huge amount of fertilizers purchased with tied credit and grant aid were paid more than open market prices, the aid donors/fertilizer suppliers were the real beneficiary of subsidy.

2. Fertilizers purchased tied credit and grant aid constitute a national resource. So long as this resource is sold at less than its opportunity cost (world market price) the buyer user may be taken to enjoy subsidy. On the other hand government procurement cost for grant aided and in the short run for credited fertilizers are close to zero ; and there is a net revenue to the government amounting to the sale value of fertilizers. Food, fertilizer and other commodity aid accounted for over 70 per cent of total aid to Bangladesh since independence and the counterpart fund derived from the sale value of such commodities is a major source of government expenditure. The distribution of public expenditure upto 1978 provides evidence that agricultural growth or rural development more broadly defined has not received highest priority despite the rhetoric of planning documents. Agricul-

Table 11. The Agriculture Sector Share in Bangladesh Government Expenditure 1972-78

	1972/73[b]	1973/74[b]	1974/75[c]	1975/76[c]	1976/77[c]	1977/78[c]
Current expenditure of which as per cent of total :						
1. Agriculture sector[a]	2.0	2.2	3.5	1.7	1.4	1.5
2. Food subsidies	26.9	21.8	16.2	14.7	9.3	10.9
Development expenditure of which as percent of total :						
1. Agriculture (Fertilizer subsidy)	na	12.4 (4.6)	12.2 (6.5)	12.1 (6.5)	15.2 (7.0)	13.3 (na)
2. Flood control & irrigation	na	15.0	16.4	14.3	11.9	12.3
3. Rural Development	na	6.6	5.4	5.1	4.2	4.4
Total (1+2+3)	33.9	34.0	34.0	31.5	31.3	29.9
Total expenditure of which as per cent of total :						
1. Agriculture sector	20.4	18.5	17.4	19.0	17.9	16.9
2. Food subsidies	11.4	10.6	8.4	6.2	4.2	15.0

a. Includes expenditure of the Ministry of Rural Development and Water Development Board.

b. Actual.

c. Revised budget estimate.

tural sector share of current and development expenditure has shown a downward trend (Table 11). Moreover, nearly two-fifths of agricultural sector development expenditure has been absorbed by the Water Development Board to support its massive establishment and large projects which accounted for only 7 per cent of total irrigated area in 1977/78.[18] Lowering of subsidy on fertilizers provide part of the extra revenue needed to meet the ever increasing costs of big projects from which farmers and the rural community derive very little benefit.

3. Per unit procurement costs of local Urea and TSP have increased over time. This is partly (in the case of TSP primarily) because the local fertilizer plants run well below capacity. Procurement cost could be substantially reduced by increased capacity utilization of the fertilizer plants. In this sense, the plants are also enjoying part of the current subsidy.

4. Distribution cost accounts for around 20 per cent of total cost of fertilizers. Break-up of distribution costs for five years are shown in Table 12. While supplying these information to the Input Subsidy Committee, BADC contended that some items were based on actuals while others were estimates.[19] Whether actuals or estimates, rationale of the magnitude of some cost items are questionable :

Table 12. Distribution Cost per ton of Fertilizer, 1973/74 to 1977/78.

Cost items	Taka per ton by year				
	1973/74	1974/75	1975/76	1976/77	1977/78
Port dues	2.6	11.1	11.6	2.4	19.5
Clearing & forwarding charges	15.1	55.0	73.5	24.7	39.3
Rail & steamer freight	49.9	107.6	80.1	79.2	45.6
Internal movement between godowns	45.6	58.5	80.3	80.1	63.9
Shortage	21.1	41.4	25.1	56.3	50.1
Dunnage	—	0.3	0.5	1.5	1.2
Gunney bags	3.0	19.2	2.6	16.7	6.1
Rent for hired godown	2.4	6.8	7.2	9.4	6.6
Maintenance of godown	0.7	2.7	3.6	15.7	5.2
Interest on working capital	2.6	—	8.6	12.2	0.8
Physical verification	0.1	1.6	0.3	1.4	1.4
Advertisement	0.2	0.2	0.4	1.3	1.0
Dealers commission	47.6	58.1	117.1	117.4	100.0
Establishment cost	23.9	88.9	58.0	49.4	70.5
Overhead cost for HQ administration	34.7	93.3	103.6	88.8	68.8
Total	250.5	544.7	572.5	556.5	408.1

(a) Overhead cost of BADC Headquarter has been charged as a flat rate of 2.5 percent of total cost of the fertilizer scheme. This is unreasonable because of two reasons : (i) overhead cost should not grow in proportion to sales, (ii) the Finance Division of BADC actually prepares a revenue budget in the beginning of each year for the approval of the Ministry of Finance. Expenditures follow the pattern approved by the government. Therefore, the question of using a flat rate does not hold good.[20] Under certain assumptions, Hashem calculated overhead cost of Tk. 12.02 per ton for 1977/78.

(b) Inter-godown shipment of fertilizers is done by hiring private trucks, barges, motor launches and coasters. There are evidences of large scale malpractice in this operation through showing of longer than actual distance/route, larger than actual number of trips made, misreporting the capacity of the vehicles, inflating rates of payment etc.[21]

(c) Cost due to shortage has been calculated on the assumption of 2 percent loss in handling because BADC adjusts yearly stock assuming 2 percent shortage. Actual shortage may be much less because shortage should be a decreasing, not a linear, function of quantity handled. If the actual shortage in a year is less than 2 percent, the balance is likely to be eaten up by the godown staff. There are evidences of such misappropriation.[22]

Extent of subsidy has been overestimated to the extent that inclusion of the above mentioned unrealistic costs has inflated distribution costs.

Between 1973/74 and 1977/78, an average of 506 million taka has left the government exchequer every year on account of subsidy on fertilizers.[23] The BADC has been the recipient of this sum to meet the difference between procurement and distribution costs and sales revenue. The above discussion will have proved that the farmers, the BADC as distributor along with private traders connected with it, the local fertilizer plants and the foreign suppliers/donors—all have a share in the subsidy cake. It may be worthwhile, but has not been attempted here, to calculate the share of the subsidy cake going to each of the above group.

Input-Output Price Ratio and Demand for Fertilizer

Two important factors influencing demand are fertilizer-output ratio and fertilizer price-output price ratio. In Bangladesh, a general input/output relationship for fertilizer to foodgrains is estimated as 1:4.[24] The World Bank estimates 1:3.5 and Ahmed[25] has estimated 1:3.3 for Boro paddy, 1:3.24 for Aman paddy and 1:3.05 for Aus paddy ; in all cases traditional and high yielding varieties have been combined.

Foodgrain prices were relatively unstable compared to fertilizer prices during the last one and half decade (Table 13). This has greatly influenced annual changes in demand for fertilizers ; every fall in grain prices was followe