CHAPTER VII

FERTILIZER POLICY AND STRATEGY FOR NEPAL

(A Critical Review)

7.1. Fertilizer Policy of HMG of Nepal:

Role of the State: The fertilizer policy of the Government is part of its overall strategy of planned economic development through development and modernization of Agriculture. It is part of a policy-mix and its success or failure depends to a large extent, upon the role of the government in creating an organizational, institutional, legal and economic environment conducive to the success of the fertilizer policy.

Organizational Role: Since there are a large number of small farmers having uneconomic land holdings it is impossible to help them effectively. Hence under Small Farmer Development Programme (SFDP), farmers are being organized into small groups of 5 - 25 so that they may receive financial, technical and other aid and assistance from the government, developmental agencies, extension agencies, cooperative system etc. Similarly a new multipurpose organisation called "Sajha" (A Community Cooperative) has been organized so that credit, agricultural inputs and essential
items of consumption may be channelised through them to the small farmers in the farthest nooks and corners of the country. The Sajha is a democratic body with a structure similar to that of the panchayat system.

Institutional Role: The state is responsible for creating institutions to perform various essential economic functions. Thus it has established the Agriculture Inputs Corporation (AIC) to procure and distribute fertilizer and other agricultural inputs in Nepal. It has established Agricultural Development Bank, Nepal (ADB Bank) to extend agricultural credit; It has organized the Department of Agriculture with its multifarious divisions to carry on research, training and extension functions. It has created numerous agencies to extend support services for marketing of fertilizers as well as agricultural, horticultural, animal husbandry and forest products and for generation of power and development of irrigation resources.

Role in Economic Development: The state is the primary agency for creating the infrastructure needed for economic development. It is also primarily responsible for creating physical facilities for the functioning of an efficient marketing system. Thus it has to provide an efficient transportation and
communication network and establish markets and regulate their functioning. It is also responsible for ensuring that modern agricultural inputs are procured and distributed. Similarly it has direct responsibility to ensure that the basic minimum needs of the people are met and production incentives are provided for. The state has also an important welfare role to play. For it has to create and maintain public health and educational facilities, maintain economic stability through maintenance of employment and containment of inflation and ensure accelerated economic growth with social justice. With this in mind various policy measures are:

7.1.1. Organizational Policy: As indicated earlier farmers have been organised into viable groups so that they can receive aid and assistance from the state and a "Sajha" system was organised to channelise credit, modern agricultural inputs and essential commodities to the small farmers. The Sajha system is given the monopoly of distribution of credit, inputs and essential commodities so that they may grow into large and economically viable units in time.
Further, considering that the agricultural market and market for agricultural inputs are not yet well developed the state adopted the policy of creating a monopoly structure in marketing agricultural inputs.

A cooperative system of agricultural credit has also been organized and this system is used for fertilizer credit as well.

7.1.2. Institutional Policy:

As indicated earlier the state has created a network of institutions to perform essential social economic functions. This is necessary because the people are too poor and do not possess local initiative and enterprise to organise and run such institutions by themselves. AIC, ADBN, Nepal Food Corporation, Nepal Transport Corporation and various regulatory and other agencies have been created to facilitate marketing of fertilizers and provide support services.

7.1.3. Market Channel Policy:

The official policy is to distribute fertilizer and other agricultural inputs and the essential commodities through a three-tier distribution system with AIC at the Apex, District Cooperative Union in the
middle tier and Sajhas forming the bottom tier. The AIC is to procure, stock and distribute the inputs. The DCU's perform the function of wholesaler and Sajhas serve as retail outlets. Where Sajhas are either absent or non-functional private dealers are appointed as retailers. The official policy is to favour Sajhas and gives them monopoly in distribution. Since Sajhas are not fully developed and functional in all parts of the country, private dealers were appointed to ensure supplies of fertilizers and other inputs to the rural masses. This recent policy of dual-agency Sajha/private dealer has led to the rapid expansion of private dealers and this has benefited the small farmers in the remote areas in that they now have a sales point in their neighbourhood.

7.1.4. Credit Policy:

Because of subsistence farming (i.e., lack of marketable surplus), and the barter economy farmers have meagre cash resources. Consequently, when it comes to cash purchases of fertilizers, they are in a dilemma to purchase or forego the use of fertilizers. Similarly, the dealers (whether private or Sajha) are unable to stock fertilizers, operate only during the peak seasons and are not knowledgeable about the
fertilizer analysis, use or practices. Consequently, there is urgent need to extend fertilizer credit to farmers to buy and trade credit to dealers to ensure stocking and regular and timely supply of fertilizer to the farmers. Hence the state has created a cooperative system of credit and pumping larger and larger amounts of credit through them into the agricultural economy.

7.1.5. Promotional Policy

The promotion work is confined to occasional advertisements in news papers and periodicals, Tri-weekly broadcasts in the evening on Radio Nepal and distribution of handout and pamphlets at the sales points. Hence the real burden of promotion work lies on the shoulders of the extension workers of the Department of Agriculture.

7.1.6. Extension Policy

The policy is to have one JTA (Junior Technical Assistant) for every 2500 farm families to give them technical guidance. In addition farmer's rallies, field demonstrations etc. are used to popularise fertilizer use and fertilizer application practices. T and V method and use of progressive farmers as extension assistants have both been adopted, for extension work. The general policy is one of the research and extension.
7.1.7. Pricing, Taxation and Subsidisation Policy:

In Nepal because of high prices of fertilizer and introductory state of development of fertilizers and the low resource situation of the bulk of the farmers, fertilizers have to be sold at subsidised prices if they are to be adopted. Consequently, taxing fertilizer is counter productive as the subsidy will have to be increased by the amount of the tax. Having realised this government has decided not to tax fertilizer. Even the 1% licence fee for import of fertilizers which was formerly being levied has also been done away with recently. The pricing policy is aimed at (a) bringing fertilizer within the reach of Hill farmers and (b) preventing outflow of fertilizers to India across the border. Also a uniform price is charged throughout the country (by providing transport subsidy) so that Hill farmers are not disadvantaged due to high cost of transport to their area.

7.1.8. Fertilizer Policy as a Plank in National Agricultural Development Strategy:

As was indicated earlier the fertilizer policy is intended to maintain and improve soil fertility and thus contribute to improved productivity of
agriculture so that the acute food shortage experienced in Hill region may be wiped out and food security may be ensured. Simultaneously it would improve agricultural income and production and thus accelerate the rate of economic growth. However, there is need to coordinate fertilizer policy with other development policies so that the policy will have better chance of success.

7.2. Fertilizer Strategy of Nepal:

By strategy we mean an action programme designed to attain policy goals/objectives. Consequently, to study strategy we must define the goals/objectives to the policy, identify the strategy adopted and then assess the effectiveness of the strategy to attain the policy goals/objectives.

7.2.1. Policy Goals:

The long range objectives of the fertilizer strategy should be to:

"Use fertilizer, in conjunction with other inputs, to increase agricultural production to feed an expanding population, to provide needed raw materials for agroindustry processing, and to provide increased employment".
In order to increase national agricultural production, fertilizers must be used efficiently. To obtain its maximum economic benefit, fertilizer use must be increased to meaningful levels. Since farmers are ultimately the only ones who can increase agricultural production, it is they who must be encouraged and instructed to follow efficient fertilizer practices, to obtain the highest economic benefit. There are several constraints which come in the way of farmers achieving the long range objectives of expanded and efficient use of fertilizer. These constraints are:

1. AIC's lack of motivation to increase fertilizer sales and improve fertilizer consumption level.

2. Uncertainties of fertilizer supply by donor countries and uncertainties regarding quantities to be imported on own account.

3. Lack of fertilizer credit and its impact on regular and timely supply of fertilizers.

4. Faulty distribution system and lack of personal salesmanship.

5. Inadequacy of Transport and storage facilities.

6. Inadequacy of effort and resources to motivate the farmers, through:
(i) Price incentive
(ii) Favourable crop prices
(iii) Sales promotion.

7.2.2. Finance And Management of AIC:

We have already indicated that in the light of the prevailing uniform price policy for fertilizer and the heavy price subsidization, trade in fertilizer is highly unprofitable for AIC which is obliged to sustain heavy financial losses year after year. With increase in the volume of imports and sales of fertilizer the losses of AIC mount. Hence AIC has no incentive whatever to promote sales of fertilizer in Nepal. The absence of competition also discourages promotion of sales. Thus AIC lacks motivation to promote sales. The situation is further aggravated by the fact that promotion and extension work is assigned to the Department of Agriculture.

In this context it may be noted that prior to 1972 when uniform pricing policy was first introduced in Nepal, AIC was selling fertilizer at cost price. The pricing policy then was to sell at a price below cost in the Hills and make up the loss by selling above cost in the Tarai. This policy fitted nicely into the policy objective of promoting agricultural productivity in the Hills and discourage diversion
of fertilizer supplies from Tarai to India, by keeping prices of fertilizer high in the Tarai.

All this changed when international fertilizer prices rose sharply and the domestic prices had to be raised in tune with international prices. But since the government is of the view that high import-high output price ratio is not suited to developing countries in general and Nepal in particular, and since raising prices of foodgrains was not considered practical in view of mass poverty, preponderance of small and marginal farmers, subsistence farming, low level of fertilizer usage, the only option open to the Government was to subsidise the price of fertilizer. However, this policy has had disastrous consequences for the finances of AIC and has eroded its economic viability and sapped its motivation to promote fertilizer sales. Consequently gradual withdrawal of subsidy with corresponding gradual rise in crop prices to maintain value-cost ratio (VCR) is now being seriously considered by the Government.

We suggest that the policy of uniform pricing should be abandoned. Fertilizer must be sold at cost price in Tarai and at subsidised price (transport subsidy) in the Hills. The Government should
compensate the AIC fully to offset the losses from transport subsidy incurred by AIC. The crop prices should be correspondingly raised to maintain and if necessary to improve the Value Cost Ratio (VCR).

It should be noted in this context that if the fertilizer price is raised by one rupee per Kg, the price of grain per Kg. will have to raised by only Rs. 0.10 if the crop response is 10 Kgs. per Kg. of fertilizer. Once the AIC is relieved of the burden of losses it will have incentive to sell more fertilizers. Consequently, AIC should have a separate marketing division to look after the fertilizer promotion work.

7.2.3. Strategies For Improving Procurement And Supplies:

At present uncertainties regarding intentions of donor countries plague the AIC and affect the regularity and timeliness of its supplies. The remedy is to improve procurement procedure and have a better communication and dialogue with donor countries to ensure regular and timely supplies.

Timely availability of fertilizers is of crucial importance to increasing consumption. At present, there is uncertainty about the level of aid imports which is decided by the donor countries on a year to
year basis. It would be useful if donor countries could be persuaded to enter into longer term arrangements - say for three years or so at a time to enable advance planning for the remaining quantities to be purchased. AIC should also consider the desirability of reintroducing off season rebate to distributing agencies to induce them to position stocks nearest consumption areas during the slack season.

For this purpose, AIC should improve its procedure for projecting annual demand and maintain continually updated 6 -, 12 -, and 24 - month fertilizer supply schedules by product type and area, to meet the correctly projected demand. AIC should also give proper guidance to the donors as to the proper type and quantities of fertilizer suitable for use in Nepal:

7.2.4. Marketing Strategies:

Marketing Strategies cover the following areas of decision making:

(A) Marketing channel
(B) Physical Distribution System
(C) Fertilizer Pricing
(D) Value Cost Ratio (VCR)
(E) Sales Promotion and Advertising.
(A) **Marketing Channel**

Under the direction of the Government of Nepal, AIC has adopted the policy of entrusting the wholesale function to DCU's and the retailing function to the Sajhas on a monopoly basis in their respective areas of operation. Only in areas where Sajhas do not exist or are existing but not functioning satisfactorily dealership is given to private traders. While the long term objective is to foster and strengthen the Sajha system, the short-term strategy to ensure regular and timely supplies in Hill area the dual-agency policy has been adopted and consequently there has been a steady growth in the number of private traders. This has injected an element of competition in the fertilizer trade in the rural areas where none existed before and it has thus helped improve the supply situation. There are also complaints that private traders are under cutting prices by foregoing part of their commission to improve their share in the fertilizer market.

The active participation of private traders in retail trade in fertilizers is a healthy development and needs to be encouraged. In particular, private traders should be encouraged in the Hills, where the
cooperative sector is inactive, to ensure wider coverage.

(B) **Physical Distribution System**:

(1) **Storage Facilities**: The existing storage facilities of AIC, both owned and hired, appear to be excessive in relation to the quantity of fertilizers handled. However, the facilities are not suitably sited; consequently there is excess capacity at some locations and shortage of capacity at some other locations. Further, there is wastage of storage space as in some locations. AIC warehouses are sited next to the godowns of the Sajhas. Further while there is adequate storage capacity at rail heads and major centres of consumption, there is acute shortage of storage capacity at the wholesale and retail levels. That is the storage capacity of DCU's and Sajhas is not at all commensurate with their needs. There is need for developing storage capacity at these levels to ensure that stocks are kept in position and are readily available for timely supply. Consequently, a critical review of existing and planned storage facilities is an urgent necessity to release surplus accommodation and reduce costs and identify locations for new construction to meet felt needs.
(ii) **Transportation Facilities**: Transportation cost is next to the CIF cost of fertilizers the most important element of cost. There is considerable scope for reducing this cost. We suggest that:

1. Cost of shipping from donor country to Calcutta port can be brought down by bulk shipping. Alternatively, Nepal may come to some arrangement with India so that Nepalese imports of fertilizers may be channelised through Minerals and Metal Trading Corporation (MMTC) of India which imports fertilizers in bulk. This is also likely to result in price advantage due to forward intelligence, savings in foreign exchange on bags and ocean freight due to MMTC imports being in bulk as well as timely availability of materials. This aspect should be seriously considered and the matter taken up with South Asian Association Regional Cooperation (SAARC) Secretariat.

Another possibility is to use ISO containers for import of fertilizers. These containers can move on ships, rail and road and would reduce losses by eliminating multiple handling of bages, pilferage, etc. and speed up transit by eliminating delay in transshipment from one mode to the other and minimise problems of customs formalities at the port and at Nepal border.
Such containers can move up to Kathmandu and a 15 to 20 percent saving in inland transportation cost can be achieved.

Change over from low analysis complex fertilizers to high analysis DAP-Urea combination would result in significant saving due to reduction in quantum of material handled for the same nutrient level. A saving in subsidy of 70 to 100 million rupees is estimated to result at the level of 1984-85 and 1985-86 quantum of imports, respectively. Hence, both from the point of view of supplying farmers with fertilizers at the lowest cost as well as from the cost to the economy, a switch over from complex fertilizers to high analysis DAP-Urea combination appears to be an urgent necessity as this is likely to bring about a reduction in imports of at least 15,000 mt. of fertilizers per year.

There is also need to have a separate 'Transport Cell' within AIC to coordinate shipping schedule transportation schedule from Calcutta to Nepal Border and domestic transportation schedule inside Nepal to the advantage of AIC. At present these activities are not well coordinated.

Also there is need for proper planning and scheduling to avoid back haulage and inter branch transfers
to balance demand and supply in the area of each branch.

(C) Fertilizer Pricing:

The present fertilizer price strategy has miserably failed. It is therefore, necessary to revise the strategy urgently. We suggest the following changes:

(i) The machinery for deciding prices of fertilizer is slow and cumbersome in its operation. It does not respond quickly to changes in fertilizer prices announced by India. There is need to quicken the process of decision making and price response.

(ii) The level of prices: The fertilizers prices should be maintained at a level 6 percent higher than retail prices in India to prevent outflow of Nepalese fertilizer to India.

(iii) The subsidy of price of fertilizers should be gradually eliminated and prices of grains should be correspondingly revised upwards to maintain a favourable VCR (Value Cost Ratio)

(iv) Transport subsidy needs to be continued indefinitely on grounds of equity to ensure that the Hill farmers are not disadvantaged in the matter of fertilizer use.
(v) To reduce the burden of price subsidy, the present system of valuation of fertilizer received as aid should be set aside. Instead they should be valued at the corresponding CIF price for direct purchases for the purpose of computation of subsidy.

(vi) The system of uniform prices should be abandoned and AIC should supply fertilizers on no-profit-no-loss basis. That is fertilizer price should be a full cost price except that transportation cost will be subsidised in Hill areas.

(D) **Value - Cost Ratio (VCR)**:

International experience of other developing countries with similar background suggest that the farmers use a rule of thumb to decide whether fertilizer should or should not be used. They will have incentive to use fertilizer if grain fertilizer price ratio is greater than 1.0 and if VCR is greater than 2.0. In this context considering the price policy of either grain or fertilizer alone is not useful. It is the ratios which are important. This fact should be borne in mind while raising fertilizer prices. Similarly crop response must be considered while taking decisions about VCR.
Since Nepal is still in the introductory stage of fertilizer use, there is an urgent need for informing the farmers about the availability of fertilizers, and potential benefits from efficient use of fertilizer. Also information about fertilizer doses and methods of application needs to be disseminated.

The various field studies conducted so far suggest that the extension service in Nepal is weak and ineffective. Also the technical services provided are grossly inadequate. In particular, there is urgent need to provide some mobile soil testing laboratories so that specific fertilizer dosages may be recommended for application based on soil status. This would greatly enhance the efficiency of fertilizer use.

The promotional measures, such as Radio broadcasts, newspaper advertisements and distribution of pamphlets at sales points have also proved to be quite ineffective.

7.2.5. Motivating the Farmer:

Experimental data has clearly demonstrated that fertilizer use is highly profitable and such there is
no need for price subsidisation. However, a regular long term campaign should be organized to bring these facts to the notice of the farmers and convince them about it. Next they must be enabled to buy fertilizer by extending credit to them and finally the fertilizer should be available on time and at the place needed. Also it should be of the right type and be available in required quantity. All this needs to be ensured. For this purpose we suggest that the dealer net work be strengthened and that retailers be given adequate trade credit to run their business profitably and adequate incentive by way of higher commission to survive and grow. Also they should be trained so that they may be able to explain to the farmers the quality and nutrient composition of the fertilizer, its use, recommended dosage for different crops under different soil conditions and the method of application etc. They should also be given incentive to engage in personal selling.

7.3. Agency for Implementing Fertilizer Strategy:

The Agriculture Inputs Corporation - a public sector enterprise, has been entrusted with the sole responsibility for processing and distribution of fertilizers and other agricultural inputs in Nepal.
A profile of AIC has been presented in Appendix 1.

7.4. Cost of Fertilizer Policy and Strategies:

Has the AIC which is responsible for implementing the national fertilizer policy and strategy benefited by its fertilizers trade? The answer is no. The AIC has lost heavily due to the policy of price subsidy and its operations are in jeopardy. We have indicated earlier that the fertilizer trade is not profitable under the prevailing marketing conditions in Nepal.