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# RECOMMENDATIONS

SEMINAR ON  
FERTILIZER  
DISTRIBUTION  
AND USE  
IN PAKISTAN

# **Recommendations of Seminar on Fertilizer Distribution and Use in Pakistan 1979**

Sponsored by :

- National Fertilizer Corporation of Pakistan Ltd. (NFC)
  - US-AID Mission to Pakistan.
- Pakistan Agricultural Research Council (PARC)
- National Fertilizer Development Centre (NFDC)



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# FOREWORD

The seminar on, "Fertilizer Distribution and Use in Pakistan," was held on February 28-March 1, 1979 at Islamabad to assess the findings of a national survey study carried out by NFC - US AID during 1976-78 on "Distribution and Use of Fertilizer in Pakistan." The primary objective of the seminar was to subject the major findings of the survey to a critical evaluation by a broad range of experts and planners to obtain their collective assessment of the recommendations and to identify the implementing agencies.

The seminar was attended by 115 experts, scientists and planners representing 39 national and 9 international organizations. The deliberations of the seminar were spread over six sessions i.e., Research Methodology, General Farmers' Investigation Survey, Institutional Credit Survey, Fertilizer Dealers' Survey, Intensive Farmers' Study and meetings of Recommendation Committee. As a result of these deliberations seventeen specific recommendations were developed which are reproduced in the following pages.

The proceedings of the seminar are in the process of preparation and will be published shortly.

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# RECOMMENDATIONS

## Introduction

It was observed with satisfaction that a substantial progress has been made in developing and improving fertilizer use during the past five years. Growth in fertilizer consumption has registered progressive increase averaging about 12% annually for nitrogen and 34% for phosphorus. The N:P ratio improved from 6:1 in 1973-74 to 3.5:1 in 1977-78, indicating a better balanced use of fertilizer. Realizing the obvious importance of fertilizer as key input, the time is appropriate to formulate policy measures to sustain the encouraging growth trend and ensure efficient use of fertilizer at the farm level. There is, thus, a need to develop an appropriate package of technology as well as policy measures which when implemented will lead to increased and balanced use of fertilizer.

### 1. Fertilizer Research

In order to optimize the use of fertilizer for increasing crop production, it is imperative that systematic research is conducted under different soil and ecological conditions to determine the type of fertilizer, the amount, the time and the method of application to various crops. National Fertilizer Development Centre (NFDC) is already in the process of reviewing the status of this research with a view to identifying weaknesses and strengthening the programme. Pakistan Agricultural Research Council (PARC) should coordinate this research with NFDC, research institutes, universities and the fertilizer industry.

### 2. Soil Testing

The network of soil testing facilities should be reviewed and strengthened throughout the country so that individual farmer can have his soil tested easily as well as various soil series can be analysed routinely for developing soil fertility maps at district level to make specific fertilizer recommen-

dations for different crops and soil types. Various fertilizer manufacturing/marketing companies should also be encouraged to provide such facilities on payment basis. This should be coordinated by NFDC.

### 3. Fertilizer Use Information

The existing information available on fertilizer use for crop production should be consolidated by NFDC in the form of a book and widely distributed amongst relevant agencies engaged in fertilizer use, distribution and extension. This material can be further used in preparing leaflets for distribution amongst farmers.

### 4. Extension Service

One of the most important findings of the study relates to in-effectiveness of the extension service in motivating farmers for fertilizer adoption. Without going into the constraints which the extension service faces, it is recommended that PARC should initiate and coordinate a research project to determine the appropriate extension methods suitable for conditions prevalent in Pakistan and to evaluate the recently introduced T & V extension system.

### 5. Fertilizer Demonstrations

The fact that fellow farmers were an important source of fertilizer information, signifies the role of demonstration in farmers' education on fertilizer use. There is, therefore, a need for an effective and continuous demonstration programme by the extension service and fertilizer industry.

### 6. Special Radio Channel for Agriculture

In view of the central importance of radio in farmers' education, a special radio channel, focussing exclusively on modern agriculture, adult education and rural develop-

ment should be established for the rural population. The Ministries of Agriculture and Information & Broadcasting should develop proper organization and create requisite facilities for this channel.

The findings of the study that major agricultural operations in barani areas are carried out by women, further emphasize the need for the special radio channel.

## **Television**

There should be a regular TV programme on agricultural extension at least twice a week. The programme should concentrate on agricultural operations and their demonstrations through pictures and slides, rather than interviews with the specialists.

## **8. Dealers' Training**

In order to further promote fertilizer use, the fertilizer dealers should possess the basic technical training to impart agricultural know-how to their customers. NFDC should design a suitable training programme and coordinate its implementation through fertilizer manufacturers/marketers, ultimately leading to a training certificate as a prerequisite for fertilizer dealership.

## **9. Road Infrastructure**

There is a direct relationship between metalled road and the fertilizer consumption. This emphasizes the need for an extensive road network in the rural areas including the possibility of developing and opening up canal banks for rural transportation.

## **10. Transportation**

Transport system should be developed to meet the increasing needs of fertilizer movement. Transport Task Force Committee should evolve a rational strategy in this regard. In addition, there is need to enlarge the capacity of private transport system by encouraging import of transport

carriers through appropriate incentives such as exemption in import duty.

## **11. Storage**

The highly seasonal nature of fertilizer demand, coupled with increasing volume of fertilizer to be distributed, suggests an urgent need for developing proper and adequate storages at appropriate levels (manufacturer, distributor, dealer and farmer) in the distribution channels. The issue being vital and complex merits an in-depth consideration by the Executive Committee of the Fertilizer Planning Committee.

Special provisions for fertilizer storage facilities should be made in barani areas to ensure timely availability of fertilizer, especially to coincide with the rainfall. The fertilizer manufacturers and the cooperatives should be the principal agencies to implement this programme.

## **12. Dealers' Commission**

Dealers' commission and marketing incidentals should be periodically reviewed. While reviewing the commission, its adequacy for sub-dealers operating at village level should also be duly considered.

## **13. Credit**

- (i) In view of the increasing disbursement of loans through the nationalized commercial banks, the Agricultural Development Bank, the Cooperative Banks and other Governmental agricultural credit institutions, especially intended for the uplift of the small farmers, a stage has reached for an in-depth empirical study by the State Bank of Pakistan with the assistance of the Agricultural Credit Advisory Committee and the National Fertilizer Development Centre to evaluate the extent to which these resources have actually reached the field at the grass-

roots level. The study should suggest the ways and means to improve the methodology of reaching the small farmers with seasonal credit and an effective recovery system thereof.

- (ii) The study has shown that short term production loans availed against personal surety are more effective for quick disbursement and better recoveries than the loans secured by other means. Banks and agricultural credit institutions should, therefore, promote a closer banker-customer relationship to increase agricultural lending for short term purposes against personal surety. The pass book system should, however, constitute a long term strategy in view of its institutional character.
- (iii) The study has clearly revealed that fertilizer consumption and availability of credit for purchase of fertilizer in barani areas is quite low. To accelerate agricultural development in the barani areas, the banks and agricultural lending institutions should increase their lending for agriculture in these areas.
- (iv) The 'supervised credit' has proved to be an effective system of credit for small farmers. The banks, agricultural credit institutions and cooperatives should, therefore, extend such package of credits to more villages.
- (v) The study has shown that a very large proportion of credit for fertilizer is based on non-institutional sources. It is, therefore, essential that an in-depth study of non-institutional credit system should be carried out by the State Bank of Pakistan. This study should include the transactional and interest costs of institutional and non-institutional credit as well as the consequent social effects on the borrowers.

- (vi) The study identified limited financial resources as one of the major constraints faced by fertilizer dealers. It is recommended that the feasibility of supplying credit to dealers be investigated, so that the gap between dealers' capacity to sell and his capacity to buy fertilizer can be bridged. The NFDC, in collaboration with the fertilizer industry, should undertake this study.

#### 14. Fertilizer Adoption

The most significant finding of the study was that the adoption and level of fertilizer application is the same both on large and small farms. The same is true in case of tenants and owners. This is a very significant finding with far reaching policy implications. The Government should examine this finding and if necessary get it corroborated by other surveys because it leads to important policy measures in agricultural development planning.

#### 15. Fertilizer Data

Systematic gathering, organization and analysis of data are essential for the rational management of the national fertilizer programme. The NFDC should develop the capacity to undertake and coordinate these studies on a regular basis.

#### 16. Follow-up Studies

The study provides a strong data-base on critical aspects of fertilizer distribution and use on a national basis. There is a need to make such grass-roots surveys a continuous exercise in order to measure and monitor changes in fertilizer use. In view of the demonstrated capacity of NFC—USAID Market Research Project to undertake such studies, there is a need to further strengthen this Project. The PARC in collaboration with NFC should coordinate these studies on countrywide basis.

## 17. **Review of Previous Recommendations**

The Planning Division should consolidate and review the recommendations from previous seminars on the subject of fertilizer distribution and use in order to determine as to what extent these recommendations have been implemented. A periodic evaluation of these recommendations is also suggested.

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