

THIRD REPORT
STANDING COMMITTEE ON
PETROLEUM & CHEMICALS
(1993-94)

(TENTH LOK SABHA)

PRODUCTION, IMPORT, R&D, PROMOTION
AND MARKETING OF FERTILISERS

(MINISTRY OF CHEMICALS & FERTILISERS)
(DEPTT. OF FERTILISERS)

Presented to Lok Sabha on December, 1993
Laid in Rajya Sabha on December, 1993



LOK SABHA SECRETARIAT
NEW DELHI
December, 1993/Agrahayana, 1915 (Saka)

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CORRIGENDA TO THIRD REPORT OF STANDING
COMMITTEE ON PETROLEUM & CHEMICALS
(1993-94)

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COMPOSITION OF THE STANDING COMMITTEE ON
PETROLEUM AND CHEMICALS (1993-94)

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(iv)

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SECRETARIAT

1. Shri G.L. Batra — *Additional Secretary*
2. Shri G.R. Juneja — *Deputy Secretary*
3. Shri Brahm Dutt — *Assistant Director*

INTRODUCTION

1. The Chairman of Standing Committee on Petroleum and Chemicals (1993-94) having been authorised to submit the Report on their behalf, present this Third Report on the Ministry of Chemicals & Fertilisers (Deptt. of Fertilisers) relating to 'Production, Import, R&D, promotion and Marketing of Fertilisers'.

2. The Committee took evidence of the representatives of Ministry of Chemicals and Fertilisers (Deptt. of Fertilisers) on 19 and 20 October, 1993 and of Ministry of (Deptt. of Agriculture & Cooperation) on 20 Oct., 1993. The Committee also heard the views of representatives of (i) Fertiliser Association of India, (ii) experts and farmers, (iii) recognised unions/officers associations of HFC/FCI and PDIL, (iv) FCI and HFC, (v) IFFCO and KRIBHCO on 19 August, 14, 29, 30 September and 19 October, 1993 respectively.

3. The Committee also received memoranda from several experts on the subject which were considered by the Committee. The Committee considered and adopted the Report at their sittings on 9 and 10 December, 1993.

4. The Committee would like to express their thanks to the officers of the Ministries of Chemicals and Fertilisers (Deptt. of Fertilisers), Agriculture (Deptt. of Agriculture and Cooperation) and also others who appeared and placed their considered views before the Committee on the subject.

NEW DELHI;
14 December, 1993
23 Agrayana, 1915 (Saka)

SRIBALLAV PANIGRAHI
Chairman,
Standing Committee on
Petroleum & Chemicals.

PART I— BACKGROUND ANALYSIS

I. DEMAND AND PRODUCTION OF FERTILISERS

A. Role of Administrative Ministry

The Department of Fertilisers (DOF) in the Ministry of Chemicals and Fertilisers is entrusted with the responsibility of sectoral planning, promotion and development of fertiliser industry, planning and monitoring of production, import and distribution of fertilisers, management of subsidy for indigenous and imported fertilisers and administrative responsibility for public sector undertakings and cooperative sector units engaged in production of fertilisers. The work relating to assessment of requirement of fertilizer nutrients, ensuring timely and adequate supply and promotion of fertilisers, however, is the responsibility of the Ministry of Agriculture (Department of Agriculture and Cooperation).

1.2 The work of DOF has been broadly divided into four Divisions dealing with (i) Fertiliser Projects and Planning; (ii) Fertiliser Import, Movement and Distribution; (iii) Administration; and (iv) Finance and Accounts. The following PSUs and cooperative units engaged in production of fertilisers and related functions are under the administrative control of DOF:—

Name of PSU	Produced Category of Fertilisers
(i) Fertilizer Cooperation of India (F.C.I.)	Nitrogenous
(ii) Fertilizers & Chemicals Travancore Ltd. (FACT)	Nitrogenous & Phosphatic
(iii) Madras Fertilizers Ltd. (MFL)	—do—
(iv) National Fertilizers Ltd. (NFL)	Nitrogenous
(v) Rashtriya Chemicals & Fertilizers Ltd. (RCF)	Nitrogenous & Phosphatic
(vi) Hindustan Fertilizer Cooperation Ltd. (HFC)	Nitrogenous
(vii) Pyrites, Phosphates, & Chemicals Ltd. (PPCL)	Single Superphosphate (and exploiting pyrites deposits)
(viii) Paradeep Phosphates Ltd. (PPL)	Phosphatic

(ix) Project Development India Ltd. (PDIL)	Area of operation Design, engineering and consultancy services, R&D, production of catalysts and chemicals and fabrication of equipments.
--	---

Name of Cooperative

(i) Indian Farmers Fertilisers Cooperative Ltd. (IFFCO)	Nitrogenous and Phosphatic
(ii) Krishak Bharati Cooperative Ltd. (KRIBHCO)	Nitrogenous

1.3 Besides the PSUs and cooperatives, there is a wide network of fertiliser plants and units in private sector having total production capacity of 2957,000 tonnes of nitrogenous and 1721,000 tonnes of phosphates. Coordination between the public and private sectors, whenever required is, provided by DOF at different form in respect of different activities. Production targets are fixed by Government at the beginning of the year after discussion with all companies.

B. Importance of Fertilisers

1.4 Fertiliser plays a significant role in accelerating the growth of agricultural production which is treated as backbone of Indian economy. There has been a steady growth in the consumption of fertilizers since 1966-67 when the new agricultural strategy was adopted. Nevertheless, the consumption of fertilisers is an important index of the pace of agricultural output in India. Consistent with the increased consumption of fertilisers, its production has increased gradually. The prime objective of our planning has been to achieve self-sufficiency in agricultural output. It is pertinent to mention that the agricultural growth maintained uptrend except in some years when it witnessed erratic behaviour of nature/monsoon etc. As a result, the food production of 74.23 million tonnes during 1966-67 reached at 167.1 million tonnes in 1991-92 and expected to be about 181 million tonnes in 1992-93.

C. Requirements of Fertilisers

1.5 There are three main fertilizer nutrients required for various crops. These are Nitrogen (N), Phosphate (P) and Potash (K). Out of these, indigenous raw material is available mainly for nitrogen. The major requirement of phosphate either in the form of raw materials or finished fertilisers is imported; the indigenous phosphatic ores are comparatively poor in quality and meant only 5% of the total demand. The entire requirement of potash is also met through

imports as there are no known, exploitable reserves of potash in the country.

1.6 Different kinds of fertilisers which form part of nitrogen and phosphates nutrients are:—

Nitrogen	<i>% of contribution in production during 1992-93</i>
(i) Urea	81.2
(ii) Complexes	8.7
(iii) DAP	6.3
(iv) Ammonium Sulphate	1.6
(v) CAN	1.8
(vi) A/c	0.4
Phosphates	<i>% of contribution in production during 1992-93</i>
(i) DAP	51.8
(ii) SSP	15.6
(iii) Complexes	32.6

1.7 Fertiliser Association of India (FAI) in a note furnished to the Committee stated that the National Informatics Centre (NIC) had worked out the requirement of fertilisers yearwise upto the year 2005 A.D. while preparing VIII plan Document. NIC estimates for the likely demand upto 2004-2005 alongwith estimated consumption during 1992-93 are as under:—

Year	N	P ₂ O ₅	K ₂ O	Total
	in 000' tonnes			
1992-93 (Estimated consumption)	8,400	3,191	1,066	12,657
1993-94	8,910	3,720	1,580	14,210
1996-97 (Terminal year of VIII Plan period)	9,930	4,220	1,760	15,910
1999-2000	10,940	4,730	1,940	17,610
2001-2002 (Terminal year of IX Plan period)	11,650	5,090	2,070	18,810
2004-2005	12,680	5,610	2,250	20,540

1.8 The demand of fertilisers as per the Govt. estimates is likely to

grow appreciably during the 8th and 9th plans. Based on the recommendations of Working Group on Fertilisers for the 8th Five Year Plan, the Planning Commission has prepared the Plan document wherein likely demand of Nitrogen, Phosphate and Potash would be around 115.0 lakh tonnes, 50 lakh tonnes and 18 lakh tonnes, respectively during the terminal year of the Plan (1996-97). The demand of Nitrogen in the country by the end of 9th Plan (2001-2002) would be in the range of 134.5—137.3 lakh tonnes, an increase of 19.5-22.3 lakh tonnes compared to the projected demand for the terminal year of the 8th Plan.

1.9 During the course of examination of DoF, the Committee wanted to know the plans/strategy worked out by the Govt. to meet the wide gap between demand and supply of indigenous production of fertilisers. Secretary, DoF replied during evidence as under:—

“The fertiliser production capacity that we have in terms of nitrogen is presently 85.3 lakh tonnes. Some new plants are going to be added by the end of 8th Plan, nearly 83% of the nitrogenous requirement would be met locally. If you take phosphatic fertiliser, since our country is short of the basic raw materials which are required for manufacturing this phosphatic fertiliser, like rock phosphate, phosphatic acid etc., we are self-sufficient to the tune of 70 per cent or so. In the case of potash fertiliser, our country's reserves are fairly insignificant. Therefore, we are totally depending on imports. This is the scenario and I suppose it will continue by the end of the Eighth Plan.”

1.10 Explaining it further, DoF stated in note furnished after the evidence as follows:—

“The gas based fertilizer plants at Gadepan (Rajasthan), Babrala (U.P.), Shahajahanpur (U.P.) and Kakinada (Andhra Pradesh) were to be commissioned during the 7th Plan period. However, all these projects had been delayed. The Kakinada Plant was commissioned during the 1st year of the 8th Plan. The other plants are expected to be commissioned during 1993-94 and 1994-95. The likely production of Nitrogen from the existing plants, as also the projects under implementation would be 88 lakh tonnes per year. Thus, there will be a gap of 27 lakh tonnes of nitrogen at the end of the 8th Plan between the demand and the likely production. However, if the demand projection for phosphate (50 lakh tonnes) materialises at the end of 8th Plan, additional quantity of 8 lakh tonnes of Nitrogen will be available through phosphatic fertilizers. Thus, the net gap between the demand and production of Nitrogen at the end of 8th Plan would be about 19 lakh tonnes, which would be equivalent to about 41.3 lakh tonnes of urea”.

As a part of the strategy to bridge the gap between the demand and supply of Nitrogen, a number of projects were identified. As natural gas is

the most preferred feedstock for producing urea, new capacities were proposed based on gas, the requirement of which was estimated at 9.7 million cubic meters per day (MMSCMD). Against this, only 4.1 MMSCMD of natural gas has been allocated for doubling the capacity of the existing gas based urea plants at Vijaipur (NFL-Madhya Pradesh) and Aonla (IFFCO-UP.) and one medium sized grassroot plant to be set up in the Krishna-Godavari Basin. This would result in additional production of 7 lakh tonnes of Nitrogen (15.2 lakh tonnes of urea). The present indications are that no more gas would be available for the fertilizer sector for the 8th Plan. This will leave a gap of 12 lakh tonnes of Nitrogen (26 lakh tonnes of urea). Therefore, during the terminal year of the 8th Plan there would be a need to import about 26 lakh tonnes of urea.

According to the Working Group on Fertilizers for the 8th Plan, the demand of Nitrogen in the country by the end of 9th Plan (2001-2002) would be in the range of 134.5-137.3 lakh tonnes, a increase of 19.5—22.3 lakh tonnes compared to the projected demand for the terminal year of the 8th plan. Taking into account the gap of 12 lakh tonnes of Nitrogen at the end of 8th Plan and a further gap of 21 lakh tonnes at the end of 9th Plan would be of the order of 33 lakh tonnes, equivalent to 72 lakh tonnes of urea. It is highly unlikely that such a massive quantity of urea would be available in the international market for India alone as the total marketable surplus of urea internationally is expected to be of the order of 60 to 70 lakh tonnes only. In view of the above, additional urea capacity will have to be planned.

D. Production Performance

1.11 The following table gives the sector-wise targets *vis-a-vis* actual production of nitrogenous and phosphate fertilizers during the year 1991-92 and 1992-93:—

Name of Sector	1991-92		1992-93			
	Target (‘000MT)	Actual (‘000MT)	CAP. UTI %	Target (‘000MT)	Actual (‘000MT)	CAP. UTI %
NITROGEN						
(I) Public Sector						
(A) Viable Units	2602.6	2683.5	87.9	2640.0	2567.0	88.0
(B) Loss-Making Units	637.1	457.1	31.3	591.2	454.7	31.1
Total (I)	3239.6	3020.6	69.0	3231.2	3021.7	69.1
(II) CO-OP. Sector	1622.7	1728.5	112.8	1646.6	1705.4	111.3
(III) Private Sector	2487.6	2552.3	108.8	2822.0	2703.2	106.7
Total (I+II+III)	7350.0	7301.3	88.5	7700.0	7430.3	88.0
PHOSPHATE						
(I) PUBLIC SECTOR	748.1	731.7	92.4	760.9	656.4	82.9
(II) CO-OP. SECTOR	340.3	349.9	113.2	340.9	308.1	99.7

(III) PRIVATE SECTOR	1561.6	1480.5	89.5	1648.3	1341.8	78.6
TOTAL (I+II+III)	2650.0	2562.1	93.0	2750.0	2306.3	82.1

1.12 On the basis of the above table, the production of public sector presented a dismal picture as compared to private sector performance during the last two years. The production target of nitrogenous fertilisers in public sector had not been achieved during the last two years 1991-92 and 1992-93. The performance of cooperative sector has been remarkable as their actual production went ahead of the target fixed for the year 1991-92 and 1992-93. Overall, the output remained lower than the actual demand.

The fall in the production of nitrogenous fertilisers, was due to frequent breakdowns and fund constraints and restriction of gas supply to some fertiliser plants. Similarly the production of phosphatic fertilizers had also suffered due to substantial drop in consumption of phosphatic and complex fertilizers consequent upon steep increase in the prices of these fertilizers following their decontrol in August, 1992.

1.13 The Committee further pointed out that production targets of phosphate fertilizers were not achieved even in private and cooperative sectors. Asked about the reasons for the same, DoF replied in a note as follows:—

“The production of phosphatic fertilizers has been affected occasionally in the past due to shortage of phosphoric acid. This has also affected the production of nitrogen which is produced as part of the phosphatic fertilizers. After the de-control of phosphatic fertilizers from 25.8.1992, the market price of phosphatic fertilizers showed a steep increase as earlier these fertilizers were heavily subsidised. This adversely affected the off-take of phosphatic fertilizers on the one hand and production and viability of the phosphate producing units on the other. The problems of the indigenous phosphatic units has been accentuated due to availability of cheaper imported DAP. Due to substantial difference between the price of imported DAP and the local cost of production and the sluggish off-take of DAP in the country, a number of DAP and complex fertilizer units either suspended their production or curtailed their production during the period April, 1983 to June, 1993. With the announcement of special concession of Rs. 1000 to the farmers on purchase of indigenous DAP and proportionate concession on indigenous complex fertilizers and SSP, the indigenous units have resumed production, with the exceptions on one unit. This has affected the production of both phosphate and Nitrogen.”

1.14 Explaining the reasons for drop in phosphate fertilizers in the indigenous industry, a representative of Fertilizer Association of India deposed before the Committee:

"....During the last two years, various *ad hoc* decisions have been taken by the Govt. from time to time. Today, there is an utter confusion in the fertilizer sector and consequently in the Agriculture sector. In July, 1991, prices rose by 40 percent; in August, they were reduced to 30 percent. An announcement was made that small and marginal farmers will be exempted from this increase for whom the State Government will administer subsidy. It has been stated by the Government recently in reply to a Parliament question that only 3 percent of the farmers benefited from this scheme....

....If you look at the April-June production, the production of phosphate is down, DAP production is down, super phosphate production has gone down, complex production has also gone down."

1.15 On being asked about the likelihood of setting up new plants to meet the growing demand of fertilizers, the witness replied:—

"No sir, I can make a statement that there is no fertilizer growth of industry that I am envisaging. For Aonla and Vijaypur Plants expansion projects are to be taken up. No new nitrogen plant is likely to start production early. No plant for phosphate is under construction. I want to submit that unless the policy is definite and appropriate atmosphere is made our dependence on import will go on increasing."

1.16 Some experts in the fertilizers industry in their evidence submitted before the Committee apprised the Committee that due to low returns in the fertiliser industry, new investment including foreign investment was not forthcoming. During the course of examination of the DoF the Committee wanted to know about the efforts being made to attract foreign investment in fertilizer industry, the Secretary DoF replied:

"Sir, so far as foreigners coming and setting up new plants in India is concerned, today the possibility is very dim. They will be interested only in gas based projects. But we really do not have any extra gas at the present moment. So, there is no likelihood of any foreigner coming to India."

1.17 When asked to elaborate it further, DoF in a note brought out the following reasons for lack of foreign investment in the fertilizer sector in India:

(i) Fertilizer is a highly capital intensive industry. Depressed international market of fertilizers has made it possible to secure fertilizers at cheaper rates in the international market as compared to the domestic cost of production of fertilizers in the new plants.

(ii) After de-control of phosphatic fertilizers, investments in phosphatic fertilizer industry appear *prima facie* unviable compared to the cost of production in countries which have abundant raw

materials like rock phosphate and sulphur. The indigenous phosphatic industry is largely dependent on imported raw material.

(iii) In the case of nitrogenous fertilizers, natural gas, which is the most preferred and cost effective feedstock, is not likely to be available atleast for some years to come.

(iv) So long as there is Retention Price Scheme for nitrogenous fertilizers, the investment will be worthwhile. However, it is not certain how long this scheme would continue. Once this scheme goes, the market will not be able to absorb the high cost of indigenous production from new plants."

E. Factors for Production

1.18 Overall production has been below the installed capacity in the recent years. Apart from poor production performance of FCI and HFC plants (which has been discussed elsewhere in the Report) the other factors adversely affecting the production performance of fertilizers industry have been mainly due to shortage of gas power and coal. The natural gas is most preferred and economical feed stock for fertilizer plants. All new plants are gas based as the cost of production of these plants is cheaper. The present allocation of gas for fertiliser industry is about 27 million cubic meters per day, which works out to about 36% of the total allocation of natural gas for all sectors. For the VIII Five Year, Plan considering the likely demand/supply gap in nitrogen, the Department of Fertilizers had asked for allocation of 9.7 million cubic meters of natural gas per day to set up additional capacities. The actual allocation was, however, limited to 4.1 million cubic meters per day.

1.19 In this connection, the Managing Director of KRIBHCO deposed before the Committee that they were not getting the required quantity of gas.

1.20 Similarly, representatives of other PSUs like HFC/FCI brought to the notice of the Committee that there was acute power shortage in some of their plants. Even one or two second power failures/distruption causes production losses running into several lakhs.

1.21 During the course of evidence it was pointed out that contents in the coal supplied to coal based plant was on higher side and adversely affected the production performance.

When Committee enquired whether the issues regarding availability of coal/gas/power etc. were taken up the concerned Ministries/Governments/Department at the Ministry level, the Secretary, DoF replied:

"So far as gas is concerned there is what is called the GAS Linkage Committee. The Committee attends to gas linkage and also attends to any difficulties in between. So far as Coal Department is concerned, in fact, our requirement is very marginal. Coal is not a major input in this place. In the case of

Railways, we again have, with the Railways, a tie-up that we meet periodically. In our own office we have got a movement division and we take officers from the Railways there.

There is also a Committee in the Cabinet Secretariat. The Secretary Coordination is the Chairman of the Committee. Normally it looks into the problems of soordination between Coal, Railways, and Ministries like Industry etc. for purposes of cement, power, steel etc.

There is an Infrastructural Committee which looks into our problems also. So there is coordination among them."

1.22 When asked whether coordination between various Deptts. of the Government was working satisfactoriley the witness replied:

"We have no problem. When we have major differences with the Ministry of Petroleum & Natural Gas then this is taken up with the Committee of Secretaries and with the Cabinet Secretary."

II. IMPORTS OF FERTILISERS

2.1 Currently, the indigenous production of Nitrogen (N) and Phosphate (P) meet about 85% and 70%, respectively of the country's requirement. The total requirement of potassic fertilizers has to be imported as the country does not have any known and exploitable reserves of potash. The gap between demand and indigenous production of N & P is also met through imports.

2.2 The following table shows the consumption, production and quantity and value of imports of fertilisers during the last 5 years:—

Year	Consumption	production	Imports	Cost of Imports	Subsidy on Imported fertiliser
	(in lakh tonnes)				(Rs. in Crores)
1988-89	110.40	89.64	16.08	644.53	200.70
1989-90	115.68	85.43	31.14	1538.77	771.10
1990-91	125.46	90.45	27.58	1335.87	659.33
1991-92	127.28	98.63	27.69	1934.19	1299.60
1992-93	121.53	97.36	29.76	2216.01	996.11

2.3 On the basis of available trends in the table above it may be stated that the imports of fertilisers would continue during 8th and 9th Plan periods to fill the gap between demand and supply.

2.4 The Committee desired to know about the concrete steps taken by Govt. from time to time to reduce the imports which were increasing year after year, DoF in a written note informed the Committee that:

"The gap between indigenous production and demand is to be met through imports. Indigenous raw materials for phosphatic fertilizers account for negligible portion only. There are countries in the middle-east, North and West Africa and US Gulf where good quality rock phosphate is abundantly available. The Indian companies are being encouraged to set up joint venture projects for phosphatics in these countries. On such joint venture for phosphatic production in Senegal has been in operation for the past ten years. Another joint venture between an Indian company and a Jordanian company for producing 2 lakh tonnes of phosphoric acid per annum is currently under implementation. Efforts are also being made to explore whether running concerns for phosphatic

production in US Gulf can be acquired. These joint ventures, if realised, will ensure continuity of supply of phosphatic raw materials and finished fertilizers at a competitive price.”

Explaining it further, Secretary, DoF stated during his evidence:—

“One strategy which we are actively pursuing and exploring is to set up joint ventures abroad in the neighbouring countries like Qatar. Our people visited Qatar and they have identified the sites. But a little work needs to be done to sign Memorandum of Understanding. The second country is Oman and the third is, recently, we had sent a team to Iran -South of Iran - where there is a place called Qeshm Island where they have set up a free zone and all that. Also, some effort is being made to locate a plan in Brunel which has a very rich source of gas. The idea is to bring the fertilizers from there on a buy-back arrangements. Another strategy is to set up ventures abroad either on our own or in collaboration with the locals depending upon the local laws and regulations and then get the fertilizers back into this country. So, this is the kind of strategy that we are trying to adopt and trying to promote.”

2.6 Various experts and also FAI submitted before the Committee that the international prices of fertilisers were presently on lower side and did not reflect the cost of production. Multinational companies can enhance the prices after capturing the market in big countries like India and China.

2.7 In reply to a question about dumping of fertilisers by advanced countries, M.D., IFFCO stated during his evidence:—

“About dumping by the Americans, I would say that when we lock at the industry, we may feel bad that they are dumping DAP. DAP is basically produced by the USA. The phosphoric acid is produced by North African countries like Morocco, Tunisia. The ammonia is produced by former Soviet Union, FSU especially Ukrain which has the largest capacity of exporting ammonia. So, supplying DAP cheaper to India does not mean much to us as far as productivity of agriculture is concerned because the farmer will be getting it cheaper. I think the game was to create a panic situation in countries like Morocco, Tunisia, Senegal etc. where the total economies are dependent on their phosphoric acid production. The price of ammonia has shot up by 40 dollars because Russia has stopped the gas supply to Ukrain. They were not able to meet the price and they were not able to make the payment to Russia because before this ammonia was available very

cheap. This is more to do with international marketing strategies. In India we closed down for three to four months. Now, it is running successfully. This helped in getting the raw materials prices reduced.”

2.8 On being asked about the possibilities of use of bio-fertilisers with a view to reduce the imports of chemical fertilisers, a representative of Deptt. of Agri. & Cooperation stated:—

“I would like to give the example of China, because of the compulsion of the situation and also because of various other factors, there should be a constant endeavour to find out alternative sources. China is successfully experimenting with bio-fertilizers. We are also planning a scheme for effective demonstration before our farmers about the efficacy of other sources of nutrients like organic and bio-fertilizers.”

III. REVAMPING OF FCI AND HFC PLANTS

3.1 The table delineated below shows the comparative production performance of various PSUs/Cooperative units and private sector as a whole during the years 1991-92 and 1992-93:

Name of the plant	Installed capacity as on 1.12.1992	Production		% capacity utilisation	
		1991-92	1992-93	1991-92	1992-93
A. Public Sector					
I. F.C.I	806.0	247.1	235.2	30.7	29.2
II. H.F.C.	654.0	209.9	221.6	32.1	33.9
III. N.F.L.	1036.0	1067.6	1034.0	103.1	99.8
IV. FACT	346.0	256.0	237.9	74.0	68.8
V. R.C.F	1000.0	840.6	923.7	84.1	92.8
B. Cooperative Sector					
I. IFFCO	864.0	946.5	929.5	109.5	107.6
II. KRIBHCO	668.0	782.1	775.8	117.2	116.1
C. Private Sector					
~ Total (A+B+C)	2623.0	2552.3	2703.2	108.8	106.7
~ Total (A+B+C)	8531.0	7301.3	7430.3	88.5	88.0

3.2 From the above table, it is observed that capacity utilisation of Cooperative Sector (IFFCO and KRIBHCO) and the private sector as well has been quite encouraging during 1991-92 and 1992-93. However, in some of the PSUs, such as NFL and RCF, the production performance was satisfactory whereas it was very poor in the case of HCF and FCI during 1991-92 and 1992-93 as is evident from the plant-wise production trends given in table given below:—

Name of the plant	Installed capacity as on 1.12.92 (000'MT)	Production (000'MT)		% Cap. utilisation	
		1991-92	1992-93	1991-92	1992-93
F.C.I					
Sindri	219.0	105.6	135.9	48.2	62.1
Gorakhpur	131.0	0.0	0.0	0.0	0.0
Ramagandam	228.0	88.1	58.0	38.6	25.4
Talcher	228.0	53.4	41.4	23.4	18.2
Total F.C.I.	806.0	247.1	235.2	30.7	29.2

H.F.C.		0.1	0.2	0.5	1.0
Namrup-I	21.0	35.9	23.2	23.6	15.3
Namrup-II	152.0	90.1	113.4	50.9	64.1
Namrup-III	177.0	49.9	34.2	32.8	22.5
Durgapur	152.0	33.0	48.4	22.3	31.8
Barauni	152.0	209.9	219.4	32.1	33.5
Total H.F.C.	654.0				

3.3 The equity base of both FCI and HFC has been totally eroded by losses as will be seen from the following data as on 31.3.1993:—

Company	Paid-up Equity and Reserves	Accumulated Losses	Net Worth
FCI	828.49	1836.76	(-) 1212.27
HFC	686.04	1861.12	(-) 1175.08

“As regards the reasons for sickness in HFC and FCI, DOF stated that various units of FCI and HFC have become sick due to a variety of factors like technological deficiencies, equipment imbalances, infrastructure problems, over-staffing and in some cases unfavourable industrial relations, resulting in losses. Mounting losses over the years have created a vicious cycle for these companies, with paucity of funds not permitting even essential maintenance of plant and equipment, leading to frequent break-downs in production, compounded by inability to purchase even raw material all contributing to still heavier losses.”

3.4 Gorakhpur unit of FCI is not operating since June 1990. Similarly, all units of HFC except Namrup-III had stopped operations since 1st September, 1993. On account of poor production performance which have caused heavy losses, both FCI and HFC have been declared sick units and have been referred to BIFR for consideration for revival.

3.5 Explaining the reasons for sickness in FCI/HFC plant and expert (ex-CMD) of Paradeep Phosphet Ltd. stated as follows:—

“As far as some technology adopted is concerned they were not proven technology whether be it thing of Haldia or Barauni or other affected factories. The Government of India had formed number of Committee's which had given recommendations as to what should be done. But those recommendations have not been adopted. That is the reasons why the companies over the years have gone sick.”

Asked about the possible ways to revive these of plants the witness stated:—

“It will not be worthwhile now to put some more money in those old plants; instead of that, it is better to set up new plants. If a plant is set up in Gorakhpur, it will be cost effective also production wise. There will be no problem.”

3.6 In their anxiety over the fate of about 18000 employees working in FCI and HFC units (FCI 8719 and HFC 9244) representatives of the recognised workers unions of different fertilizer plants and officers associations presented their views on the reasons for sickness in these two companies and their possible revival.

3.7 The above representatives brought out the following reasons for the present situation of FCI and HFC plants:—

- (i) The reorganisation of FCI/NFL in 1978 was un scientific and less efficient plants were grouped together and given to HFC and FCI together as on date of reorganisation HFC/FCI inherited accumulated losses to the tune of Rs. 80.94 crores and Rs. 110.08 crores respectively.**
- (ii) FCI/HFC plants were of un-proven technology, some of them being quite old like Gorakhpur unit which has outlived its life.**
- (iii) Ramagundam and Talcher plants of FCI are coal based and the cost of production/operations is more as compared to new generation gas based plants.**
- (iv) FCI/HFC whose capacity utilisation was low and on account of this, they were not getting even the cost of production. Govt. has not derated the capacity of these PSUs and they are discouraged to produce as more production means more loss.**
- (v) Acute power shortage in several plants.**
- (vi) No action on recommendations of various Committee appointed by Govt. to go into the problems of HFC/FCI plants.**
- (vii) Failure of management to keep pace with the advancement of technology.**

3.8 On being asked by the Committee about the suggestions for making FCI and HFC viable PSUs workers representatives submitted the following suggestions:

- (i) Govt. should approve revamping proposals pending Govt. approval in respect of several plants.**
- (ii) Govt. should examine and consider the Techno-Economic Revival Plan submitted by Workers Federation/Officers Associations.**
- (iii) Govt. should get the BIFR study expedited and production should not be stopped in any of the plants.**

- (iv) Some of the FCI/HFC plants could be taken over by financially sound companies like NFL, RCF, IFFCO and KRIBHCO. In this connection they gave the instances of merger of New Bank of India with Punjab National Bank and likely merger of Vayudoot with Indian Airlines.

3.9 During the course of evidence of the representatives of FCI, the Committee wanted to know the reasons for FCI's poor production/financial performance. CMD, FCI stated as follows:

"Fertilizer Corporation of India, National Fertilizer Ltd. group of companies were reorganised in 1978 into five companies viz. FCI, HFC, RCF, NFL and PDIL. FCI at that time had one plant in operation at Gorakhpur. Sindri Talcher and Ramagundam were in the project stage. Sindri Plant started modernisation, rationalisation and commercial production from October 1979 and commercial production at Talcher and Ramagundam which were coal based plant started in 1980 November. Right from the start all these units have been running in loss on account of low capacity utilisation."

3.10 On being pointed out by the Committee that Talcher and Ramagundam were new plants and these should have done well, the witness stated:—

"Coal based plant at Ramagundam and Talcher are first generation plants with four gasifiers first time used in the world and soon after commissioning in 1980 these plants did not operate upto the desired level due to equipment imbalances and design deficiencies. Even during the last 13 years of operation the performance has not been satisfactory. Again the main reasons are non-availability of additional gasifier and power problem. Immediately after the start and during operation problem started from gasifier as these plants have got Ammonia based on coal gassification and although coal was successfully converted into gas, yet down stream equipment i.e. waste heat boiler failed resulting in non-production of high pressure steam thus 70 tonnes of steam per hour were lost. Therefore problem remained with separation units. Capacity of the plant was de-rated to 2/3rd but problems continued."

....."The revamping proposal in respect of Ramagundam and Talcher are under consideration of the Government."

3.11 As regards the Sindri plant the witness stated:—

"Sindri unit was the pioneer plant in the Country which started in 1951. This plant was modernised in 1979. It has although a proven technology there is the problem in the air separation unit."

3.12 When asked about the reasons for stoppage of Gorakhpur plant since June, 1990, the Chairman & Managing Director, FCI replied:—

"This plant was commissioned on 1.1.1969. Over the years the plant has aged and the health of the plant deteriorated. In this case also revamping proposals has been submitted to the Government which amounted to Rs. 66.65 crores. The proposals was approved in 1990 June and conveyed to us. However, unfortunately there was an accident in the plant on 10.6.1990 where one of our engineer died. When the Government of UP desired that a third party survey must be done and remedial measures taken before the plant is restarted. FCI engaged PDIL, FEDO and SPIC for this task. They submitted a report based on which for the restart of the plant an investment of Rs. 130 crores was required and for revamping of the plant Rs. 228 crores investment was required. With Rs. 130 crores investment the production level would be 1,60,000 tonnes against the rated capacity of 2,85,000 tonnes. With the revamping plant after an investment of Rs. 228 crores our capacity will go to 2,42,460 tonnes against 2,85,000 rated capacity. However, we felt that in both the cases the cost of production as well as the retention price was high. It was found therefore inviable. We then submitted a proposal to the Government that since this technology is obsolete and this plant had already lived its life, and also because of its high energy consumption, we should go in for a new plant as we have got the infrastructure available in the plant. Therefore, a proposal for 900 tonnes Ammonia and 1500 tonnes Urea was submitted at a cost of Rs. 879 crores. This proposals is under active consideration of the Government."

3.13 Asked about the other reasons of sickness apart from low capacity utilisation, CMD, FCI stated:

"Our plants are not working to the full capacity, FICC fixed the norms at 80 percent which we were not achieving and hence reimbursement of the cost."

3.14 In the same context, the CMD, HFC also stated, as follows:

".....I produce the cheapest Urea in the World, but I am called in efficient. Namrup II Urea is the cheapest in the World. In Namrup II, my cost of production should be around Rs. 3000 per tonnes. Government says that I should have run at 85 percent of design capacity. I should have produced at Rs. 2533 per tonne and sold at Rs. 2750 per tonne. So I should return to Government Rs. 200 per tonne. I produce and I lose and pay the Government also."

3.15 In the context of some of the plants running at over 100% capacity utilisation, CMD, HFC stated before the Committee that the capacity utilisation also depends upon the installed capacity shown in the records as at times actual capacity of the plant is not reflected properly. He further explained that a plant producing 100 tonnes of urea could be called

efficient if the installed capacity of the plant is shown 50 tonnes. However, if the capacity of the same plant is shown 150 or 200 tonnes, the plant would be termed as less efficient.

3.16 When asked about to give some specific example, the witness stated that the actual capacity of Durgapur Plant was 550 tonnes as against the installed capacity shown as 1000 tonnes. He further added that actual capacity of the Plant should be recognised.

3.17 During the course of evidence of the representatives of IFFCO and KRIBHCO the Committee wanted to know their views about the possible manipulation of installed capacity of a plant, CMD, IFFCO stated:

"These are matters of science and technology. These things are standard in the world. You cannot change those standards. If you have purchased a machinery which is not performing to that standard, that is your fault."

3.18 When asked specifically that there was no manipulation in quoting the rated capacity, the witness replied:

"Yes, Sir. The basic thing is, if you are maintaining a plant well, if you are operating a plant well, if you can run it for 360 days. KRIBHCO is running it for 350 days (as against the norm of 330 days)."

3.19 On being asked further as to how a plant could produce over 100 percent of the capacity, the witness replied:

"Each fertiliser plant will always have five to seven percent margin which can be achieved with proper operating techniques and by exploiting it fully."

3.20 Asked about the views of the DoF about the method of fixation of capacity at the time of installation of a plant, a representative of the DoF stated during evidence as follows:

"There are norms on the basis of internationally accepted practices. In a year, any plant would work for about 330 days out of 365 days. The remaining 30 days are required for overhauling and looking after the plant. This is one parameter. The second parameter is the guarantee given by the contractor in respect of the turnover per day."

3.21 In the context of cost of production CMD, FCI stated the Gas based technology was cheaper than the Coal based technology.

3.22 The Committee also enquired about the steps taken to reduce the manpower strength. CMD, FCI stated that so far 998 employees had opted for VRS. "

3.23 The Committee further pointed out that due to resource constraints it may not be possible for the Government to invest more fun.

in the industry. The Committee enquired whether any company in the private sector is interested to take over any of the sick units.

The witness replied:

“To attract any entrepreneur it is necessary to have a clean balance sheet. The capital structure has to be changed. Otherwise, no entrepreneur will come forward to take over that. In the event of the Government not able to finance, the company will not be able to run the plants because we do not have the type of investment that is required and we cannot raise that type of investment. Of course, our officers and workers are capable of running the plant. Now, the alternative is merger with National Fertilizers, RCF and others which have got the new technology and got surplus funds.”

3.24 When asked whether NRI or foreign investors could take over FCI/HCF plants, CMD, HFC replied that no NRI would be interested to invest in the industry mainly due to non availability of raw materials/gas and low returns on investments and lack of freedom in pricing.

3.25 From Plant-wise analysis indicates that the poor production performance of HFC plants were due to power failure, frequent break-down of plant and machinery and short supply of natural gas. It was pointed out during the course of examination that HFC had already submitted various proposals with different alternatives for revamping/rehabilitation of Durgapur, Barauni, Namrup-I and II Plants, for Govt. approval.

3.26 The Committee took a serious note of one of the HFC plant viz. Haldia Project where a sum of Rs. 761 crores had been spent upto August, 1993, could not become operational so far and a manpower strength over 1500 employees have been getting salary without any work. Asked about the reasons for failure of Haldia Project CMD, HFC stated during evidence as follows:

“Haldia was a project conceived in the '70s. It could have been one of the most integrated units in the country in which every unit is complimentary with every other unit. There were Ammonia Plant, Nitric Acid Plant, Sulphuric Acid Plant, Phosphoric Acid and a Nitro Phosphate Plant. There are by products soda, ash methanol. Every plant was literally dependent on other plant. In a way, it was a very ideal project. The problem with the project was in procuring the plant and equipment. The technology component was not so complicated. But it was the procurement of plant and equipment under the various limited options to the Government particularly multiple credits. After the equipment was installed, it was found that there was large mis-match between various components. The plant was physically ready for commissioning in 1979. At that time, we had a regular contract with West Bengal Electricity Board for supply of power. For three years, we could

not get the required power. The plant remained idle. Then the Government of India was kind enough to sanction a Gas Turbine Captive Power plant which was installed and commissioned around January, 1982.

When the commissioning activities were taken up slowly the mis-match problems started and leakages, lot of equipment problems were there. These were taken up. Unfortunately, there was a major failure of the oxygen compressor. The Government of India directed us in 1986 to stop the commissioning activities.

He added:

"Officially, the plant has not started as yet. Even on paper today, it is a project. We are paying something like Rs. 18 crores per year towards salaries and other expenses and we have about 1568 employees there doing almost nothing."

3.27 Asked whether any expert Committee had examined the status of the plant the witness replied:

"We are interacting with the Government. As decided by them for rehabilitation studies technical experts like Toyo of Japan were called in to inspect the plant and decide what has to be done to make the plant functional. Their suggestion was an investment of another Rs. 500 crores should be made."

3.28 Asked about the future of plant, CMD, HFC stated:

"I have already approached the Government to permit me to lay-off the labour, to sell of the plant as scrap and in case the Government is agreeable, I have requested the Government to set up a new plant. This is my considered opinion."

3.29 During the course of evidence of representatives of DOF the Committee was anxious to know why HFC and FCI units were losing heavily on account of low capacity utilisation due to mis-match of technology. Asked about the reasons for which Govt. not agreeing to derate the capacity of FCI/HFC plants Secretary, DOF stated:—

"I agree that there was a mis-match. We find a situation where the operational efficiency of a plant is less. The question of what do we do with them comes. One thing is we can derate the capacity of the plant. But it would mean that a particular company will get more subsidy from the Government."

3.30 On being asked by the Committee whether the HFC/FCI plants achieved full capacity at that time of their installation, a representative of DOF stated that two units of Ramagundam and Talcher and some other units like FACT had not been able to achieve even their rated capacity.

3.31 Asked whether guarantee test were conducted after installation of the plants, a representative of DOF replied:

“Out of the three units of HFC, Barauni and Namrup phase II had guarantee test but not Durgapur. Barauni had achieved a rated production guarantee for six or seven days period. Similarly Namrup had also achieved.”

3.32 As regards the FCI plants, the witness stated that guarantee tests could not be done in Ramagundam and Talcher.

3.33 On being enquired about the reasons for not having guarantee tests he stated that many agencies were involved in it.

3.34 In reply to a further question about the poor production of these plants the witness replied that it was due to mis-match of technology.

3.35 It also come out during examination that Ramagundam and Talcher projects went into production in 1980 and in 1982. Talwar Committee was appointed to go into the problems of these two plants.

3.36 The Committee pointed out that FCI revamping proposal were of about Rs. 1900 crores and over Rs. 4000 crores would be required if new plants were to be set up. When asked whether Govt. proposed to revamp the old plant or new plant were being thought of, Secretary, DOF replied:—

“Here the figure of Rs. 1,988 crores is the total money required. In the case of Ramagundam and Talcher, some have said that the existing technology has not been found to be successful. What one can do is, to completely change the raw material from coal to naphtha and this will cost about Rs. 474 crores for Ramagundam and Rs. 484 crores for Talcher, that itself comes to about Rs. 950 crores. Basically, the question is whether we have this kind of resources today firstly with these companies and later with the Government. Naphtha is a costly source for manufacturing Urea compared to gas. We have to import Naphtha. If somebody from outside is ready to put, in this kind of investment, naturally it would be good but it is very difficult for the Government to find resources of this heavy order.”

3.37 Asked about the problems of HFC plants, Secretary DOF replied:

“In the case of HFC there are problems. The Namrup-III is functioning well. Haldia project remains suspended for quite some time. In the case of Barauni and Durgapur, continuing cash flow problem is there. They do not have money for raw material. The feed stock is also a problem. There is also the problem of wages to the workers. In the Budget for 1993-94 there is a provision for non-plan assistance for this plant. This is being released so that the labour and workers could be paid the wages. One is also trying to

see whether to use the limited resources available under non-plan expenditure for running the plant in a limited way. We are trying to see whether any money can be provided for continuing the operation of the plants."

3.38 On being suggested by the Committee as to whether some plants could be made functional by taking some machinery/equipment from the sick plants, a representative of DOF replied:

"So far as HFC plants are concerned, Durgapur and Barauni plants are similar but not identical. But the Namrup II plant is absolutely dis-similar. The feedstock is different. It is natural gas. There will not be any equipment required for this plant with Durgapur and Barauni plants. In the same way, the technology of Haldia is different."

3.39 When asked about the future of Haldia project, the witness stated:

"Haldia is a part of HFC, when we are making proposal of revival of HFC it is also being considered. I submit that Haldia is not separate."

When asked whether present plant was just scrap, the witness replied:

"No, we can only say we have not taken a decision."

3.40 On being asked as to why the revamping proposal of about Rs. 500 crores based on Japanese expert could not be implemented, a representative of DOF stated that they found that with the kind of investment the cost of production of Haldia project would be un-viable.

Regarding the possibility of setting up DAP Plant at Haldia, he added:

"Actually we require only 400 people to operate this plant, whereas we have got 1700 people working there at present. The Public Investment Board Committee said that unless you solve this problem of with the surplus manpower of 1300 people, it is thoroughly unviable."

3.41 When asked as to why some manpower could not be transferred to other units, the witness stated:

"From Haldia, HFC transferred about 300 of these trained people to other units of course it is a fact that some trained people have left already."

3.42 The Committee further pointed out that the workers and officers of FCI/HFC and PDIL had prepared a Techno-Economic Revival plan and submitted the same for Govt. approval. Asked about the views of Govt. on this plan, a representative of DOF replied:

"We found in most of the cases the investment suggested by them was too much on the lower side. In case of Ramagundam and Talcher, they were suggesting an investment of Rs. 20 crores each."

It was found highly inadequate to meet the kind of results which had been envisaged in that TERP. Secondly the TERP was totally silent about the surplus work force in all these plants."

3.43 On being asked whether Govt. had learnt any lessons from the failure of projects like Haldia, Secretary DOF stated:

"Drawing lessons from Haldia, the entire procedure or giving approval underwent a change and a two-stage system was introduced. In the beginning, we see whether this proposition is at all feasible. If we are convinced, then we ask the company to give us a Detailed Project Report (DPR). This is the first stage of clearance. It is only after the DPR is prepared in which all the techno-economics discussed then only the decision to invest in the project is taken. In fact, this two state clearance arose out of that. Subsequently plants which were set up are working at very high levels of capacity utilisation. We have become selective in the kind of technology that we adopted."

3.44 The Committee further asked about the reasons for delay for coming up with concrete proposals before BIFR, the Secretary of DOF replied:

"The reasons is now whatever we take before the BIFR, it must have the approval of the Government at the highest level, that is, the Cabinet Committee. The procedure is we have to invite the views of all the concerned departments like Ministry of Finance, the Department of Banking, Industrial Development and Ministry of Labour. All the concerned departments have to give their comments. All the comments have come now and we are trying to expedite it."

3.45 When asked whether consultations with other departments were over, the witness stated:

"We were to submit them before September, 1993. We are going to do it before 31 December, 1993."

3.46 The Committee further asked about the views of DOF regarding possible prospects of revival of FCI/HFC plants, the Secretary of DOF informed:

"The other departments have sent in their comments. We have to have our own consultations within the department and also with the PSUs and then we should be able to formulate our views. That is why we have taken three months extra time."

IV. RESEARCH AND DEVELOPMENT

A. Research and Development

4.1 There are two engineering consultancy organisations under the Deptt. of Fertilizers, viz. Projects and Development India Ltd. (PDIL) and FACT Engineering and Design Organisations (FEDO), which render consultancy services to fertilizer and allied industries and also carry out R & D activities.

4.2 As regards the activities of PDIL, Deptt. of Fertilizer has stated that PDIL has been India's leading organisation in engineering and construction of fertilizer and allied chemical plants since its inception in 1961 under the name of P & D Division of FCI. The organisation has to its credit establishment of several nitrogenous and phosphatic fertilizer plants. Besides design, engineering consultancy and R & D activities, PDIL is also engaged in production of catalysts. PDIL developed know-how for ammonia and urea technology in substantial measure and applied in the design and construction of the 600 tpd/1167 tpd ammonia/urea project as part of Namrup-III Plant of HFC. It was associated as Indian Contractor for the gas based plants at Thal, Vijaipur, Aonla, Jagdishpur which are in production and has been assigned the same role in the projects under implementation of Gadepan and Babrala. However, for the Shahjahanpur project PDIL is the prime consultant.

4.3 About the FEDO, Deptt. of Fertilizer has stated that FEDO is also a design, engineering consultancy organisation. One of the major jobs handled by FEDO was the design, construction etc. of the 2×1000 tpd sulphuric acid plant for Paradeep Phosphates Ltd. They were the Indian Contractor for the ammonia plant of FACT at Udyogamandal, subject to the Government approval of this project. FEDO is also engaged in R & D work on pollution control, recovery of chemicals from effluents, etc.

4.4 The Budget allocations to the main R & D unit viz. PDIL has been very low as may be seen from the following table:—

<i>Year</i>	<i>Plan outlay provided in Demands for Grants</i>
1991-92	Nil (Actual)
1992-93	Rs. 1 crore (Rev. Estimates)
1993-94	Rs. 2 crore (Budget Estimates)

DOF is also providing Rs. 4 crores grants in aid for R & D Division.

4.5 It also came out during the course of examination that on account of suffering losses (over Rs. 15 crores annually) for the past several years, PDIL has been declared a sick company and has been referred to BIFR alongwith FCI and HCF and as such can not provide funds for R & D work from its internal resources.

4.6 As some of the PSU's and cooperative units like KRIBHCO were earning good profit the Committee wanted to know the amount spent on R & D activities, CMD, KRIBHCO stated:—

“It is very very low. But, the thing is that for modernisation, retrefitting and for all these things, you do not really require any in-house research and development”.

4.7 During the course of examination of FAI, the Committee enquired about the activities in R & D programmes in the fertilizer industry, Executive Director of FAI replied:—

“At present original research of technology, to my mind, is not being done in this country, our only research and development is to have better maintenance and absorbing the technology given by the outsiders. Fundamental research in technology is not done in this country. The organisation of fundamental research is not possible for us. We have to set up a separate institute for that. The setting up of a fundamental research institute for the fertiliser industry is somehow or the other, getting into difficulties and it has not materialised so far.”

4.8 Explaining the achievements of indigenous industry in the field of R & D, Secretary, Deptt. of Fertilizer stated during the evidence:—

“In the research and development area, basically in the fertilizer sector, if you see, the basic chemistry of making nitrogenous fertilizers has not changed. It remained the same for the past 70-80 years. What has really changed is the technology. Earlier we used raw materials like coke, then we came to naphtha but, a big jump has been made by using gas. All these technologies have been successfully adopted in this country. For making fertilizers out of gas or naphtha or any other feedstock, you have to have catalysts. In catalyst development also, we have a public sector enterprise. They manufacture and market catalysts. The third is the area of laying down of specific engineering designs. Here again, in the early days, much of the work used to be contracted to foreign parties but, today, nearly 80 per cent of the work is being done indigenously in this country and only a small percent is contracted to outsiders. In the

engineering capabilities, we are fairly ahead today. Then, the most important area in research and development in the fertilizer sector is energy conservation. The less energy you consume for making the same unit output, the more cost effective your process is. In this connection, some of our new plants are almost at par with the very best in the world. I must say here that, it is a matter of satisfaction, if you really see the energy efficiency in these plants, they are comparable to the best in the world. In the area of energy conservation, much work is being done. And recently, I had occasion to mix with a number of technologists in the field and they have identified a number of project in the fertiliser sector in which research and development could be undertaken in Governmental institutions like CSIR laboratories and also in our universities."

4.9 When asked there were any plants to strengthen R & D organisations in the country, DOF replied in a note:—

"With relatively easy accessibility to fertilizer technologies developed elsewhere for fertilizer production and requirement of considerable investment in the R & D for development of new technology, it cannot be said with any degree of certainty at this stage whether there will be any tangible progress in the development of fertiliser technology in the country."

B. Technology for Fertilizer Production

4.10 The fertilizer plants function either on coal based or gas based or naphtha based technologies. However, with the growing use of gas and other petroleum products like Naphtha, the new plants are gas based and it is most preferred feed stock for fertilizer plants. Talcher and Ramagundam plants of FCI which were set up in 1980 are having Coal based technology. Various experts as also representatives of PSU's and cooperative units submitted before the Committee that cost of production in gas based plants is cheaper than the coal based plants. Similarly, efficiency of gas plants was quite impressive. In this context instances of IFFCO/KRIBHCO plants were cited where capacity utilisation has been more than 100 per cent.

4.11 The FCI management and also the representatives of DOF when asked about the failure of Talcher and Ramagundam plants admitted that the failure of these plants was due to mis-match of technology.

4.12 In this context a representative of the workers/officers associations which appeared before the Committee submitted that the mis-match of technology was taken as a failure of coal technology. The equipments/parts etc. in these plants were taken from different sources. He also pointed out that still there were some plants in developed countries like America and Japan based on coal technology. But in India ash content in indigenous coal was higher than the stipulated norms has been one of the reasons of poor performance.

4.13 On being pointed out that gas technology was economical as compared to coal based technology, the witness replied:—

“When we go to the Government and discuss with higher authorities, they tell us, Naphtha technology is better and coal technology is not efficient. No doubt, the situation has changed. Everybody talks of profit which is the motive. But it is the socio-economic policy of the public sector and if the Government does not come forward to develop this technology will the private sector develop it? For example, after five years from now, no Naphtha will be available, no petroleum product will be available. That means, India does not have any alternative technology. What will be the situation? Tomorrow there is a war and you do not get Naphtha and do not get imported technology. Will the Government produce nitrogenous fertilizer? If there is adverse relation with exporting or importing countries, what will happen? So, we should not kill this technology. The rate of increased cost of Naphtha is much higher than that of coal. By the time the plant comes up and gives production on Naphtha Plant, fertiliser production from coal and from Naphtha will be more or less the same. After that, production will Naphtha will be costlier than coal. Our request is that this technology should not be killed and we should be allowed to operate with that technology”.

4.14 The Committee further wanted to know whether there were fertiliser plants in the world running on coal based technology. FCI after obtaining the information from International Fertiliser Association of India indicated as follows:—

<i>Name of Country</i>	<i>Position regarding coal based plants</i>
(i) South Africa	One ammonia plant established in 1976. Having some problems in air separation plant.
(ii) Turkey	One ammonia plant established in 1962. Resortedly limited future.
(iii) Zambia	Two plants—having same technical problems.
(iv) Greece	One coal based plant closed in 1992.
(v) Japan	One Plant (UBE) established in 1972.
(vi) China	One Plant having some problems. Another plant being planned in collaboration of Japan.

V. PROMOTION OF FERTILIZERS

A. Fertilizer Consumption and Food Grains Productivity

5.1 The promotion and availability of fertilizer is the responsibility of Ministry of Agriculture. The following table shows the fertiliser consumption *vis-a-vis* foodgrain productivity in India and some other developed and developing countries during the year 1990-91.

<i>Name of Country</i>	<i>Fertiliser (NPK) consumption (Kg./ha)</i>	<i>Foodgrain Productivity (Kg./ha)</i>
Bangladesh	102.3	2439
China	277.7	4161
India	74.3	1648
Japan	400.1	5290
Korea DPR	416.1	5336
Korea REP	460.1	5656
Netherland	602.8	6571
U.K.	368.0	6281
World Average	95.2	2511

5.2 During the course of evidence of Department of Agriculture and Cooperation, the Committee wanted to know the reasons for less consumption of fertilisers per hectare in India, as compared to other countries even like China and Bangladesh, the Agriculture Secretary, replied that low fertiliser consumption in several part of the country was due to two reasons viz. several part of the country were not served by proper irrigation facilities and secondly farmers were not in a position to invest in inputs.

5.3 The per Kg. per hectare fertiliser use and foodgrain productivity in terms of quintal per hectare during 1990-91 in respect of States of Punjab,

Haryana, West Bengal, Uttar Pradesh, Madhya Pradesh and Rajasthan has been as follows:—

<i>State</i>	<i>Fertiliser use (Kg./ha.)</i>	<i>Foodgrain Productivity (Kg./ha)</i>
Punjab	161.9	33.9
Haryana	97.5	23.5
West Bengal	90.7	17.3
Uttar Pradesh	88.7	17.3
Madhya Pradesh	35.8	10.3
Rajasthan	19.7	8.7

5.4 Asked about the reasons for wide disparities in fertiliser use amongst the different states, a representatives of Ministry of Agriculture & Cooperation replied:—

“In 1991-92, it was 70.27 Kgs. per hectare. If you take the country as a whole, there are 251 districts which are consuming below the national average. If you take the State-wise position, Punjab consumes 162.23 Kg. per hectare which is a high consumption compared to the national average. Then, Tamil Nadu comes second with 117.19 Kg., Andhra Pradesh consumes 114.20 Kg., and Haryana consumes 107.79 Kg. Therefore, we would not take the position that any particular fertiliser should not be consumed, but it should not be a wasteful consumption. In fact, we have been asking the State of Punjab to promote bio-fertilisers because there are lot of reserves available in the soil and they could be used. In Punjab and Haryana the consumption of phosphorous was not very low. In spite of the price going up, the farmers have got used to a higher level of consumption.”

5.5 When asked about the measures taken or proposed to be taken to increase the per hectare consumption so as to achieve the target of foodgrain production of 240 million tonnes by 2000 AD; the witness stated:—

“This is a long drawn activity which the Ministry with the help of the State Government was trying to bring about an improvement in fertiliser consumption all along keeping in mind that the excessive use of fertiliser can also be harmful to the soil.”

5.6 On being pointed out by the Committee that water level in Gangetic plains had gone down and had adverse affect on irrigation programmes/schemes, he stated:

"It is a fact that on account of over exploitation of ground water this problems has arisen in certain parts of the country. The situation is grave in UP., Punjab and Haryana. Regarding that, the Water Resources development Ministry is also doing some thinking. Of course, we still have not learn from them what their scheme is. But the question is, how to increase the re-charge of the ground water. This is the basic problem. Recharge of the ground water by rains preventing the rain water from getting into the rivers or to the sea without being held back, how to promote the concept of rain water conservation in the farmers fields, these are the ideas which we are pursuing through the national watershed programmes and other programmes. But it is large programme that we are working at. We are even trying, whether we can take up a World Bank aided project in this regard."

He added:

"We left to the State Government to take up schemes. We have some general guidelines for in distribution of individual subsidy under this scheme to create infrastructural facilities. We have overall guidelines for projects like seed testing laboratories, buffer stocking of seeds etc., Some State Governments have taken up land reclamation schemes. This was an important scheme in West Bengal, Himchal Pradesh, Rajasthan, Bihar, Tamil Nadu, Kerala, Haryana and Orissa. Land reclamation involved taking up other alternative schemes or having some schemes to use land. Most of the small and marginal farmers have welcomed this scheme. Testing of inputs of seeds and fertilisers, this scheme is taken up by 12 States. These schemes were taken up after all the States were informed of the promised Rs. 500 crores but we were given only Rs. 365 crores. We are still fighting for the remaining funds though there is some talk that the funds like subsidy savings on fertiliser would be put back into the agricultural sector, particularly for infrastructure development."

5.7 On being asked by the Committee as to whether increase in procurement prices had not enabled the farmers to purchase fertilisers at higher prices, the Committee were informed by the witness that revision was done as investment in agriculture development had gone down and quantum of exponditure on fertiliser subsidy was increasing.

5.8 The Committee further pointed out that foodgrain productivity per hectare in 1990-91 in India was 1648 Kg. as compared to 2439 kg. of Bangladesh 4161 Kg. of China and 5290 Kg. of Japan. The Committee wanted to know as to what extent higher use of fertiliser could improve the productivity keeping in view the fact that there was a little scope for

expansion and the entire increase could come only from increased productivity. The Agriculture Secretary replied:—

“Concepts like organic farming are being taken up where there are various kinds of practices like where they use earthworm, etc. then utilising the agricultural waste and convert it into other aspects. This is one of the major activity, apart from dealing with situation arising out of this change in fertiliser policy.

We are today trying to process a scheme. The scheme is still to be finalised with the help of Finance Department but the basic scheme is what we have discussed and theoretically, in principle, the Finance Department has agreed, is that at the Farmer Training Centre in different part of the country there are about 150 odd FTCs. Then there are about similar number of Krishi Vigyan Kendras. There are NARP centres. These are the three institutions where farmers interact with our research system.

What we do is we take up demonstration of possible organic farming in that centre and then bring farmers of neighbouring areas for 2-3 days training and make them aware of the basic a research in this area. So that this can be a big programme to propagate the process of organic farming.

5.9 Various PSU's and cooperative units also do same activities in the field of promotion of fertilisers and related activities. When asked to specify the such activities undertaken by these units, DOF in a written note replied that fertiliser companies also play a supplementary role in promoting fertiliser use through the following programmes:—

- i) Laying of demonstration plots/fields.
- ii) Adoption of villages.
- iii) Soil testing facilities.
- iv) Farmers training programmes.
- v) Distribution of mini-kits of fertiliser.
- vi) Organising kisan Melas.
- vii) Display of hoardings and distribution of pamphlets in different regional languages.

5.10 DOF also stated that due to various programmes promoting fertilizer use has resulted in increase in consumption to a level of about 72 Kg. per hectare in 1991-92 compared to 1 Kg. consumption per hectare in 1950-51.

B. Use of Balanced Fertilisers

5.11 The representatives of farmers deposed before the Committee that latest information about fertiliser and its effective use has not been made available to about 2/3rd of farmers in the country. The farmers do not

know the cropwise balanced quantum of nutrient to be used and impact there of on future productivity of soil. According to them Govt. assistance for educating better use of fertilisers as well as the soil testing facilities were not made available to all farmers.

5.12 During the course of evidence of the representative of the Ministry of Agriculture & Cooperation, the Committee pointed out that there was tendency to use more urea whereas the consumption of potash & phosphatic fertilisers was very low. Asked about the reasons for it, the Agriculture Secretary stated as follows:

"It has been the cause of concern for the Department of Agriculture and Cooperation all these years and much more now with the change in the fertiliser policy. We were, in the last 30 years, attempting to bring about some kind of balance in the use of fertiliser, which is considered to be good for production, and a large measure of success has been achieved in this, particularly in the States in the South where consumption of NPK was commensurate with the consumption of other kind of fertiliser. An effort was being made in other parts of the country also since fertiliser consumption was low in various parts of the country."

5.13 Asked about the proper ratio of NPK fertilisers a representative of Deptt. of Agriculture and Cooperation stated that the ideal ratio was 4:2:1.

5.14 When asked about the present ratio the witness replied:

"There is a certain level 4:2:1 of Nitrogen, phosphorous and Potash which would be ideal. We cannot reduce the importance of nitrogen and so, to reach this level, proportionately the prices should be such that we can encourage the balanced use of fertilisers. It took us 30 years to come up to a level of 5:2:1. In one season we have gone to 15:4:1. That is the situation. The fertiliser policy should be such that the difference of prices between Nitrogen, Phosphorous and Potash should contribute to be balanced use of fertiliser in the proportion of 4:2:1."

5.15 Explaining the reasons for unbalance in the ideal ratio of NPK fertiliser the witness stated that this was an after effect of the decontrol of P&K fertiliser in Aug. 1992. The price of these fertiliser went up. The price level of Potash increased 300% prices of Nitrogen fertiliser was reduced by 10%. As a result consumption of urea went up. In this connection a representative of Ministry of Agriculture stated:—

"Now with the change in fertiliser policy, there has been a tremendous shift in the pattern of mix. Our effort to bring about a balance with application has received a certain amount of set back. Overall, what we call NPK ratios, as far as they are concerned, during Kharif 1992 the NPK ratio was 6.59:2.51:1 one is taken as

constant. If the impact of the decontrol was full in Rabi (1992-93) Due to 10 per cent decrease in the price of Urea the result was an increase in consumption of Nitrogen and fertilizer which led to increased ratios as 15.12:4.55:1. This was the kind of distortion that took place immediately after the decontrol."

5.16 In reply to an another query, the witness stated:

I would not like to go into how the decision was taken. The impact of the price rise was I think, much graver than what was anticipated. The price of potash went up almost 300 per cent. Since the impact was so severely felt it was not possible to correct the imbalance. We have now to do a lot."

5.17 Asked about the impact of imbalance in fertiliser consumption, the witness stated:

"The use of phosphate and potash is declining and that may affect the productivity for the coming year..."we have not had immediate impact in foodgrain production. It is usually a long term effect for after a period of 3-4 years..We continue to have bumper harvest in spite of this decline because the material is still available in the soil..."

5.18 During the course of examination, it was pointed out that after increase in prices of all fertilisers announced in July, 1991- some concessions were announced to neutralise the affect of decontrol of P&K fertilisers. Besides this, some concession were announced for Small and Marginal farmers. For this purpose Govt. announced a subsidy fund of Rs. 1000 crores. The Committee wanted to know whether this decision of giving subsidy helped in improvement in consumption of P&K fertiliser a representative of Deptt. of Agriculture & Cooperation stated:

Actually first the rates were increased to 40 per cent. It was brought down to 30 per cent. Some relaxations was given to the small and marginal farmers. This created problems with the States expressing their inability to implement it as they said that many leakages will occur in the name of small and marginal farmers. We had a very poor* response from the States. Hardly any State was able to implement the directive, they said that amount provided was not enough.... There was confusion as to which among the directive, they said that amount provided was not enough....T-here was confusion as to which among the small and marginal would get the concession. Some administrative problems come up. There was lot of negative response to it."

5.19 In regard to import of DAP, the witness stated:

"By Kharif 1993 with the decanalisation of import of DAP it is now available at cheaper price, so the indogenous industry has to complete with the imported DAP. The subsidy is given only to indogenous product, Punjab, Haryana, Rajasthan went in for direct

import and they are able to get DAP cheaper. There is an improvement as far as their consumption is concerned. Also in the case of Potash, last year price went up by 300 per cent and after giving this subsidy the price was in the range of Rs. 500 per tonne. This year IPI has been able to get the price down."

5.20 Asked about the other steps taken to keep the fertility of soil intact, The witness stated:

"The other steps as far as fertiliser is concerned we are trying to promote other fertiliser like bio-fertiliser, organic fertilisers etc."

5.21 The Committee wanted to know whether fertiliser policy had been examined and reviewed with a view to correct the imbalanced use of balanced fertiliser. The witness stated:

"When this whole idea of doing away of subsidy was discussed at that point also we in the Ministry were advocating that this should not be done in such a hurry and that the programme of revising subsidy should be in a phased manner. But we have been confronted with a given situation. It is not a question for us to recommend that subsidy should be restored."

5.22 In reply to an another query about subsidy the witness stated:

"That will be a different proposition in the sense that if subsidy was to be restored what should be pattern of doing it. That will be worked out. As I said, in the last 30 years there were certain imbalances. At that point of time we were concerned with the pattern of subsidy. The use of phosphate and potash fertilisers is declining and that may affect the productivity for the coming years. Then there will be a sharp drop in the food production. Therefore, instead of giving subsidy for 'N' only, we should give it for ('P' and 'K' also."

5.23 When asked about the considered opinion of the Ministry about control and decontrol of various types fertilisers, Agriculture Secretary stated:

"The distribution of fertiliser before the change of fertiliser policy was a fairly streamlined system which has been evolved over the last 30 years and there were the cooperatives doing it and there was the private sector also. In fact, the allocation of fertiliser was done on the basis of past performance and there was a regular system of interaction between the State authorities and the fertiliser industry people, the cooperative sector and the Government of India. It was an annual exercise done year after year and it was systematically streamlined. For a country of India's size, we cannot change our distribution policy every six months. If we make

a change in the policy, it takes a long time to reach the levels down the line and it totally disrupt the functioning of the implementing agencies. The system that has been evolved should not have been tampered with; whatever modifications we want to make, they could be added on to the system."

5.24 The Committee further wanted to know whether the education of farmers about use of balanced fertilisers could be given through modern media like T.V., the witness informed the Committee that discussions with Doordarshan were in progress for giving time for this purpose and they considering it.

5.25 About soil testing facilities the Committee wanted to know whether there was proper coordination between concerned departments as lack of balanced use of fertiliser among the farmers adversely affects the productivity, A representatives of Deptt. of Agriculture & Cooperation stated:

"I am personally coordinating it and at Zonal Conferences soil testing apparatus its use and scope of improvement ranks second in the agenda after availability of fertilisers. There are over 500 soil testing laboratories available in the country today. And we have statistics of how many are mobile and how many are static. Our All-India percentage of capacity utilisation is 77 per cent. Of the total number of laboratories available in the country 77 per cent are being utilised in the country."

5.26 About the problems being faced in soil testing the witness stated:

"The major problem in States in shortage of resource so even if there is a laboratory due to resource crunch either staff or crucial equipment are not available. The Committee was informed that for filling the gap in equipment and other laboratory requirements in States Laboratories a scheme has been cleared but for staff deployment as the States are themselves responsible the Government of India cannot entertain any recurring expenditure on them."

VI. MARKETING

6.1 The Department of Fertilizers has the primary responsibility of moving controlled fertilizers to various States and UTs, under the Fertilizer (Movement Control) Order, 1973, from various plants/ports in the country so as to ensure adequate availability of fertilizers in time. The movement of fertilizers is arranged to meet the requirement of States and Union Territories on the basis of the supply plan drawn by the Department of Agriculture & Cooperation. After meeting the requirement through indigenously produced fertilizers, a ship-wise distribution plan of imported fertilizers to, various States is also made by the Department of Fertilizers.

6.2 Fertilizers alongwith other agriculture inputs like (HYV) seeds and insecticides should reach at farmers doorsteps at a right time and right place through a well planned marketing system comprising of distributors, retailers, transporters, etc. from plants/ports to block headquarters. There are 2,30,000 retail distribution outlets of which 69% are in private sector and 31% are in cooperative/state sector.

6.3 The representatives of IFFCO and KRIBHCO submitted in their evidence before the Committee that they were having a very good marketing network and in addition helping the farmers in all related fields like education about farming soil testing, training etc.

6.4 Representatives of Bharat Krishak Samaj deposed before the Committee that at times there are cases of large scale adulteration in fertilisers.

6.5 There are 51 fertiliser quality control laboratories spread all over the country with an overall annual capacity of analysing 92000 samples per year. During the course of evidence of the representatives of Department of Agriculture & Cooperation the Committee wanted to know as to how the Ministry ensure to maintain quality in the production and supply of fertilisers. A representative of DOF stated:

“As far as the quality is concerned, this is another important aspect that we take up, we review it at every zonal conference. There are 51 laboratories in the country, as a whole. We have delegated the powers to the State Governments. There are fertilizer inspectors who are duly authorised; and the percentage utilisation is almost 100 per cent.”

6.7 When asked about the cases where samples were found sub-standard and action taken against the defaulters, the witness replied:

“As far as the percentage samples found non-standard. For the country as a whole, it is about six per cent. Since it is a case of

criminal nature, they have to file it in the court of law and they have to fight it out in the courts. I have recently come to know from the State Governments as to how many prosecutions have been launched. In some of the cases, the dealers' registration is cancelled or show cause notice is issued or they are suspended. If a few very bad cases, they have taken up for prosecution in the court of law. I have got the State-wise figures with me. As a whole, the number of prosecutions launched is 1,102. This is for the period from 1989 or 1993, you can say."

PART II

RECOMMENDATIONS/CONCLUSIONS OF THE COMMITTEE

1. There are mainly three fertiliser nutrients viz. nitrogen (N), phosphate (P) and potash (K). The Committee find that the consumption of these nutrients during the year 1992-93 was 84 lakh tonnes, 32 lakh tonnes and 10 lakh tonnes for N, P and K respectively. However, the production was about 74 lakh tonnes, for N and 23 lakh tonnes for P only. The balance requirements of N and P fertiliser alongwith entire requirement of K (Potash) was met through the imports. The Committee regret to note that the overall targets of production which were below the installed capacity were not achieved. The main reasons for not achieving the ever all production targets are reportedly due to poor production performance of HFC/FCI units, shortages of gas/power. Besides the production of phosphatic fertiliser also suffered on account of decontrol of these fertilisers resulting less off-take/consumption.

2. The Committee have been informed that gas is the most economical/preferred feed stock for fertiliser industry. Even though the share of fertiliser industry in total gas availability is 36% at present, this is not meeting the full requirements of the fertiliser industry. Similarly there are problems in getting the required power supply and desired quality of coal (for coal based plants). DOF has informed the Committee that these matters have been taken up with the concerned Departments. In view of the importance of the fertiliser production which has direct bearing on the self sufficiency of the country in foodgrains, the Committee recommend that the matter regarding adequate availability of gas/power and required quality of coal may be pursued at the highest level in the Government including Planning Commission.

3. After reviewing the unit-wise production performance of various PSU's, cooperative units viz. IFFCO and KRIBHCO and private sector units during the year 1992-93, the Committee find that the production performance of IFFCO and KRIBHCO, NFL in public sector as also of private sector has been over 100%. The production performance of RCF and FACT was 68% and 92% respectively. The production performance of HFC and FCI was in the range of 29% and 33% only. While the Committee have discussed FCI and HFC plant separately, the Committee desire that other PSU's like FACT/RCF should take a lesson from exemplary performance of the cooperative sector and should improve their production performance. The administrative Ministry should also periodically review the production performance of various units under

its administrative control and provide necessary help in solving their problems as and when brought to their notice.

4. After examining the details of demand and supply of fertilisers, by the Committee has viewed that on the one hand the demand of fertilisers is increasing at a good pace, whereas the commensurate capacity is not being built up. An action plan is therefore required to reduce the gap between the demand and supply of fertilisers. According to the Working Group on fertiliser of the Planning Commission for the 8th Plan, the anticipated demand for Nitrogen (N), Phosphate (P) and Potash (K) fertilisers would be 115 lakh tonnes, 50 lakh tonnes and 18 lakh tonnes respectively by the end of the 8th Plan (1996-97). As against this the likely production capacity by the year 1996-97 would be 88 lakh tonnes for N and 30 lakh tonnes for P fertilisers. Thus there will be gap of 27 lakh tonnes and 20 lakh tonnes for N and P fertilisers respectively. As per Government estimates 8 lakh tonnes of N through production of P fertilisers and 7 lakh tonnes of K fertilisers through expansion programmes of various units which are likely to be completed by 1996-97 would partially reduce the gap. This will leave a net gap of 12 lakh tonnes of N fertilisers by the end of 8th Five Year Plan. The gap between demand and supply will further increase by the end of IXth Plan period (i.e. by 2001—2002 A.D.) i.e. 33 lakh tonnes of Nitrogen (equivalent to 72 lakh tonnes of urea). In addition there will be a gap in meeting the requirement of P and K fertilisers to the extent of about 20-25 lakh tonnes each, taking the total shortage to a staggering level of about 80 lakh tonnes. DOF was candid in their admission before the Committee that a such huge quantity of fertiliser may not be surplus in international market. The Committee accordingly recommend that appropriate action should be taken by the Government to set up new plants/expansion of existing plants with a view to meet the growing demand of various types of fertiliser to achieve the foodgrain production targets of 240 million tonnes by 2000 A.D.

5. The representatives of DOF stated before the Committee that private investment as also foreign investment was not forth coming in the fertiliser industry due to low investment returns, scarcity of raw materials/inputs like natural gas. The Committee would like the Government to take appropriate steps like augmenting gas supply to fertiliser industry, provision of reasonable return of investments etc. to attract private as also foreign investment in the fertiliser industry so that desired production capacity is built up.

6. The Committee were also informed by Fertiliser Association of India that another factor on account of which investors have been shying away from investing in the Indian fertilisers industry is ad-hoc decision of the

Govt. taken every now and then in the absence of a long term fertiliser policy. In this connection they cited instances of decisions taken regarding revision of prices, control and decontrol of fertilisers during the last 2-3 years. The Committee find substance in these suggestions and desires that the Govt. should prepare a well thought of long term fertiliser policy, keeping the overall demand and availability in view.

7. Currently, the indigenous production of N and P fertilisers meets the demand to the extent of 85% and 70% respectively. The gap between demand and indigenous availability is met through imports. The entire potassic fertilisers has to be imported as the country does not have any known and exploitable reserves of potash. The cost of imports which was Rs. 645 crores in 1988-89 increased to Rs. 2143 crores during the year 1992-93. Due to increase in gap between demand and availability the imports will further increase and may reach a level of about 80 lakh tonnes by the end of Ninth Five Year plan i.e. 2001-2002. Admittedly fertilisers of this magnitude may not be available in the international market. Similarly, the international companies which are making available DAP and other fertilisers at cheaper price today, may exploit the situation later. Accordingly, the Committee once again emphasise the need for creating additional capacities for production of fertilisers in the country.

8. The Committee are happy to note that to reduce the foreign exchange outgo, two joint ventures have been set up in Senegal and Jordan for producing the phosphatic fertilisers. The fertilisers from these joint venture are brought on the basis of a buy back arrangement. Some more joint ventures are being explored in other countries like Qatar and Iran which are having requisite raw materials as also the gas. The Committee feel that the steps taken by the Govt. are in the right direction. The Committee would also like the Govt. to explore more such joint ventures so the requisite fertiliser is made available in the country.

9. The Committee are distressed to note that production performance of two PSU's viz HFC and FCI has been very low. From the plant wise production it is noticed that the capacity utilisation in HFC and FCI plants ranged between 3% to 66% during the years 1991-92 and 1992-93. The dismal production performance is reportedly on account of technology deficiencies mis-match of equipments, frequent break downs of plant and machinery, shortage of power and shortage of funds to maintain the plants and even to purchase raw materials. At the end of March, 1993 accumulated losses of FCI and HFC stood at Rs. 1836 crores and Rs. 1861 crores respectively against their paid up capital and reserves of Rs. 828 crores and Rs. 686 crores respectively. Both the companies have been declared as sick companies and have been referred to BIFR. The Government has sought extension of time for furnishing their plans in respect of these companies before BIFR by 31st December, 1993. The examination of various aspects of FCI/HFC plants by the Committee revealed that the estimated expenditure on revival of plants or setting up of new plants on the same sites would be

much cheaper than the new grassroot plants. The installed capacity of FCI plants is over 8 lakh tonnes and that of HFC plants is 6.54 lakh tonnes and their capacity utilisation is about 1/3 of the total capacity. The total trained manpower strength in these companies is over 18000. Looking at the infrastructure of about 10 plants of FCI and HFC, the available manpower and taking into consideration the shortage of indigenous production capacity, the Committee recommend that all out efforts should be made to revive these plants.

10. The Committee regret to note that FCI plant at Gorakhpur which is reportedly has outlived its life was closed down in June, 1990 after an accident. No efforts seems to have been made so far to restart it. Similarly due to some constraints production in all the plants of HFC except Namrup III was stopped w.c.f. 1st September, 1993. Pending decision by BIFR about the future of HFC/FCI, the Committee would urge upon the Govt. to continue the production in all units of these companies.

11. The CMD's of FCI and HFC submitted before the Committee that even though some of their plants were producing cheapest fertiliser, they were not getting even the cost of production. This situation has arisen due to FICC norms of achieving 80% capacity utilisation of the installed capacity. These companies have repeatedly requested the Govt. to derate their capacity to enable them to get fair price of their production. In this connection, CMD of HFC also pleaded before the Committee that capacity shown in the records may not be true and actual capacity of a plant may be less or more than the capacity shown as installed capacity. By not recognising the actual capacity of the HFC/FCI plants, the Committee have reasons to believe that these companies have suffered badly and consequently it has added to their mounting losses. Taking in view of the precarious financial health of FCI and HFC, the Committee recommend that the Govt. should take a realistic view in this regard and present capacity of these units should be recognised. The Committee also desire that at the time of setting up of new plants Govt. should ensure that actual production capacity of such plant is taken into consideration.

12. The Committee were astonished to find that Haldia Project of HFC which was likely to start production as early as 1979, is on paper even today. An amount of over Rs. 760 crores has been spent on this project up to August, 1993. The Committee are further dismayed to learn that over 1500 employees are getting salary since 1979 (and some of them even since 1976) without being given any meaningful work whose annual salary bill is about Rs. 18 crores. The Committee are yet to hear any such parallel instance in the international corporate world. CMD, HFC in his evidence was frank enough to say that the plant and machinery was just a scrap and the present plant could not be made operational.

13. The Haldia project being part of HFC is also stand referred to BIFR. Representatives of DOF informed the Committee that the proposals of Govt.

on HFC would also include the future proposals of Haldia project. The Committee hope that with the type of big infrastructure available there, some viable plans would be finalised and implemented to utilise the huge amount already spent.

14. The Committee were informed that the main reasons for failure of Haldia was mis-match of various equipments and machinery as these were procured from various sources due to fund constraints. Some foreign experts also examined the plant and suggested some modifications plans at the cost of Rs. 500 crores which according to Govt. was on higher side to make the plant unviable one while regretting the whole episode the Committee strongly recommend that a higher level independent Committee should be appointed to look into the failure of the Haldia project with a view to fix responsibility and take necessary action against those found guilty.

15. Fertiliser is one of the major components which has over the years helped the agriculture sector to raise foodgrain production from a level of 74.23 million tonnes in 1966-67 to about 180 million tonnes in 1992-93. The food production level of 240 million tonnes is to be achieved by 2000 A.D. Since there is limited scope for increasing the land area under cultivation, further increases in foodgrain production can be achieved by better farming techniques including use of balanced fertilisers. The Committee, however, find that presently the fertiliser consumption in India is about 70 kg. per hectare as compared to other developing countries like Bangladesh and China where the fertiliser consumption is about 102 kg. per hectare and 277 kg. per hectare respectively. The consumption in other advanced countries like Japan, Korea and Netherlands is over 400 kg. per hectare. Financial Constraints of farmers and lack of irrigation facilities are the main reasons for low consumption of fertilisers in the country. Consequently, the foodgrain productivity has been very low. The Govt. is reported to have initiated some schemes like testing of soil and seeds and developing infrastructural facilities to benefit the small and marginal farmers. Since over 75% of the farmers fall under this category. Govt. should ensure successful implementation of such schemes.

16. The Committee find that one of the main reasons for less productivity is use of imbalanced fertiliser. The Committee were informed by the representatives of farmers that latest information about effective use of fertilisers was not available to about 2/3rd of the farmers. The farmers also do not know the crop-wise balanced use of fertilisers as also about the soil fertility. Apart from various extension centres and soil testing laboratories under the aegis of Ministry of Agriculture, similar services are also being offered by some of the PSU's and cooperative units and State Govts. The Committee desire that in view of the stupendous task and vastness of the country all agencies of Central Govt., State Govt./PSU's and cooperative units should work towards the educating the farmers in a close coordinated and systematic way. The work should be

allocated to different agencies in a way that all areas are covered and there is no duplication of efforts.

17. It also came out during the course of examination that in the matter of publicity through various means of media including through Doordarshan, much is required to be done. The Agriculture Ministry is reportedly has taken up the matter with concerned authorities. The Committee would like the Ministry to expedite and take concrete steps in educating the farming Community in a scientific way.

18. The Committee note that all the three nutrients viz. nitrogen, phosphate and potash are essential for harvesting a good crop and at the same time maintaining the fertility of the soil. The ideal ratio of N, P and K fertilisers is 4:2:1. The Committee were, however, stunned to hear from the representatives of Ministry of Agriculture that the present ratio of use of these fertilisers is 15:4:1. Admittedly such imbalanced use of fertiliser will lead to erosion in soil fertility and ultimately will lead to drop in foodgrain production after a period of 2-3 years.

19. The Committee were informed by the representatives of Ministry of Agriculture that the present imbalance in the use of fertilisers was on account of decontrol of P&K fertilisers in August, 1992 which was done on the basis of recommendations of a Joint Parliamentary Committee on Fertiliser Pricing. In the month of August, 1992 the prices of nitrogen fertilisers were reduced by 10% whereas there was sharp increase in phosphatic fertilisers and in case of potash the price rise was as high as 300%. Representatives of M/o Agriculture were candid in their admission before the Committee that after putting efforts for more than 30 years they were able to bring the consumption ratio NPK fertilisers to 5:2:1 as against the ideal ratio of 4:2:1. The impact of decision about decontrol of P and K fertilisers proved grave and as a result of this consumption of these fertilisers decreased sharply.

20. The Committee were also informed that in view of negative affect on use of P&K fertilisers, the Govt. reduced the prices i.e. from 40% increase to 30% increase and a scheme was announced for the benefit of small and marginal farmers. Admittedly the scheme was a failure as there was utter confusion as to who were the small and marginal farmers. Many of the State Governments were unwilling to implement the scheme. As agreed to, by the representatives of Ministry of Agriculture during evidence, the Committee feel that there is a strong case for a review in the pricing policy and giving subsidy to P and K fertilisers to maintain the production level as also to protect the soil productivity. This will ensure balanced use of NPK fertilisers which is essential for the food production and soil fertility.

21. The Committee would also like the Govt. to ensure that at the time of framing any scheme for the benefit of small and marginal farmers, all aspects of such schemes including their mode of implementation and their likely beneficiaries should be laid clearly so that these are implemented

smoothly and purposefully. This would help the Govt. in avoiding the failure of schemes like one which was announced for small and marginal farmers last year and could not be implemented properly.

22. After examining various experts, PSU's, farmers and representatives of Ministries of Agriculture and Fertilisers the Committee have come to the conclusion that much efforts have not been made in promoting the non-chemical fertilisers like bio-fertilisers and organic fertilisers. The Committee, therefore, recommend that concerned Departments of the Government should chalk out time bound programmes to develop and promote such fertilisers. These steps will go a long way in reducing the dependance on costly chemical fertilisers while keeping the soil fertility intact.

23. The Committee find that there are presently two engineering consultancy organisations viz. Projects and Development India Ltd. (PDIL) and FACT Engineering and Design Organisation (FEDO) which render consultancy services to fertiliser industry and carry out R&D activities. Fertiliser Association of India deposed before the Committee that presently no fundamental research is being done in the country in the fertiliser industry. The research organisations are doing only consultancy types of jobs. The fertiliser units including the profit earning ones are hardly spending any amount on research and development. The premier research organisation viz. PDIL is incurring losses to the tune of over Rs.15 crores annually and has been referred to BIFR. The Government grants-in-aid of meagre amount of Rs. 4 crores or so for carrying out research work is hardly adequate. While recommending the revival of PDIL, the Committee would like to emphasise the need for allocation of more funds for research activities. For this purpose fertiliser units should also be asked to contribute for benefit of the fertiliser industry as a whole.

24. The gas is the most preferred feed stock for fertiliser plants as gas based plants are running efficiently at a lesser cost. The Talchar and Ramagundam plants of FCI are coal based plants. These plants were commissioned around 1980 and optimum capacity utilisation in these plants is yet to be achieved. According to the representatives of FCI and DOF the main reason for failure of these plants has been mis-match of technology equipments and frequent break down of plant and machinery. Some of the engineers working in these plants also submitted before the Committee that the plants have failed due to mis-match of equipment rather than failure of technology.

The Committee also note that there are fertiliser plants still running on Coal based technology in some other countries. With the help of Japanese, China is reported to be in the process of setting up a fertiliser plant on coal based technology. Since there is shortage of gas in the country and reserves of coal are in abundance, the Committee recommend that

Talchar and Ramagundam Plants should continue to function on coal based technology with desired modification/revamping plants. Efforts are also needed to upgrade the coal based technology.

25. DOF has primary responsibility of moving controlled fertilisers to various States and UTs under the Fertiliser (Movement Control) Order, 1973, from various plants/ports in the country so as to ensure adequate availability of fertilisers in time. The movement of fertilisers is arranged to meet the requirement of States and Union Territories on the basis of supply plan drawn by the Ministry of Agriculture. To meet the needs of farmers there are about 2,30,000 retail distribution outlets of which 69% are in private sector and 31% are in cooperative/state sector. The Committee feel that with the present fast transport system, adequate availability of fertilisers in all parts of the country should not be major problem for the Govt. The Committee would, however like the Govt. to ensure that in no circumstances traders be allowed to hoard the fertiliser stocks and create an artificial scarcity to demand higher prices.

26. The Committee regret to note that inspite of 51 fertiliser quality control laboratories having an overall annual capacity of analysing 92000 samples per year, there are cases of adulteration in fertilisers. In this connection representatives of Ministry of Agriculture informed the Committee that powers regarding inspection have been delegated to State Govt. and Inspectors carry out the job on the basis of inspections during the period 1989 to 1993 as many as 1102 cases were detected and prosecutions launched against the defaulters. In view of importance of the subject, the Committee are of the view that Ministry of Agriculture cannot absolve its responsibility merely by delegating the work to State Governments. They accordingly recommend that inspection machinery should be strengthened adequately. Needless to emphasise, the Govt. should monitor the role of inspection machinery with a view to taking remedial measures as and when necessary.

27. The Committee also find that farmers are not involved in availability/supply and related issues like quality control in the fertilisers. The Committee accordingly desire that adequate steps should be taken by the Govt. to involve representatives of the farmers/Panchayat Samities/Cooperatives in these activities.

NEW-DELHI:

14 December 1993

SRIBALLAV PANI GRAHI

Standing Committee on Petroleum & Chemicals.

23 Agrahayana, 1915 (Saka)