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# Third Evaluation of the Bangladesh New Marketing System



International Fertilizer Development Center

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## ABSTRACT

The Bangladesh Agricultural Development Corporation, a government-owned company, is responsible for importing and distributing all fertilizer in Bangladesh with the exception of ammonium sulfate, which is distributed directly to the tea gardens by the factory.

Fertilizer consumption has expanded rapidly during the years 1973/74 through 1979/80. However, 1980/81 recorded a leveling off effect indicating a market plateau or market maturity based in part on distribution methods employed in both the old and current marketing systems. The New Marketing System, introduced initially in the Chittagong Division December 1, 1978, was expanded to all the divisions of Bangladesh July 1, 1980. Originally it was designed and planned to reduce marketing and distribution constraints by expanding the role of the private sector in fertilizer marketing and improving farmers access to fertilizer.

This evaluation briefly describes the old marketing system, the new marketing system at its conception, and the current marketing system, which is basically a conglomeration of the two previous systems. Our findings would indicate that while there has been no reduction in fertilizer sales and apparently no reduction in availability (though the distribution system continues to have problems providing fertilizer at the right place at the right time) there are a substantial number of modifications required if the Bangladesh Agricultural Development Corporation is to attain the sales goals they have forecast for the next 5 years.

PD-AAR 361

**Third Evaluation  
of the  
Bangladesh  
New Marketing  
System**

## FOREWORD

During the course of this evaluation 1,000 active dealers were asked to respond to a detailed 5-page, 68-question survey. The dealers were categorized by district and market representation on the following basis:

1. High Use Easy Access
2. Low Use Easy Access
3. High Use Remote
4. Low Use Remote

All districts except the Chittagong Hill Tracts were studied and each market segment by district was included in the survey.

All district managers were requested to complete a 2-page questionnaire which included their recommended dealer interview areas by market segment. The Bangladesh Agricultural Development Corporation home office personnel who were interviewed included General Manager (Supply), Manager (Sales), and Manager (Storage). Twenty-five percent of the thana inspectors and fifteen percent of the storekeepers were also interviewed.

On the basis of these results of the dealer survey, two additional surveys were designed and initiated on a randomized basis for:

1. Former dealers (no longer active)
2. Farmers

## ACKNOWLEDGMENT

Valuable assistance was provided in data collection and tabulation by the local staff of the International Fertilizer Development Center headed by Mr. Mokarrum. A special note of thanks goes to Mr. M.I.M. Howladar, Mr. Kobbad Hossain, Mr. Ansarul Huq, and Mr. Atiqur Rahman of the Bangladesh Agricultural Development Corporation.

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## ABBREVIATIONS AND ACRONYMS

BADC	Bangladesh Agricultural Development Corporation
DAP	Diammonium Phosphate
FAO	Food and Agriculture Organization of the United Nations
FY	Fiscal Year
GOB	Government of Bangladesh
GTSP	Granular Triple Superphosphate
HUEA	High Use Easy Access
HUR	High Use Remote
HYVs	High-Yielding Varieties
IFDC	International Fertilizer Development Center
KSS	Krishi Samabaya Samity
LUEA	Low Use Easy Access
LUR	Low Use Remote
MP	Muriate of Potash
MSS	Movement, Storage, and Sales
NMS	New Marketing System
OMS	Old Marketing System
PDPs	Primary Distribution Points
PTSP	Powdered Triple Superphosphate
TCCAs	Thana Central Cooperative Associations
TSCs	Thana Sales Centers
TSP	Triple Superphosphate
USAID	U.S. Agency for International Development

## QUANTITIES AND MEASURES

1 square mile (mi<sup>2</sup>) = 2.59 square kilometers (km<sup>2</sup>) = 640 acres = 259 hectares  
1 taka (TK) = US \$0.049 (January 1982)  
1 long ton (lt) = 2,240 pounds = 27.22 maunds = 1.01605 metric tons  
1 maund (md) = 40 seers = 82.27 pounds = 37.3 kilograms  
1 seer = 2.05675 pounds

NOTE: All tons are long tons unless otherwise indicated.

## SPECIAL TERMS USED

**Aman**—Rice (paddy) crop planted before or during the monsoon rains beginning in June and harvested during November-January; B. aman is broadcast aman; T. aman is transplanted aman.

**Aman Season**—The period over which aman rice is grown; covers all crops grown during this period.

**Aus**—Rice (paddy) planted during March-April and harvested during July-August.

**Aus Season**—The period over which aus rice is grown; covers all crops grown during this period.

**Boro**—Rice (paddy) planted in winter and harvested during April-June.

**Boro Season**—The period over which boro rice is grown; covers all crops grown during this period.

**Thana**—Administrative unit.

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## EXECUTIVE SUMMARY

### Third Evaluation of the Fertilizer New Marketing System (NMS) in Bangladesh

Prepared by the  
International Fertilizer Development Center (IFDC)  
March 1982

In 1977 and early 1978 the Government of Bangladesh (GOB), Bangladesh Agricultural Development Corporation (BADC) officers, and U.S. Agency for International Development (USAID) held several meetings on methods to improve the fertilizer marketing system. The purpose was to increase fertilizer use on an equitable basis throughout Bangladesh. This was to be achieved through a New Marketing System (NMS) designed to remove supply and dealer constraints.

EADC, a corporation wholly owned by the GOB under the Ministry of Agriculture, was the designated implementation unit.

Consultant services are being provided by the International Fertilizer Development Center (IFDC) to assist BADC in the implementation of the NMS. The assistance includes monitoring and evaluating the NMS on an ongoing basis to assure rapid detection of implementation problems and development of recommendations for corrective action.

### Old Marketing System

Identified constraints under the Old Marketing System (OMS) included:

1. Erratic and uncertain supplies of fertilizer from local production and imports.
2. Limited internal transportation and fertilizer storage capacity.
3. Low dealer commissions.
4. Inadequate dealer and farmer incentives.
5. Dealer appointments under OMS limited as to number per union and to designated location of sales activity, and subject to recordkeeping inspection by BADC.

In 1978 the GOB and BADC with assistance from USAID made the decision to initiate the NMS on a 1-year trial basis in the Chittagong Division only. The NMS was gradually expanded and in July 1980 the final division was introduced to what had become a considerably modified and regressive version of the original NMS concept.

BADC officials insist that the philosophy, goals, and objectives of the NMS are accepted. They point out that some parts of the NMS could not be implemented immediately because of various constraints; however, these constraints are being removed and the NMS is now being implemented.

### New Marketing System Concepts

The original concepts of the NMS were as follows:

1. Allow any person, group, or organization to register as a dealer and buy from BADC without restrictive requirements.
2. Offer quantity discounts sufficient to attract viable wholesalers.
3. Develop dealer incentives.
4. Remove location restrictions, allow any individual or group to buy, sell, or transport fertilizer anywhere in the country except the border area.
5. Reduce the BADC points of sale and encourage wholesaler activity as a replacement fertilizer source for the majority of the Thana Sales Centers which were designated to be closed.
6. Encourage institutional dealer/farmer credit programs.

### Directives and Their Impact

Directives were issued for the commencement of the NMS effective December 1, 1978, but before that date new instructions were sent out which complicated the BADC lifting (purchase) procedure and restricted quantity purchasing.

1. Dealers were required to obtain a delivery order from the Thana Inspector prior to getting fertilizer from the storekeeper. This is not a requirement at the currently operating Thana Sales Centers (TSCs), where the dealer deals directly with the storekeeper.

BADC's position is that in order to ensure the necessary check and balance the delivery orders must be issued by someone other than the person actually delivering the fertilizer and that the procedure should be uniform throughout the country.

2. A 20-ton maximum single lifting was imposed. The BADC home office reports that this directive was rescinded; however, district offices are not aware of this, possibly because of lack of adequate communications.

The Ministry of Finance, External Resources Division, made constructive commitments regarding BADC actions to improve the NMS which included:

1. Developing a new staffing and organizational structure complementing the NMS.
2. Developing and implementing a dealer training program.
3. Developing a dealer classification system to identify potential wholesalers and preferred dealers.

However, there are still indications of reluctance to change from the OMS. Examples of this are:

1. Changes in ground rules of TSC closings and a reluctance to close TSCs that should be closed on the basis of the new criteria.
2. The minimum quantity purchase has been reduced to 1 ton.
3. Dealer margins have been reduced.
4. NMS market strategies have not been developed.
5. BADC's number of points for fertilizer sales were to be substantially reduced with the full implementation of the NMS but, in fact, they remain virtually unchanged from the OMS days.

BADC states that because of an acute shortage of fertilizer the measures mentioned above were taken on a purely temporary basis to make fertilizers available at the farmer level. However, when the supply situation improves, BADC officials believe that all components of the NMS will be implemented in the true spirit of the program.

#### Dealer Profile

There are approximately 22,000 active fertilizer dealer shops in Bangladesh with an additional 5,000-6,000 part-time "hat-type" (periodic market) dealers. This is a slight increase over the OMS.

The dealers prefer the NMS to the OMS primarily because it is less restrictive.

Eighty-seven percent of the currently active registered dealers were also dealers in the OMS.

The total number of active dealers is declining primarily because of increased capital investment requirements due to rapid price increases and low profit margins.

BADC officials believe that increases in the dealer's commission and expansion of the dealer's credit program under the NMS may take care of this problem.

The primary distribution points (PDPs) represent less than one-third of BADC's total point-of-sale godowns (warehouses) but sell 72% of all fertilizer sold by BADC. The PDPs sell a large quantity to dealers located in thanas other than the thana location of the PDP.

A majority of the active dealers experienced significant sales increases in the past year, due in part to the reduction in numbers of dealers.

About 20% of the active registered dealers sell more to subdealers than to farmers and could probably be classified as wholesalers.

The whole dealership structure is being reviewed by BADC in the context of the NMS and the above findings. The present tentative thinking is that BADC may have a few wholesale dealers for each thana and the wholesale dealers may have their retail dealers in their respective jurisdictions. A final decision on this matter will be taken soon.

The dealers' general comments indicate, at the very least, a lack of rapport between BADC and their dealer network.

BADC officials think that the dealer-training credit programs under the NMS will reduce this problem. They state that they are taking steps to ensure that the dealers will play a significant role in promoting the use of fertilizers.

The dealers price to farmers in remote areas tends to be slightly higher than those in easy access areas, which is primarily a reflection of increased dealer transportation costs.

### Constraints

Distribution constraints continue to exist, and the farmer's full demand for fertilizer has not been realized during peak demand periods. The farmer's fertilizer use as well as dealer's lifting has been constrained by the failure of the BADC distribution system to make fertilizer available in an adequate, timely, and convenient manner.

The lack of a viable dealer/farmer credit program is a critical factor in fertilizer demand. Institutional sources provide a very small percentage of fertilizer credit, the bulk being supplied by friends, relatives, traders, and professional moneylenders. According to BADC its credit program is being reviewed and hopefully steps will be taken to ensure that increased credit is distributed to the fertilizer dealers and the farmers. Recommen-

dations regarding methods to improve credit performance are detailed in Chapter 6.

Fertilizer prices have increased more than 55% since December 1978 but farmer output prices during the same period have changed little. The realities of the correlation between input and output prices dictate some change; however, input and output pricing has complex national policy implications.

There seems to have been an assumption made that those districts with very low fertilizer use intensity would achieve a faster average growth pattern and "catch up" with the more progressive districts. This has not occurred; the primary reason being that the low-use districts have not accepted high-yielding varieties (HYVs), drainage, and irrigation.

It is important that the dealer learn good business practices. He is the necessary link to the farmer; he should keep the farmer/customer informed and aware of the potential benefit of new seed-fertilizer technology and, once adopted, to provide him with the advice he needs for correct use and the best adaptation to the farmer's own situation. Detailed dealer training recommendations are contained in Chapter 4.

The dealer lifting procedure is complicated and time consuming; it is not unusual to require 3-5 days of a dealer's time for an individual lifting.

BADC is aware of this problem and is taking steps to improve the procedure.

BADC sells a significant portion of the fertilizer in damaged and reduced weight bags which further reduces dealer margins and restricts farmer use.

BADC is taking actions to remedy these conditions, both with locally produced and imported fertilizers.

### Organization

Without exception BADC management recognizes the need for staffing and organizational adjustments; however, there is no universal agreement on what these changes should be. As a result of this evaluation, we recommend the reorganization include the following:

1. Manager (Credit) with appropriate staff
2. Manager (Training) with appropriate staff
3. District Sales Supervisor (with additional district manager status)
4. District Operation Supervisor (with additional district manager status)

5. Technical Field Representatives (converted Thana Inspectors)
6. Manager (Program Monitoring), high-level home office staff position

The organizational structure and staffing pattern suggested in this report are being examined and reviewed by BADC. It expects to develop a suitable organization and staff to implement the NMS in the near future.

We are of the opinion that these recommended staffing changes can be accomplished without adding to BADC's total number of employees. Detailed justification and recommendations are contained in Chapter 6.

## INTRODUCTION

In this report we will briefly review and compare the OMS along with the stated objective of the NMS and the degree of success attained. We will make a careful evaluation of the modifications to the NMS since its conception and the apparent effect of those modifications. Where in the course of the evaluation obvious constraints are identified, detailed recommended solutions will be included.

This evaluation then will encompass briefly some of the same areas as the previous two evaluations. However, it will also break new ground by delving deeper into "cause and effect" and making recommendations when our market research findings clearly indicate a real constraint.

For the reader who may not be familiar with Bangladesh, some background information is given below so that a better understanding of the limitations of any marketing system may be understood.

Bangladesh is bordered on the north, east, and west by India; on the southeast by Burma, and on the south by the Bay of Bengal. Its size, 55,126 mi<sup>2</sup>, is about the same as that of the State of Wisconsin in the United States. The 1981 population was estimated to be about 90 million. This makes the population density greater than any other country in the world with the exception of city/states such as Singapore and Hong Kong.

Most of the land is flat, alluvial plain deposited by the Ganges and Jamuna Rivers. The lower portion of the country, where the two main rivers converge to form the present delta, is crisscrossed with a multitude of connecting streams. These furnish adequate waterways for transportation but impede road and rail transportation and add substantially to travel time in the area.

Bangladesh has a total area of 35.5 million acres of which net cropped area totals approximately 22.6 million acres. Irrigation is available for about 2.85 million acres. Cropping intensity is approximately 1.53 crops/year. In general, the farms are small, the average size being about 2 acres, and the trend is towards even smaller farms as family plots are divided from generation to generation. The principal crop is rice, which uses about 80% of the annual fertilizer consumed in Bangladesh.

The land is fertile and has the potential of substantial yield increases. However, to achieve and maintain the high yields the land is capable of producing, it is necessary to improve technology and distribution in the areas of HYV, irrigation, and fertilizer.

Transportation and communication facilities are a serious constraint to the distribution of these production inputs.

BADC fertilizer distribution in Bangladesh is administratively divided among 4 divisions, 21 districts, and 65 subdivisions.

There are 418 agricultural thanas of about 125 mi<sup>2</sup> average size and 4,420 unions which comprise approximately 15 villages each. This adds up to a total of some 65,000 villages throughout the country (see map in Figure 1).

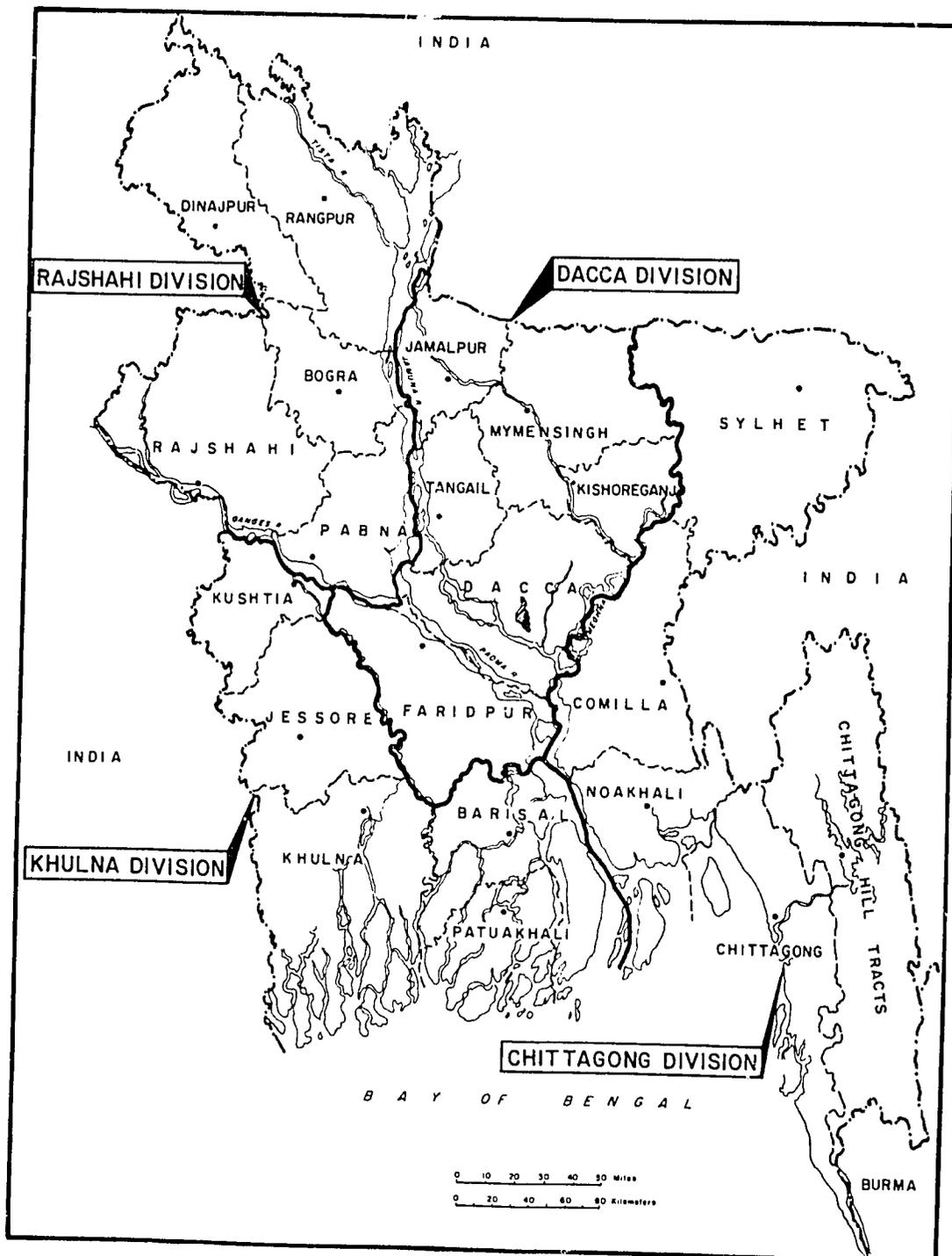


Figure 1. Bangladesh BADC Marketing Divisions.

## CHAPTER 1

### THE OLD MARKETING SYSTEM

BADC originated in 1961 and was designated the East Pakistan Agricultural Development Corporation. It began and continues as a wholly owned government corporation.

When East Pakistan seceded from West Pakistan in 1971, the name changed from East Pakistan Agricultural Development Corporation. The Corporation is headed by a Chairman who reports to the Ministry of Agriculture. BADC has five wings on the Corporation; the sixth wing, primarily the Administration Wing, is under the direct supervision of the Chairman.

1. The Supply Wing is responsible for the procurement, distribution, and marketing of fertilizer as well as the procurement of other agricultural inputs for BADC.
2. The Field Wing is responsible for the production, procurement, processing, and distribution of various types of seed.
3. The Irrigation Wing is responsible for the operation and maintenance of the different types of irrigation equipment that it sells and rents.
4. The Planning Wing is responsible for the preparation and revision of development schemes and annual development plans. It is also responsible for monitoring and evaluating development schemes including the preparation of annual as well as special reports.
5. The Finance Wing is responsible for all financial activities, including the preparation and revision of the budget, maintenance of accounts, and conducting the work relating to audits.
6. The Administrative Wing is responsible for personnel management, development of organizational structure, and management functions, such as training and public relations.

The current organizational structure of BADC's Movement, Storage, and Sales (MSS) Wing under Supply is shown in Figure 2.

BADC's total revenue from fertilizer sales in 1979/80 was TK 1,769.9 million or US \$118 million at an exchange rate of TK 15 to US \$1.

#### Background of Bangladesh Agricultural Development Corporation

In 1962 the forerunner of BADC assumed the responsibility of marketing agricultural inputs, with the exception of ammonium



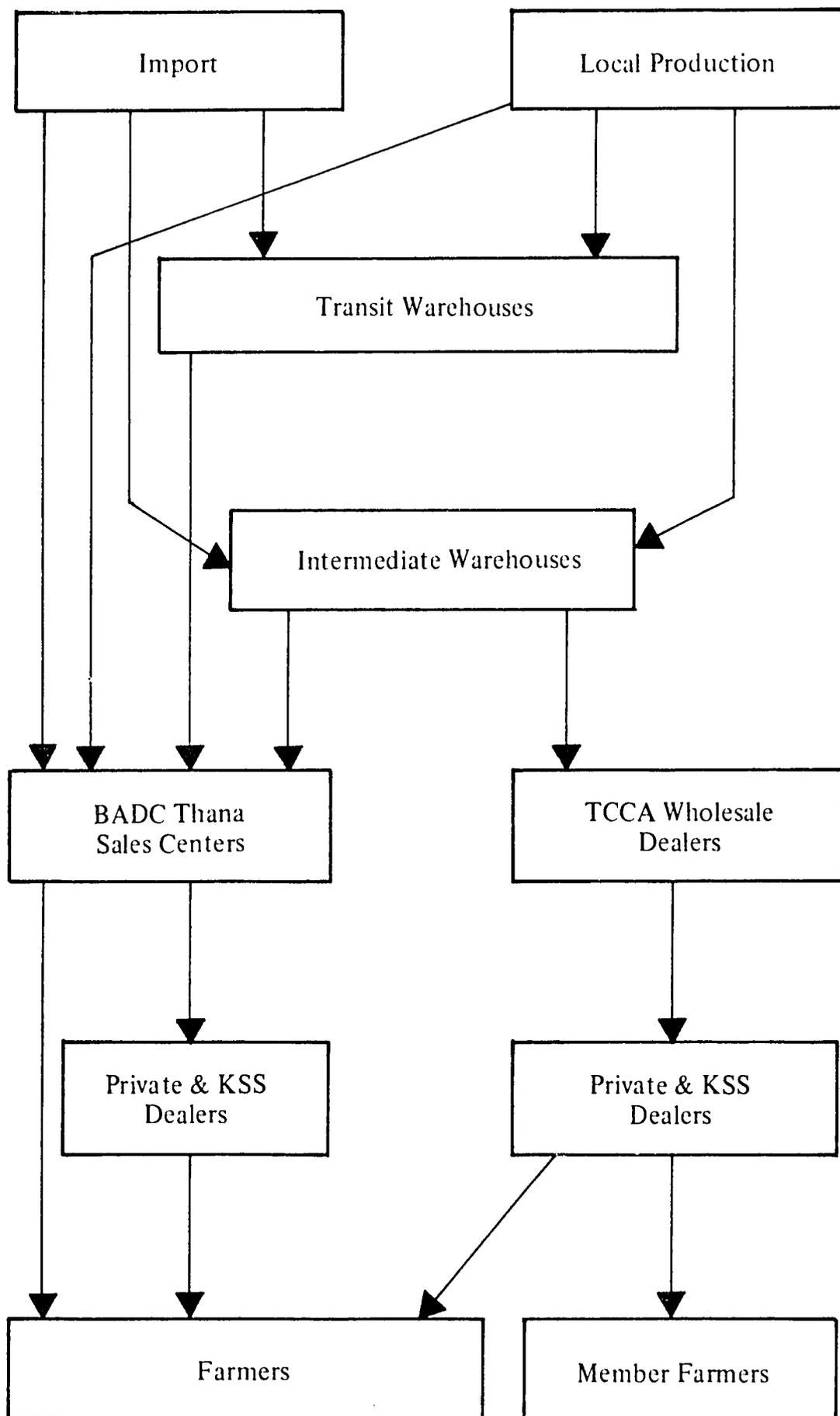


Figure 3. Fertilizer Distribution Under the Old Marketing System, 1977/78.

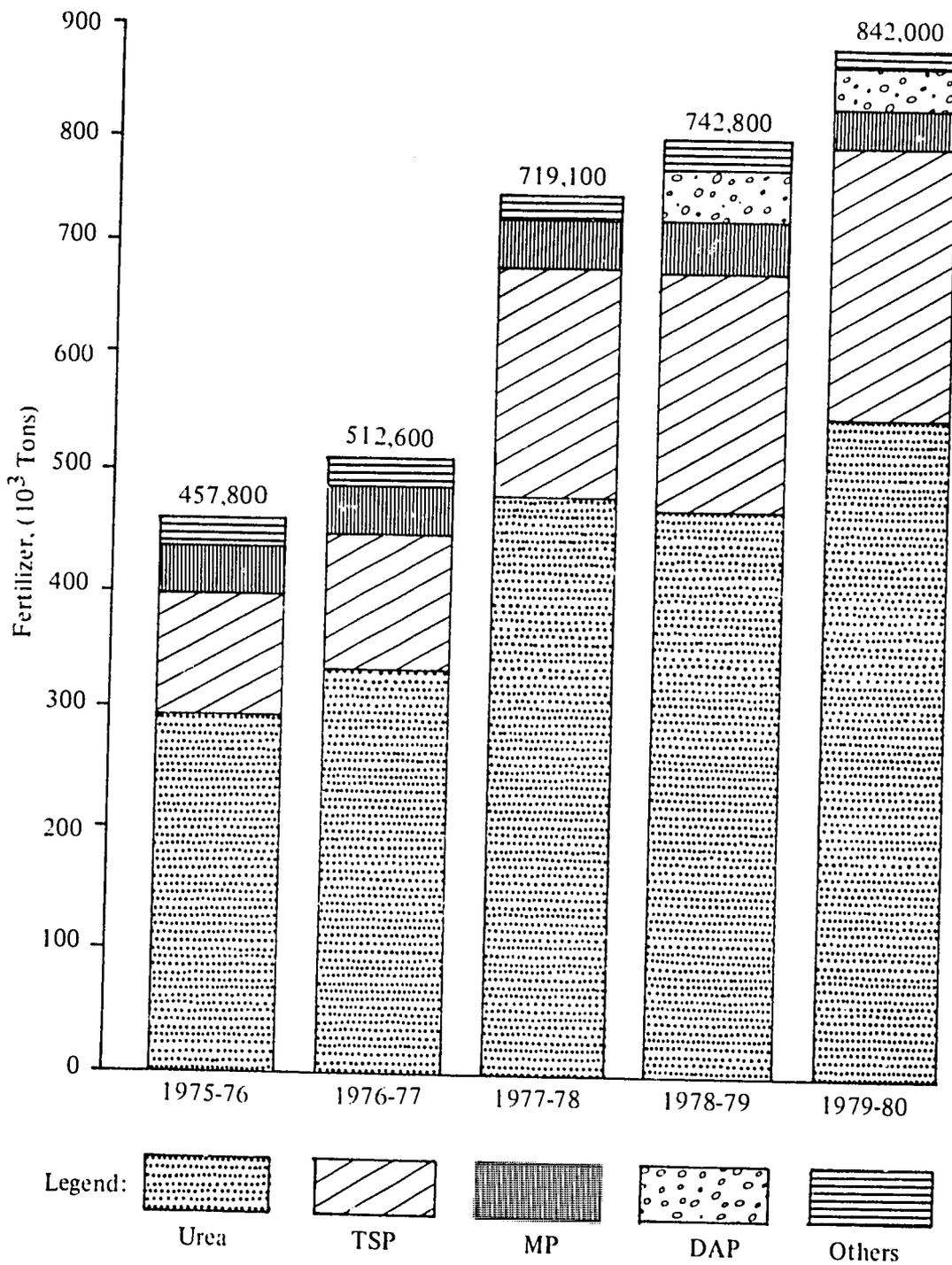


Figure 4. Comparative Fertilizer Sales by Products, FY 1975/76 Through 1979/80.

shows the proportion of urea, TSP, MP, DAP, and other fertilizer materials distributed.

Figure 5 indicates the average sales by month over a 2-year period from July 1978 to June 1980. Monthly ratios of fertilizer products sold fluctuate slightly because of variations in weather and changes in cropping patterns.

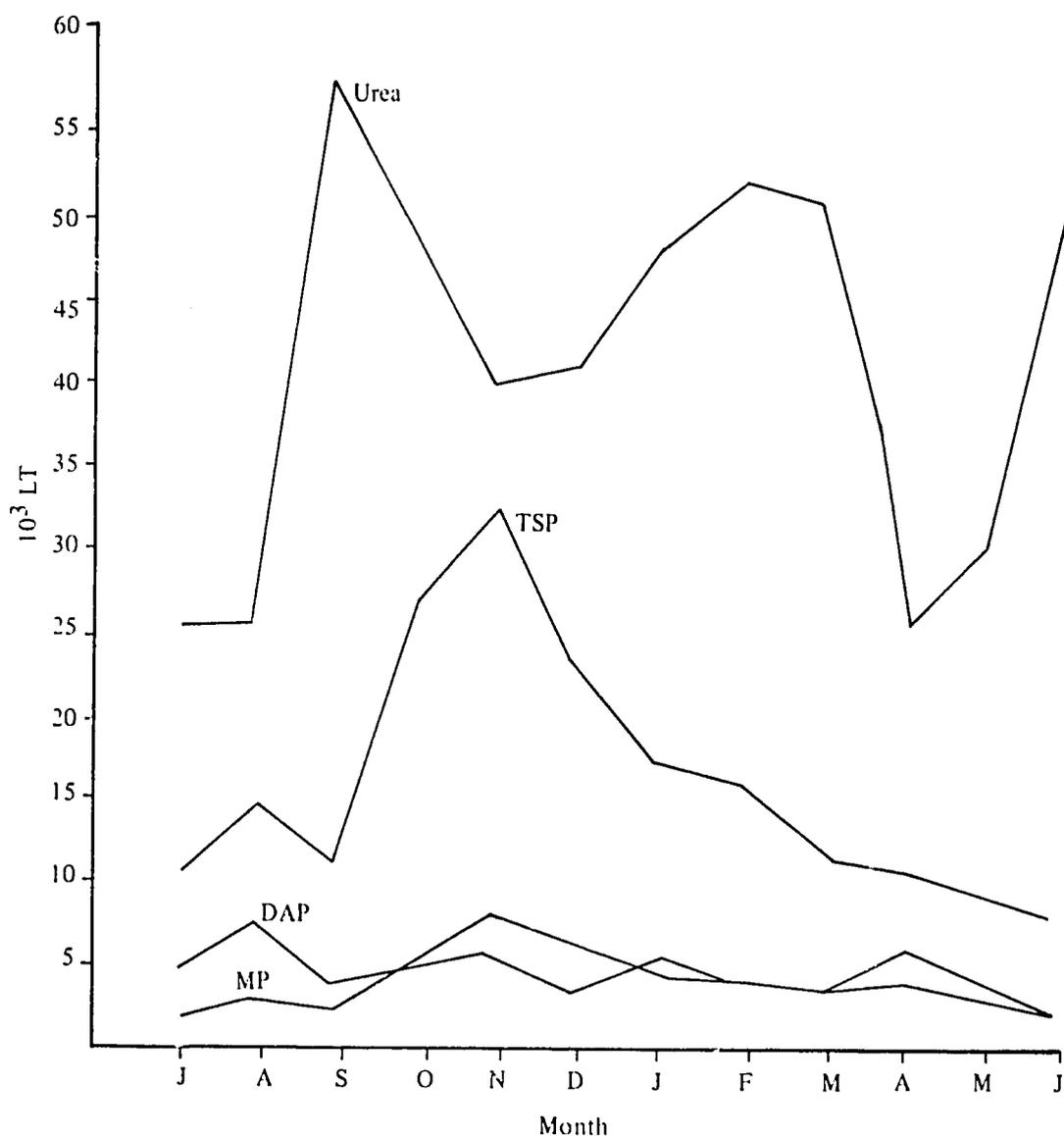


Figure 5. Comparative Monthly Sales of Various Fertilizers, FY 1978/79 and FY 1979/80 Two Year Average.

Appointment of Dealers  
Under the Old Marketing System

Under the OMS dealers were nominated by BADC, but prior to official appointment the nomination required approval of a committee composed of BADC's Thana Inspector and Thana Extension Officer, both of the Ministry of Agriculture; the local Union Council Chairman; and an officer representing the Deputy Commissioner at the thana level. After approval of the committee, a contractual agreement was signed by the dealer which in effect gave BADC supervisory control of the dealer. Some of the contract directives were as follows:

1. The dealer's sales were restricted to a specific area.
2. The retail price was determined by the government.
3. He must purchase product only from the TSC/TCCA where he was registered.
4. The dealer must make all records available for inspection by BADC.

Commission to Dealers  
Under the Old Marketing System

Fertilizer prices during the OMS years moved slowly but steadily upward to reflect world price increases and Bangladesh subsidy reductions.

Under the OMS the dealer's gross commission was based on the distance of the dealer's shop from the TSC or the TCCA warehouse from which he was supplied. Prior to 1978 a four-tier distance system was used. In 1978 it was reduced to a two-tier system. From 0 to 6 miles the commission was TK 4/md or TK 108.88/ton. Farther than 6 miles it was TK 6/md or TK 163.32/ton. An exception was made and still exists from the Chittagong Hill Tracts District, where because of difficult travel and high transportation costs, the four-tier commission system has been retained.

A study prepared by IFDC's Distribution Consultant and reported in the "Second Evaluation of the Bangladesh New Marketing System" indicates that the 5-year average dealer commission in the OMS was 8.6% of weighted average official price of BADC's gross sales revenue. Dealers interviewed agree that in the OMS, when handling and freight charges were excessive, they raised the consumer price above the official price to avoid incurring a loss on their investment.

## CHAPTER 2

### THE NEW MARKETING SYSTEM

#### Background

During 1977 and early 1978 several BADC officials held meetings with USAID personnel to discuss in detail methods to improve the marketing system. The result of these discussions was BADC's decision, with the concurrence of the GOB and assistance from USAID, to initiate on a trial basis, a new system of distribution.

USAID received an official letter dated May 3, 1978, from the Joint Secretary, Ministry of Planning, External Resources Division, requesting that they provide funds and technical assistance to improve fertilizer distribution in Bangladesh. The letter included plans for a number of proposed actions regarding fertilizer sector activity. Those directed to fertilizer marketing and distribution are quoted as follows:

Marketing of fertilizer will be stimulated by encouragement of private sector involvement in retailing and wholesaling (initially on an experimental basis in a predetermined region of the country) as follows: During the first year a new system of fertilizer marketing will be introduced in the Chittagong Division. This system will include: (a) complete freedom of private sector movement of fertilizer, except for the 5-mile border area; (b) the margin between the wholesale price and the maximum administered price to the farmers will be established at a level sufficient to allow a reasonable profit to both wholesale and retail dealers; no control will be placed on the rate at which the wholesaler sells to the retailers; and (c) BADC will not sell fertilizer from its thana godowns but will maintain them only as observation posts for a period, except in those cases where the private dealers fail to operate and fertilizer prices rise well above the administered maximum price. Special attention will be given to remote areas where transportation is difficult. Instead BADC will sell fertilizer from agreed primary distribution points. In addition, Fenchuganj and Ghorasal urea factories will begin fertilizer sales direct to private dealers. To the extent this system is successful in the Chittagong Division, it will then be extended to the entire country. (A modified version of the NMS was expanded gradually and fully adopted nationally on July 1, 1980.)

The USAID assistance has been in the form of a grant to finance fertilizer imports, godown (warehouse) construction, and technical assistance. The USAID grant was entitled "Fertilizer Distribution Improvement-1 Project (388-0024)" with the purpose "To increase fertilizer use on an equitable basis in Bangladesh."

This was to be accomplished by removing supply constraints. The primary focus was to be on the reduction of fertilizer marketing-related constraints through the introduction of a new marketing system using private wholesalers and dealers for the sale of fertilizer.

The principles of the NMS were to be as follows:

1. BADC will sell to wholesalers and retailers only from PDPs except in remote and inaccessible thanas which are not served adequately by either PDPs or the PDP wholesaler/dealer.
2. At the PDPs, BADC will begin sales at reduced wholesale rates for large (wholesale) quantity fertilizer purchases. After the fertilizer leaves the BADC godowns (warehouses), its resale price will not be restricted so long as it remains below the official consumer price to the farmer.
3. BADC will increase the gross discounts to the retail and wholesale customers which will substantially increase their profits and this act will result in more aggressive marketing by the private sector.
4. The OMS licensing system for fertilizer dealers will be eliminated. Any individual, company, association, or cooperative will be permitted to purchase from any BADC sales center by completing a simplified registration form. They may sell in any area and to anyone in Bangladesh.
5. Private sector movements of fertilizer within the country will not be restricted except within 5 miles of the border area.
6. Dealer financing through various banks will be developed.

#### Directives, Circulars, and Communications on the New Marketing System

BADC Headquarters issued its first directive with regard to the NMS on August 14, 1978, to begin implementation of the NMS on December 1, 1978. This directive identified the major elements of the NMS. It listed the intermediate godowns to be converted to PDPs and the thana godowns to be closed as soon as PDPs began operation. The TSCs targeted for immediate closure were those which were adjacent to the intermediate godowns. In the OMS, intermediate godowns did not distribute fertilizer to customers; hence, the practice of having a TSC near an intermediate godown. As part of the conversion to the NMS, intermediate godowns and adjacent TSCs became PDPs. As a result most of the country's PDPs consist of multiple godowns which in some cases are several miles apart.

The same BADC directive included the new and simplified customer registration form and advertisement copy to be published

in the local newspaper announcing the introduction of the NMS. In brief they are:

1. Intermediate godowns will be converted to PDPs.
2. Wholesalers, retailers, and cooperatives will be considered as customers by BADC in the NMS.
3. The customers' minimum purchase from a PDP will be 3 tons, which may consist of any combination of fertilizer available at the PDP.
4. Dealer licensing requirements will be eliminated and replaced by a simplified customer registration form.
5. The registration requirement will be effective at TSCs as well as PDPs.
6. Any customer may register at any or as many PDPs/TSCs as he wishes.
7. Customers may transport fertilizer to any location they choose except within 5 miles of the country's border area.
8. The minimum quantity that can be sold from a TSC to a customer will be 30 md with a discount of TK 5/md, except in the Chittagong Hill Tracts District where a discount of TK 7/md will be allowed.

Before the NMS was activated BADC management sent out Memo 11309(6) on November 28, 1978, and Directive No. 2 on November 30, 1978. In summary and in sequence the modifications are:

1. At PDPs, in anticipation of increased sales, the customers are required to obtain a delivery order from the Thana Inspector before going to the storekeepers to lift (purchase) fertilizer. This procedure is required at TSCs where the customers continue taking the bank draft directly to the storekeeper.
2. Registration forms of customers registering at PDPs and TSCs will be checked to verify that the person has given his correct name and address.
3. The customer should indicate the areas in which he plans to sell the fertilizer he purchases.
4. The maximum limit of fertilizer that can be lifted (purchased) at one time is 20 tons.
5. The minimum amount of fertilizer that can be purchased by a dealer (customer) from a TSC is reduced to 20 md throughout the country except in the Chittagong Hill Tracts where it is reduced to 10 md.

Directive No. 3 dated April 3, 1979, in summary stated that:

1. The Chittagong Hill Tracts District would be excluded from the NMS.
2. Customer discounts would be established in the Chittagong Hill Tracts only at:
  - a. 0-6 miles, TK 7/md
  - b. More than 6 miles, TK 9/md
3. Customers outside the Chittagong Hill Tracts would not be allowed to buy from TSCs in the Chittagong Hill Tracts.
4. Dealers doing business inside the Chittagong Tracts would not be allowed to sell fertilizer outside the Chittagong Hill Tracts District.

In June 1979 a letter from the Joint Secretary, Ministry of Finance, External Resource Division, to USAID identified the improvements BADC hoped to make to the NMS. They were as follows:

1. Establish a staffing pattern and organizational structure to complement the NMS.
2. Improve the system of contracting fertilizer movement.
3. Close 30 TSCs in the Chittagong Division by July 1, 1979.
4. Develop and implement a dealer training program.
5. Establish a dealer classification system that would create equitable fertilizer allocation in the event a short supply situation developed.

A letter dated September 20, 1979, from the BADC Manager (Sales) to District Managers of Chittagong, Comilla, Noakhali, and Sylhet contained a list of 30 TSCs to be closed. Because of a shortage of storage space, the existing stock in TSCs was to be sold prior to the closing. However, the letter stated there was to be no further stocking of those TSCs and that the stock in the targeted TSCs should be sold on a priority basis. Warehousing and sales operations were to cease no later than December 31, 1979.

On December 29, 1979, another directive stated that Chittagong Division TSCs would not be closed until or unless sales dropped 50% or more below their sales volume prior to the introduction of the NMS. This policy was initiated in all of the divisions of BADC as the NMS was introduced throughout the rest of Bangladesh.

On November 3, 1980, a memo from Member Director (Supply) to Divisional Managers, District Managers, and Sub-Divisional Managers announced:

1. Substantial across-the-board price increases.

2. A reduction in the minimum amount a customer might purchase from a PDP from 3 tons to 1 ton.

The procedural change outlined in Memo 11309(6) which required that customers go to Thana Inspectors to obtain delivery orders prior to lifting (purchasing) from PDP godowns further complicated an already cumbersome procedure, particularly when it is remembered that in many instances a PDP consists of multiple godowns several miles apart and frequently one inspector is responsible for delivery orders for all. The extra time required for lifting is a costly burden on dealers and discourages purchases at PDPs.

BADC personnel, both field and home offices, have allocated excessive effort and resources to TSCs in an effort to continue their operation.

Thus, the directive preventing the closing of TSCs unless sales dropped 50% or more below the sales level prior to the NMS, while intended to assure product availability to the Bangladesh farmer, has in fact proved counterproductive to the NMS concept and has not improved fertilizer availability. An alternative solution that would have improved availability and enhanced the NMS would have been to lease TSCs to private wholesalers and at the same time provide incentives to those wholesalers to maintain adequate stock and develop dynamic sales promotion campaigns. It is recognized that this alternative would have required changes in the BADC staffing and organizational structure.

The improvements outlined were:

1. Structure to complement the NMS. Lack of action on this has substantially reduced the effectiveness of BADC's NMS program (see Chapter 6 for detailed recommendations).
2. Training that would receive a high priority but be accomplished in a preplanned and orderly fashion (see Chapters 4 and 6).
3. A classification process that would be extended to identify genuine wholesalers as opposed to primary retailers and to specify development and training in both categories.

## CHAPTER 3

### MARKETING SYSTEM AS IMPLEMENTED

#### Locations of Primary Distribution Points

One of the original objectives of the NMS was for BADC to centralize its sales outlets at large commercial centers in the districts rather than continue to attempt to make fertilizer available in the 418 thanas in the country. As the NMS was gradually implemented throughout Bangladesh, the intermediate godowns became PDPs. These centralized PDPs began supplying dealers and those TSCs remaining open. This procedure gave BADC a total of 68 PDPs.

BADC management subsequently determined that certain areas in Bangladesh were not being adequately served by PDPs established only at intermediate godowns and opened an additional 14 PDPs when Dacca and Khulna Divisions introduced the NMS in their respective divisions. Three have since been closed. BADC has 79 currently functioning PDPs and is proposing that an additional 17 PDPs be established, which would bring the national total to 96. The number of existing and proposed PDPs is itemized in Table 1. The locations of these points are given in Appendix B.

#### Thana Sales Center Locations

Under the initial provisions of the NMS, the majority of TSCs were to be closed; only those TSCs that served remote low-use areas with severe transportation difficulties were to be retained. This concept as originally conceived would have closed 234 TSCs while retaining 88. However, because of a combination of the new instructions by BADC Headquarters stating that all TSCs would remain open so long as sales did not fall below 50% of the volume sold prior to the NMS and a reluctance on the part of the BADC field staff to close any TSC, only 11 TSCs have been closed, and some of these 11 continue to show sporadic sales. The position has been reviewed by BADC. TSCs falling under the following criterion were closed down effective December 15, 1981:

1. Sales falling by 50% or more in any 1 year since introduction of the NMS.
2. TSCs falling within 20 miles of a PDP and connected by all-weather transportation facilities by road or river.

The number of remote thanas is being worked out by BADC, and a decision in the matter will apparently be taken soon.

Table 2 summarizes the PDPs existing and proposed the number of TSCs to be retained, the number proposed to be

Table 1. Number of Existing and Proposed PDPs by Districts<sup>a</sup>

<u>District</u>	<u>Existing PDPs</u>	<u>Proposed Additional PDPs</u>
Chittagong	4	1
Noakhali	3	1
Comilla	5	1
Sylhet	3	5
Dacca	6	1
Kishoreganj	5	1
Mymensingh	4	0
Jamalpur	3	1
Tangail	2	1
Faridpur	3	2
Rajshahi	6	1
Dinajpur	5	0
Rangpur	6	0
Bogra	3	0
Pabna	5	2
Khulna	3	0
Jessore	6	0
Kushtia	3	0
Barisal	2	1
Patuakhali	2	0
TOTAL	79	17

a. Locations of these points are given in Appendix B.

Table 2. Number of PDPs and TSCs Proposed for Retention, for Closing, and Actually Closed, by Divisions<sup>a</sup>

<u>Division</u>	<u>Thanas</u>	<u>Number</u>			
		<u>Existing and Proposed PDPs</u>	<u>TSCs to be Retained</u>	<u>TSCs to be Closed<sup>b</sup></u>	<u>TSCs Actually Closed</u>
Chittagong	103	23	37	46	11
Dacca	112	28	22	61	-
Khulna	90	17	8	63	-
Rajshahi	113	28	21	64	-
TOTAL	418	96	88	234	11

a. A listing by districts is given in Appendix B.

b. Some existing TSCs are proposed to become PDPs.

closed, and the number actually closed. The locations of these centers are shown in Appendix B.

A comparison of the TSC sales for the calendar year 1979 with sales in 1980 and the percentage variation by the TSC location is summarized in Appendix B. According to the original new BADC program, 69 of these TSCs were scheduled to be closed.

### Storage Capacities and Inventories at Primary Distribution Points

With the implementation of the NMS, centralized sales and also centralized inventory requirements made it necessary to hire additional godown capacities at the PDP locations. The godown capacities existing under construction and planned for construction by district and division at the current PDP locations are summarized in Table 3.

The total present capacity (owned and rented) of the godowns at the PDP locations as compared with the total capacity of all the godowns of the divisions is shown in Appendix B. Nationwide, about 60.5% of the total capacity is owned or rented by BADC at the PDPs.

When the capacity under construction and proposed for construction is completed, the total owned capacity will be increased to 426,000 tons. This added capacity will be 76% of BADC's total storage capacity.

Most of the rented storage capacity is in bad condition (dirt floor, leaking roof, etc.) and most of it is scheduled for release on completion of the PDP construction program. Many of the locations of both owned and rented godowns are less than ideal. The new PDP godown construction program will alleviate much of this problem as the specific godown construction sites have been carefully selected with attention given to:

1. Godown capacity determined by previous sales history and long-term potential of the area.
2. Best possible access.
3. Rapid customer service.

The implementation of the NMS has created a temporary shortage of storage space in certain areas. However, the new godown construction program will alleviate the problem. There still exists the problem of lack of a viable transportation system which is the primary constraint to timely product availability.

The average inventory levels by division for 1979 and 1980 are compared in Table 4. The average levels by district are given in Appendix B. The average utilization of total storage capacity and sales-to-inventory ratio (inventory turnover) is

Table 3. Storage Capacity of Existing and Proposed Godowns at PDPs

<u>Division</u> <sup>a</sup>	Capacity				Total PDPs, Currently Owned, Under Construction, and Proposed for Construction
	<u>Currently Owned PDPs</u>	<u>Currently Rented PDPs</u>	<u>Total Currently Used PDPs</u>	<u>Future PDPs (Under Construction or Proposed for Construction)</u>	
	----- (tons) -----				
Dacca	32,400	38,507	70,907	69,500	101,900
Chittagong	18,500	20,352	38,852	70,000	88,500
Rajshahi	36,200	31,419	67,619	128,000	164,200
Khulna	<u>12,600</u>	<u>13,164</u>	<u>25,764</u>	<u>59,000</u>	<u>71,600</u>
TOTAL	99,700	103,442	203,142	326,500	426,200

a. A breakdown by district is shown in Appendix B.

Table 4. Average Monthly Fertilizer Inventory by Divisions During 1979 and 1980

<u>Division<sup>a</sup></u>	<u>1979</u> <u>Monthly</u> <u>Inventory</u> <u>- - - - -</u>	<u>1980</u> <u>Monthly</u> <u>Inventory</u> <u>- - - - -</u>	<u>Increase</u> <u>(%)</u>
	(tons) <sup>b</sup>		
Dacca	50,888	79,529	35.1
Chittagong	53,758	57,848	7.6
Rajshahi	60,854	87,586	43.9
Khulna	40,867	58,302	42.7
NATIONAL TOTAL	214,367	283,265	32.1

a. A breakdown by districts is shown in Appendix B.  
b. Values rounded off to nearest ton.

shown in Table 5 and Appendix B. Certain districts showed a utilization in excess of 100%. This occurred when the BADC rated capacity of the godown was less than actual capacity and when sales did not achieve the forecasted quantity resulting in higher than required imports and huge inventories that require warehouses to be packed to overcapacity. Even with this condition, spot shortages in peak demand periods were the rule rather than the exception. This indicates a need for more storage capacity, an improved transportation system, and better movement planning.

The sales-to-inventory ratio (inventory turnover) target for all in-country inventory is 2.4:1.0 because BADC's goal is to keep a 3-month urea and 5-month "Other Product" buffer stock in the country. The district goal is 4:1 as BADC attempts to maintain a 3-month supply in the districts. In the high sales/low storage capacity areas (Tangail and Comilla are examples) it is virtually impossible during peak use periods to maintain even a 1-week supply.

BADC's development of private sector wholesaler incentives to maintain higher inventory levels would reduce the actual district level stock requirements, the related storage problems would be reduced, and product availability to the farmer would increase.

The national inventory level in the districts peaked in May 1980 at 302,480 tons utilizing 87% of the national district rated storage capacity.<sup>1</sup>

1. The inventory in the transit godowns and in transit warehouses was not included.

Table 5. Average Utilization of Storage Capacity by Divisions in 1980

<u>Division<sup>a</sup></u>	<u>Total Godown Capacity<sup>b</sup></u> ----- (tons)-----	<u>Average Monthly Inventory<sup>b</sup></u> -----	<u>Utilization of Capacity</u> (%)	<u>Sales-to- Capacity Ratio</u>	<u>Sales-to- Inventory Ratio</u>
Dacca	111,951	79,529	71.0	2.1:1	3.0:1
Chittagong	70,737	57,848	81.8	3.6:1	4.4:1
Rajshahi	113,767	87,586	77.0	2.3:1	2.9:1
Khulna	<u>50,701</u>	<u>58,302</u>	<u>115.0</u>	<u>2.6:1</u>	<u>2.3:1</u>
NATIONAL TOTAL	347,156	283,265	81.6	2.5:1	3.1:1

a. A breakdown by district is given in Appendix B.

b. Does not include transit godowns. Values rounded off to nearest ton.

## Product Movement

In Bangladesh fertilizer moves from source (local production or import) either to transit godown to PDP or directly to PDP. The PDP delivers directly to dealers and on occasion to TSCs. This is a significant improvement over the OMS where intermediate godowns functioned only as a supply source to the TSCs. The dealer using the PDP provides an alternate method of distribution to the thanas, previously serviced entirely by BADC through their contractors or BADC-owned trucks.

A report by the Transport Survey Section of the Planning Commission on March 14, 1979, found that even with adequate supplies of fertilizer in the country many areas did not have an adequate supply of fertilizer during periods of high demand. One of the rationales for adopting the NMS was to provide an alternate means of distribution to the thanas with the creation of a wholesaler/retailer private sector marketing system that would have total freedom of movement within Bangladesh.

Under the NMS, 72% of BADC's sales were made to PDP supplied dealers during 1980. These dealers provide redistribution to the thanas and absorb the cost of transporting, loading, unloading, and storage in the thanas. This should have substantially reduced BADC's costs. However, there has not been corresponding cost reduction primarily because BADC continues to maintain the majority of the TSCs. Contract movement costs have increased and storage handling costs at the PDPs have increased.

Figure 6 shows a comparison of the flow charts of BADC's fertilizer distribution system under the OMS and NMS.

Within districts BADC moves its fertilizers by three modes:

Rail, less than 5%  
Water, 30%-35%  
Road, 60%-65%

The dealers supplied at PDPs move their fertilizer by all modes except rail--by truck, bullock cart, rickshaw, headload, and boat.

From the supply source to the districts, the mode of transportation in FY 1979/80 was:

	<u>Tons</u>	<u>% Total</u>
By rail	302,698	37.04
By water	172,176	21.07
By road	342,345	41.89
	817,219	100.00

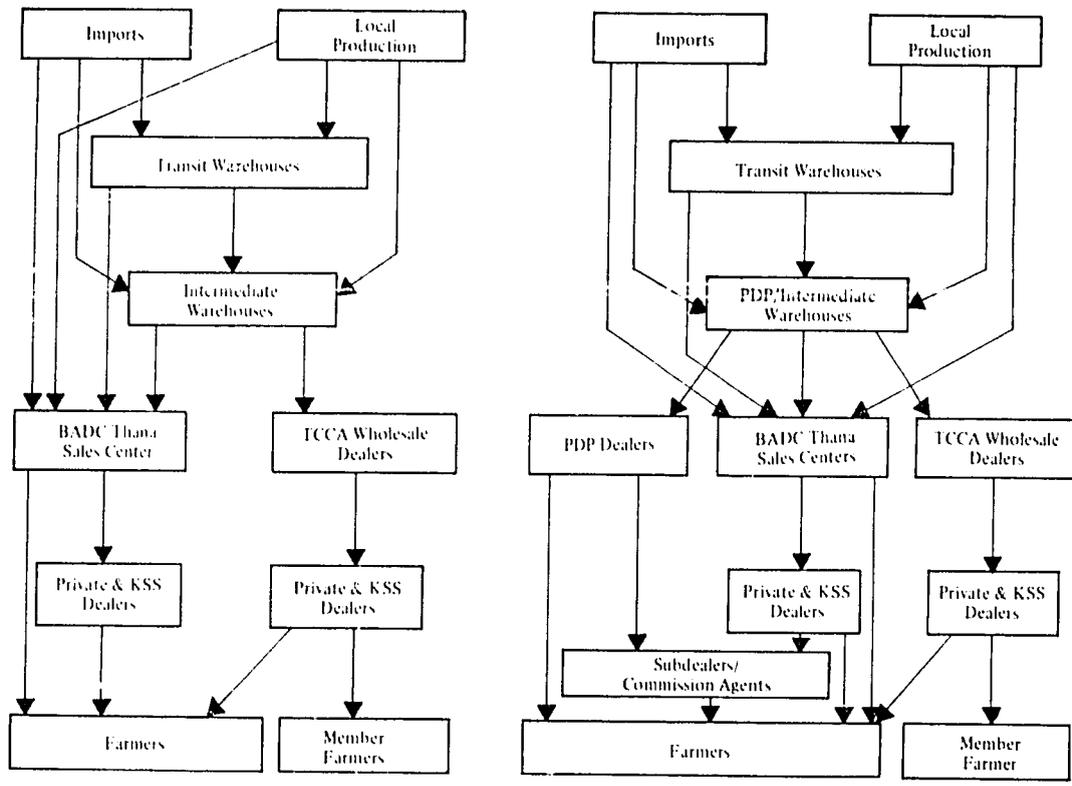


Figure 6. Flowchart of BADC Fertilizer Distribution Systems 1979/80.

Table 6 shows methods of transportation from source to district and identifies that portion moving through transit godowns.

Two railway systems operate in Bangladesh, a broad gauge system in Rajshahi and Khulna Divisions and a narrow (meter) gauge system in Chittagong, Dacca, and Rajshahi Divisions. The wagon (rail car) capacity is 22.5 tons on the broad gauge and 17.5 tons on the narrow gauge. The maximum number of wagons pulled per train is 50-60. The water transportation used in the first stage of distribution to transit godowns is by barges with capacities of 50-500 tons and by coasters with capacities of 600-700 tons. All road transport in the BADC stage of distribution is by standard-size, two-axle, diesel-powered trucks with load capacities of 5-8 tons.

Except for a small amount of fertilizer moved by BADC's 65 trucks, all movement is contracted for with private contractors or Bangladesh Railway and Bangladesh Inland Water Transport Corporation. There continue to be defects in terms of the contracts and the enforcement of the contracts which permit the contractors to perform in a less than satisfactory manner; this is a contributing factor to continued spot supply shortages throughout the country. Currently the contracts are being modified and enforcement of the new terms and conditions are expected to result in improved contractor performance.

Transportation and communications facilities are very limited in Bangladesh. The communications problem as it relates to

Table 6. Modes of Transporting Fertilizers From Source to District, 1979/80

<u>Supply Source</u>	<u>Mode of Transportation</u>						<u>Total</u> (tons)	<u>Sent</u> <u>Directly</u> <u>to</u> <u>District</u>	<u>Sent</u> <u>to Transit</u> <u>Godown,</u> <u>Then to</u> <u>District</u>
	<u>Rail</u>		<u>Water</u>		<u>Road</u>				
	<u>Tons</u>	<u>% of</u> <u>Total</u>	<u>Tons</u>	<u>% of</u> <u>Total</u>	<u>Tons</u>	<u>% of</u> <u>Total</u>			
Local production	133,650	36.8	149,615	41.2	80,004	22.0	363,269	74.0	26.0
Import	169,048	37.2	22,561	5.0	262,341	57.8	453,950	94.4	5.6
TOTAL	302,698	37.0	172,176	21.1	342,345	41.9	817,219	85.3	14.6

BADC could be solved by installing a private communications system. It would be possible to install a two-way base station antenna and relay communication network that would substantially improve BADC's efficiency.

### National Sales

National fertilizer sales by division for calendar years 1979 and 1980 are shown in Table 7; from 1979 to 1980 the Dacca and Rajshahi Divisions' shares increased, the Chittagong Division's decreased, while Khulna Division's share remained relatively unchanged. Total national sales increased in 1980. The Rajshahi Division had the greatest increase, while the Chittagong Division experienced the greatest decrease; Khulna Division had a slight increase.

The official retail price of fertilizer increased substantially in November 1980 and despite this increase December 1980 set an all time record high in sales for that month.

### Sales Comparison Primary Distribution Points/Thana Sales Centers

The fertilizer sales were tabulated by PDP and by TSC for 1980. The tabulation is summarized by division in Table 8.

By January 1, 1980, all divisions except Rajshahi had adopted the NMS. Rajshahi Division introduced the NMS in July 1980. The tabulation for Rajshahi then is for the final 6 months of 1980. During this period of the NMS 78% of the sales were made from PDPs.

The amount of fertilizer sold by PDPs outside thanas where they are located can be estimated very accurately by comparing PDP sales in the first 12 months of the NMS with the total BADC sales in the thanas during the preceding 12 months. That comparison is shown in Appendix B. At the national level, the increase averaged 272%.

If the sales in the PDP home thanas are assumed to have been constant, then the amount of fertilizer the PDPs sold to other thanas would be the amount of the sales increase--504,604 tons. If they are assumed to have risen by the same percentage as the national average, the PDP sales to other thanas would approximate 482,884 tons.

### Impact of the New Marketing System on the Thana Central Cooperative Association

Thana Central Cooperative Associations under the OMS enjoyed a monopoly in fertilizer distribution in the areas assigned to them. Fertilizer was delivered to them at BADC expense, and in addition they were given a wholesale discount. They were in

Table 7. Comparison of Sales in 1979 With Those in 1980, by Divisions

<u>Division</u>	<u>1979 Sales (tons)</u>	<u>National Sales, Total (%)</u>	<u>1980 Sales (tons)</u>	<u>National Sales, Total (%)</u>	<u>Increase (tons)</u>	<u>Change in % of National Total</u>
Dacca	189,683	25.55	233,673	26.69	43,990	1.14 (+)
Chittagong	237,172	31.95	252,578	28.85	15,406	3.1 (-)
Khulna	114,767	15.46	132,518	15.14	17,751	0.32 (-)
Rajshahi <sup>b</sup>	<u>200,760</u>	<u>27.04</u>	<u>256,762</u>	<u>29.32</u>	<u>56,002</u>	<u>2.28 (+)</u>
NATIONAL TOTAL	742,382	100.00	875,531	100.00	133,149	17.94 <sup>c</sup>

a. Sales figures were collected from P&S Section on the basis of fortnightly thana sales reports.

b. The NMS started July 1, 1980, in Rajshahi Division.

c. Percentage increase in national total.

effect exclusive wholesalers for BADC. They sold to dealers at the official BADC dealer price. This concept has merit, provided BADC (1) continued the wholesaler discount on a nonexclusive basis, (2) included the TCCAs plus other selected, nonaligned private sector wholesalers, and (3) gave a PDP pickup allowance in addition to the wholesaler-delivered discount. They would be providing the profit incentive necessary to attract good business people and the competition required to ensure consumer level promotion and price stability.

Currently the TCCAs continue to operate but are given the same discount as private PDP dealers. Regardless of quantity purchased, size of godown, area served, etc., BADC continues to provide some credit to the TCCAs in the form of bank guarantees and selected TCCAs are providing farmer credit through a program funded by the Food and Agriculture Organization of the United Nations (FAO). The PDP dealers are selling in the same areas as the TCCAs, a development which has reduced the effectiveness of the TCCAs.

Our TCCA interviews indicate that some are contemplating leaving the fertilizer business.

Most TCCAs have godowns of 100- to 200-ton capacity (the majority of those are leased from BADC) along with a reasonably qualified staff, sales brochures, and promotional material available in-house. However, forcing them to compete with a PDP dealer who has little or no storage capacity or inventory, and setting the maximum commission at the 1-ton minimum purchase level, creates a difficult situation for TCCA and other private sector wholesalers who have investments in large godowns.

It can be concluded that it is difficult if not impossible for TCCAs to compete under the BADC's current policy of no quantity discounts. If BADC establishes graduated quantity discounts up to the 75- to 100-ton/lifting level, TCCAs and true private sector wholesalers could make profitable use of their warehouses and develop and sustain a competent staff which would enable them to function effectively as wholesalers and thereby provide reliable supplies at the local level. This would also give them the incentive to increase storage capacity.

## CHAPTER 4

### IMPACT OF CURRENT MARKETING SYSTEM ON DEALERS

#### Interviews and Resulting Profile

IFDC consultants interviewed 1,000 active dealers and a randomized selection of former dealers. The areas where the interviews were made and examples of the questionnaires used are shown in Appendix A. The active dealers were categorized according to four market segments: High Use Easy Access (HUEA), High Use Remote (HUR), Low Use Easy Access (LUEA), and Low Use Remote (LUR). All dealers were interviewed at their places of business. Dealer interviews were conducted in all BADC districts (except the Chittagong Hill Tracts) for each market segment. In each district the first interview was conducted with the BADC District Manager. Included in the District Manager's questionnaire was a request to identify the four market categories as they related to his district and to list four or five locations in each category. The IFDC consultant then selected one or more of the District Manager's recommended interview areas in each market segment and in addition made a randomized selection of one or more other areas in each category.

The interviewers asked the thana inspectors to identify those dealers who had lifted since January 1, 1981--the criterion chosen by the market research group to designate active dealers. To test the validity of their classifications, a randomized group of thana inspectors was asked to identify dealers who had lifted between December 1, 1980, and January 1, 1981. There was no significant difference between the groups. From these interviews it was concluded that of the 48,535 registered dealers, only 13,780 or 28% were active.

On a nationwide basis responses to the questionnaires for the dealers and thana inspectors are presented in Tables 7-17 and Figures 7-10, as well as Tables 6, 7, and 8 in Appendix B. The national averages differ slightly from the district averages reported in the Appendix because the national averages were not weighted.

A comprehensive questionnaire totaling 5 pages and 68 questions was used to interview the active dealers on a variety of aspects of their operations (Appendix A). The questionnaire asked the distance from the dealer's store to the source of fertilizer (BADC's PDP or TSC), the number of liftings he made per month, whether he sold to subdealers and, if so, to how many, and the quantity sold to subdealers and the discount offered. Several questions dealt with the dealer's sales practices to farmers, promotional activities, pricing practice, credit extended, etc. Dealer's transportation costs were evaluated along with other business costs. The active dealers were asked about the availability of products, whether credit was available to them, and if yes, what the credit source was and was it adequate. Since most dealers operate other types of businesses, they were asked whether

Table 8. Comparison of Sales at PDPs With Those at TSCs, by Divisions

Division	Sales in 1980			
	January-June		July-December	
	Tons	%	Tons	%
Dacca				
at PDP	76,828	64.50	84,667	73.91
at TSC	<u>42,294</u>	35.50	<u>29,884</u>	26.09
TOTAL	119,122		114,551	
Chittagong				
at PDP	110,383	85.09	107,083	90.53
at TSC	<u>19,340</u>	14.91	<u>11,208</u>	9.47
TOTAL	129,729		118,291	
Khulna				
at PDP	35,421	52.29	43,212	66.71
at TSC	<u>32,321</u>	47.71	<u>21,564</u>	33.29
TOTAL	67,742		64,776	
Rajshahi				
at PDP	OMS still operating		93,395	63.16
at TSC			<u>54,479</u>	36.84
TOTAL			147,874	
All Divisions				
Totals				
at PDP	222,632	70.32	328,357	73.71
at TSC	<u>93,961</u>	29.68	<u>117,135</u>	26.29
TOTAL	316,593		445,492	
Totals for Year <sup>a</sup>				
at PDP		550,989	72.30	
at TSC		<u>211,096</u>	27.70	
TOTAL		762,085		

a. Excluding Rajshahi Division for January through June.

Table 9. Dealers' Stated Reasons for Decrease in Sales

Category of Market	% Reporting <sup>a</sup>					
	Increased Price	Increased Competition	PDP Policies	Lack of Capital	No Availability of Specific Fertilizer During Peak Use Period	Other Reasons <sup>b</sup>
HUEA	39	39	14	17	12	31
HUR	43	10	11	21	11	9
LUR	43	21	9	30	10	7
LUEA	40	18	8	10	11	4

a. Percentages do not total 100 due to multiple answers to one question.

b. Of the 31 reasons under "other" HUEA, there are 19 miscellaneous answers.

Table 10. Comparison of Fertilizer Sales With Other Business Investments

Category of Market	% of Dealers Who				Say Other Business Is More Profitable	Average Capital Invested in Fertilizer Business - - - - - (TK)	Average Capital Invested in Other Business - - - - -
	Own More Than Just Fertilizer Business	Are Pesticide Dealers and Fertilizer Dealers	Are Farmers as Well as Dealers <sup>a</sup>	Own Only Fertilizer Business			
HUEA	73	53	79	27	58	22,239	21,261
HUR	58	44	92	42	63	18,209	17,029
LUEA	61	43	76	39	65	14,223	24,458
LUR	63	36	78	37	77	12,125	15,569

a. Farming was not considered "other" business for purposes of this evaluation.

Table 11. Dealers With and Without Employees

<u>Category of Market</u>	<u>Dealers Who Hire Employees (%)</u>	<u>Average Salary Paid (TK/month)</u>	<u>Average Number of Employees</u>	<u>Time Average Employees Work in Fertilizer Business (%)</u>	<u>Average Sales Volumes of Dealers With Employees - - - (md/year) - - -</u>	<u>Average Sales Volume of Dealers With No Employees - - -</u>	<u>Dealers Selling to Subdealers With Employees - - - - - (%) - - - - -</u>	<u>Dealers Selling to Subdealers With No Employees - - - - -</u>
HUEA	49	341	1	64	7,169	4,315	60	42
HUR	42	293	1	64	7,466	4,315	54	21
LUEA	49	349	1	60	6,863	2,494	52	16
LUR	35	304	1	51	3,294	2,374	33	13

Table 12. Relationship of Dealer to Subdealer

Category of Market	Dealers Selling to Subdealers (%)	Average Number of Subdealers Per Dealer	Dealers' Average Sales to Subdealers (% of total)	Subdealers Having Own Store (%)	Average Commission Offered to Subdealers (TK/md)
HUEA	54	8	49	74	4.0
HUR	35	6	43	70	3.0
LUEA	34	8	48	86	3.5
LUR	33	6	40	69	1.5

Table 13. Percentages of Various Types of Fertilizers Sold

Category of Market	Average % of Total Sales		% of Total Sales					
	Full Bags	Loose Bags	Urea	GTSP	PTSP	DAP	MP	Other
HUEA	39	61	56	24	5	7	8	0.06
HUR	40	60	56	25	5	6	8	0.003
LUEA	33	67	57	24	5	6	8	-
LUR	32	68	59	23	5	5	8	-

The product sales ratio is slightly different from that in the national sales records because these values were derived from dealer answers. However, based on BADC sales records, the actual national sales ratio was:

Urea	TSP	DAP	MP	Other
62	26	5	5	2

Table 14. Dealers' Extension of Credit

Category of Market	To Farmers			To Subdealers			
	Dealers Extending Credit (%)	Average Duration of Credit Terms (days)	Dealers Charging Interest - - - - - (%)	Dealers Extending Credit - - - - -	Average Duration of Credit Terms (days)	Dealers Charging Interest - - - - - (%)	Dealers Lacking Capital - - - - -
HUEA	81	19	-	37	8	-	70
HUR	86	25	-	23	5	-	67
LUEA	77	31	-	33	8	-	63
LUR	80	28	-	27	4	-	63

Table 15. Lack of Availability of Fertilizer at BADC Godowns

Category of Market	% of Dealers Who <sup>a</sup>			
	Were Unable to Purchase From BADC Godown in Current Year	Incurred Loss Because of Unavailability of Fertilizer	Bought Fertilizer From Distant Godowns During Short Supply	Dealer's Estimated % of Sales Loss Because Fertilizer Was Not Available (Average)
HUEA	65	90	10	15
HUR	72	91	31	12
LUEA	57	87	22	19
LUR	55	91	17	11

a. Percentages do not total 100 because of multiple answers to one question.

Table 16. Cost of Transporting Fertilizers to Dealers

	Market Category			
	HUEA	HUR	LUEA	LUR
<b>By truck</b>				
Average distance, mile	12.79	11.02	11.63	23.86
Cost, TK/md/mile	0.18	0.26	0.20	0.20
Total cost, TK/md	2.28	2.82	2.30	4.77
<b>By cart</b>				
Average distance, mile	2.85	6.86	2.67	7.64
Cost, TK/md/mile	0.53	0.47	0.66	0.41
Total cost, TK/md	1.50	3.22	1.75	3.17
<b>By rickshaw</b>				
Average distance, mile	3.67	-	5.02	4.17
Cost, TK/md/mile	0.42	-	0.34	0.38
Total cost, TK/md	1.51	-	1.72	1.58
<b>By boat</b>				
Average distance, mile	13.36	23.55	10.53	10.39
Cost, TK/md/mile	0.15	0.16	0.24	0.38
Total cost, TK/md	2.01	3.42	2.54	3.41
<b>Other</b>				
Average distance, mile	6.21	9.47	5.77	14.22
Cost, TK/md/mile	0.27	0.32	0.30	0.27
Total cost, TK/md	1.65	3.02	1.7	3.83
Average loading and unloading cost, TK/md	0.87	0.90	0.80	0.96
Average other expense, TK/md	0.25	0.34	0.36	0.52
Average total transport cost, TK/md	2.91	4.36	3.17	5.09

Table 17. Fertilizer Sales Price and Dealer's Commission Under the NMS

	Type of Fertilizer					Weighted Average
	Urea	GTSP	PTSP	DAP	MAP	
<u>December 1, 1979</u>						
Fertilizer retail price, TK/md	70.0	55.0	55.0	70.0	45.0	64.9
Dealer's commission, TK/md						
at PDP	8.4	8.4	8.4	8.4	8.4	8.4
at TSC	5.0	5.0	5.0	5.0	5.0	5.0
<u>November 2, 1980</u>						
Fertilizer retail price, TK/md	110.0	90.0	80.0	110.0	70.0	100.8
Dealer's commission, TK/md						
at PDP	8.4	8.4	8.4	8.4	8.4	8.4
at TSC	5.0	5.0	5.0	5.0	5.0	5.0
Commission as percentage of price						
at PDP	7.6	9.3	10.5	7.6	12.0	8.5
at TSC	4.5	5.5	6.2	4.5	7.1	5.0

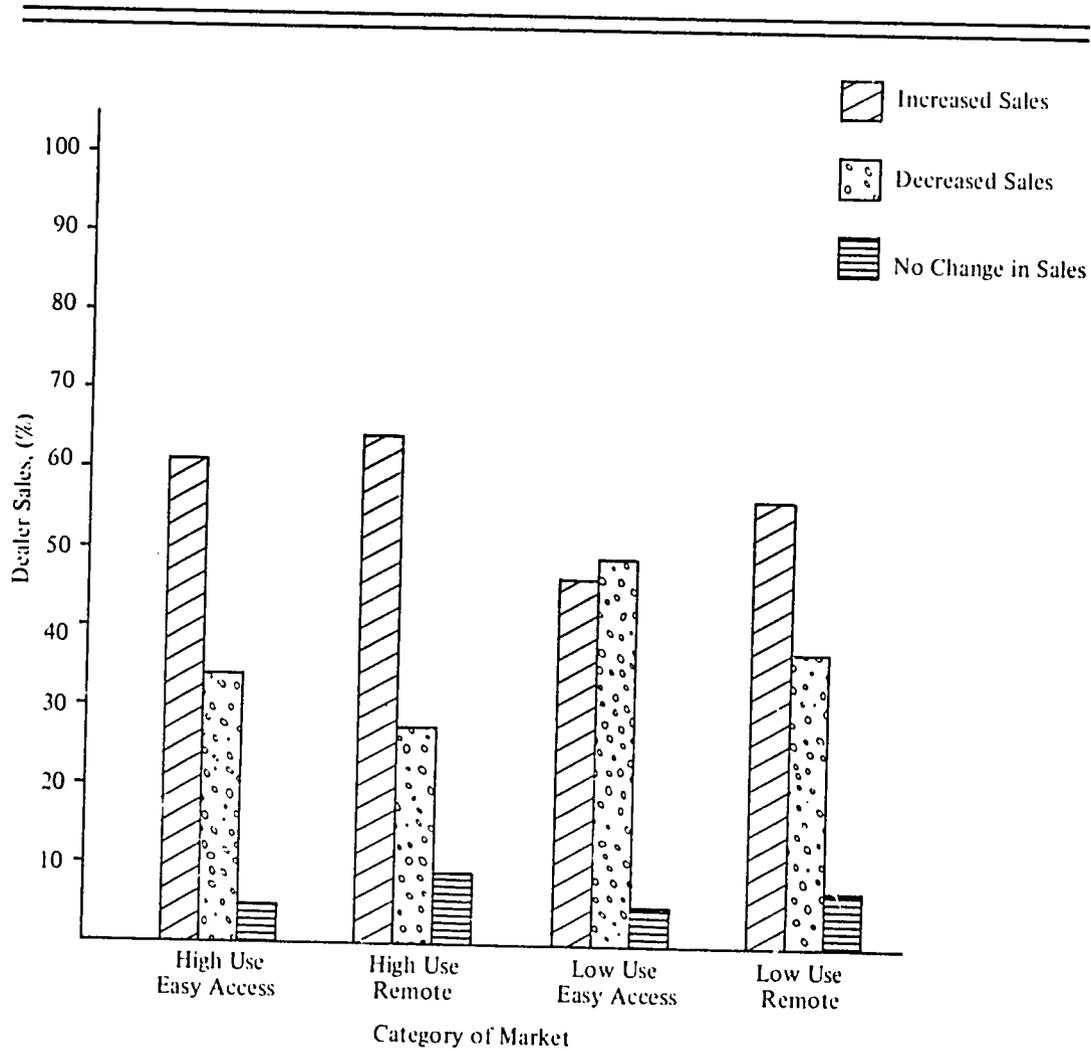


Figure 7. National Summary of Dealers' Sales FY 1979/80 Through 1980/81.

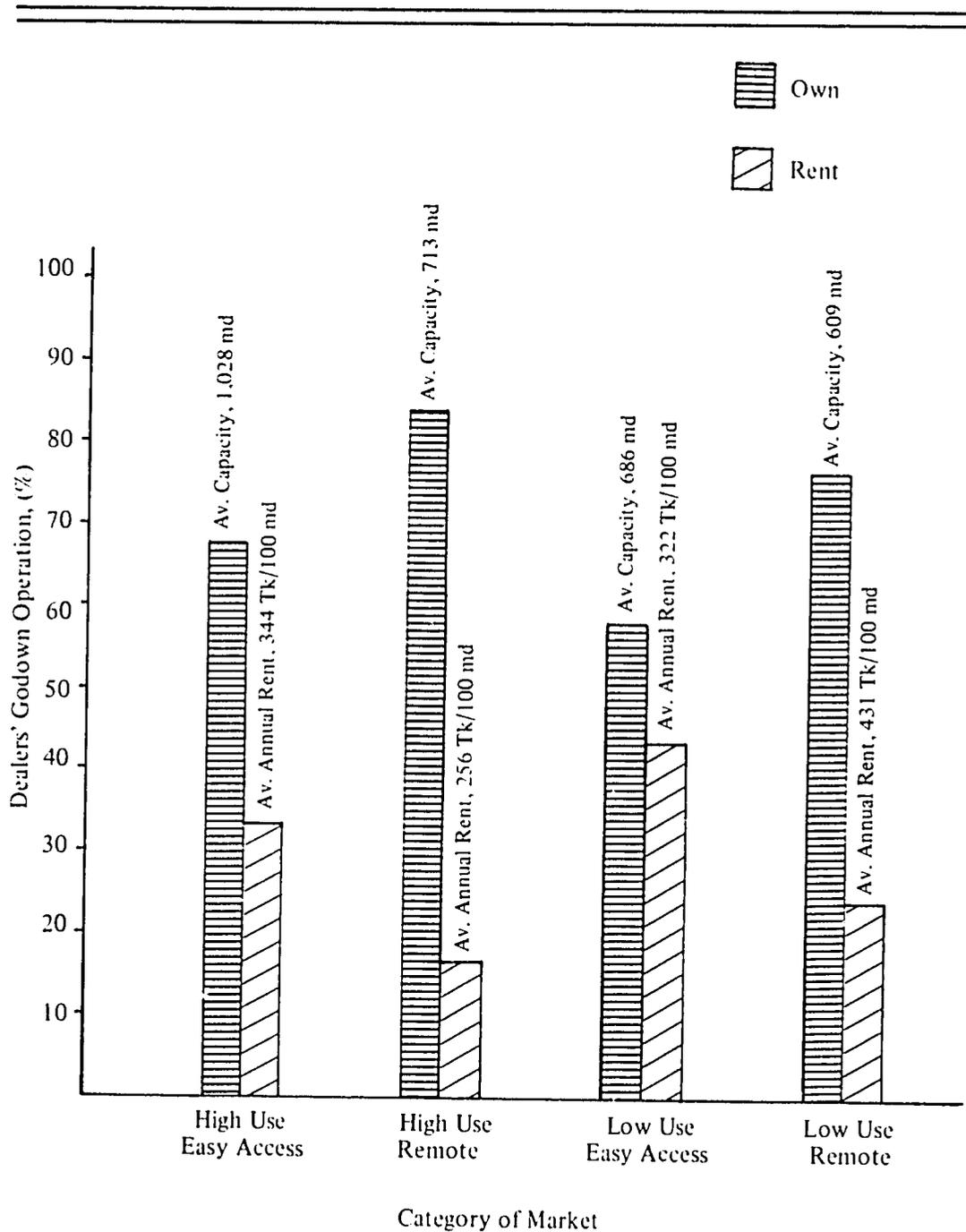


Figure 8. National Summary of Dealers' Godown Operation.

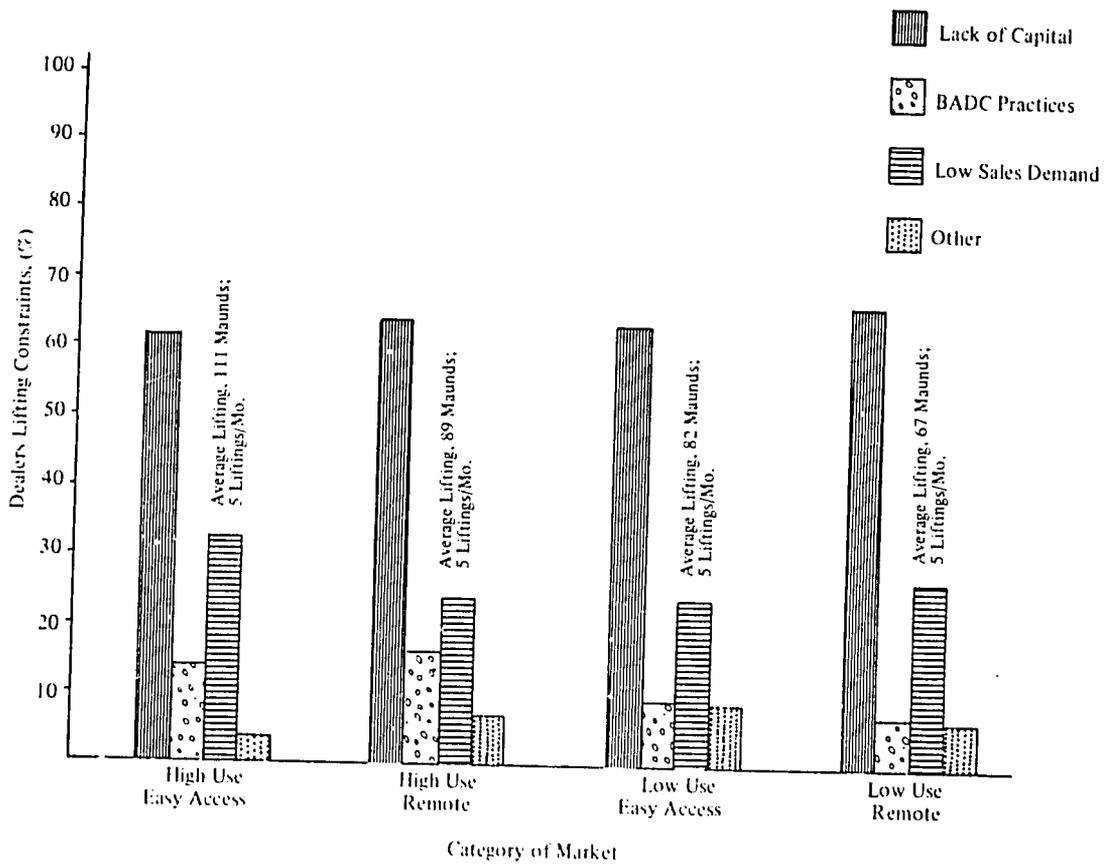


Figure 9. National Summary of Dealers' Lifting Restraints.

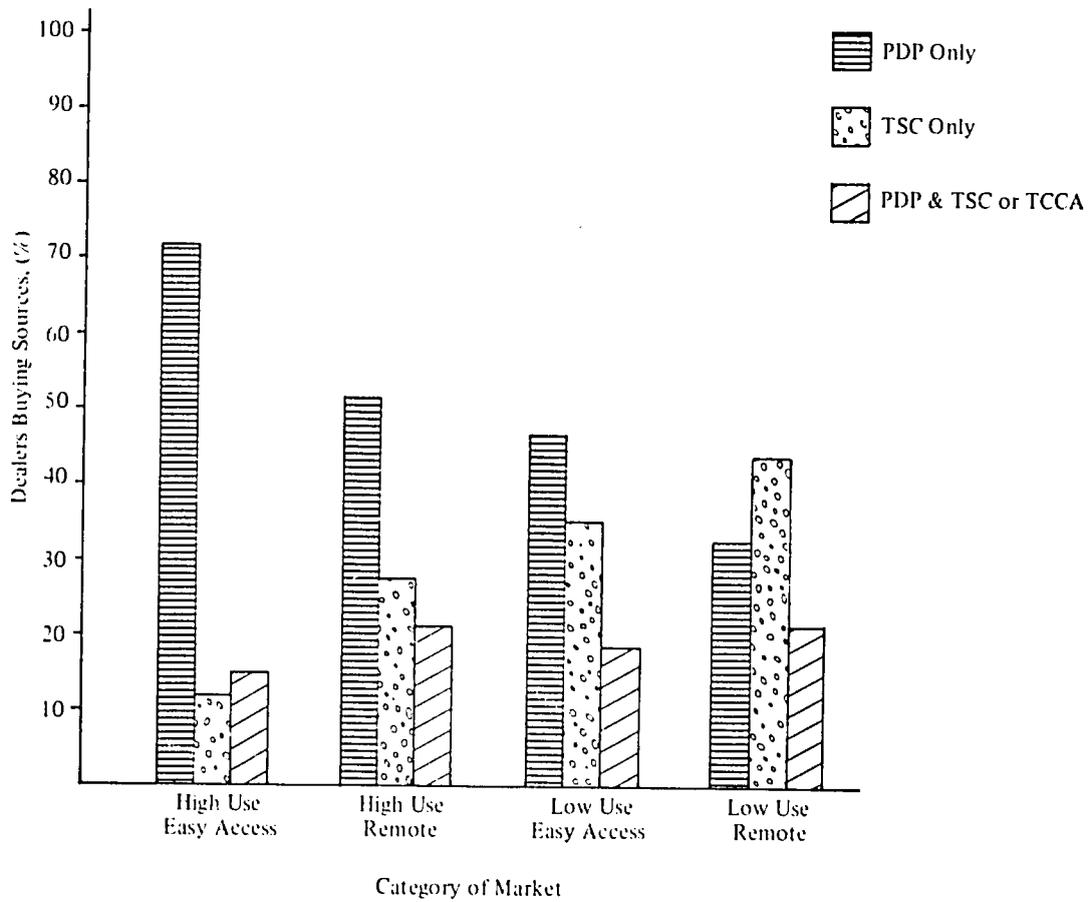


Figure 10. National Summary of Dealers Buying Sources.

Note: About 1%-2% of the dealers bought from TCCA only, and 11%-15% were new dealers (registered during NMS). Old dealers have been in business an average of 8 years.

the other business activities were more profitable and which required the highest capital investment. Comparisons of the return on investment were calculated.

Dealers were asked what they liked and disliked about the current marketing system. Without exception the dealers reported they preferred the NMS to the OMS. Some liked it because of the extended freedom that allowed them to sell in any market and to anyone they choose. However, they had many complaints and a few suggestions:

1. There were complaints that the thana inspector continued to interfere with their operations by insisting on seeing sales and stock records.
2. Some said they were not allowed to lift the product mix of their choice but were ordered by BADC to take the product mix of BADC's choice.
3. The universal complaint was the exorbitant time required to lift fertilizer; 3-5 days was not unusual.
4. A common complaint made by most dealers was that a large number of bags are short weight and that the proportion of short weight bags is increasing; dealers pointed out that the previous average loss of  $\frac{1}{2}$ -1 seer/md when they sell loose (not in full bags) has gone up to an average loss of  $1\frac{1}{2}$ -2 seers/md. This loss was not directly related to the current marketing system since this also occurred in the OMS.
5. Dealers report that the problem of product availability continues to plague them though it is not unique to the NMS. They report that BADC has always had a supply problem during peak fertilizer demand periods and that this creates a measurable sales loss (dealer estimated % is shown in the summary).

Responses given to the questions have been summarized to show a dealer profile by district and to indicate differences and similarities by district.<sup>2</sup>

The summary as shown in Tables 12-19 is a picture of the current BADC fertilizer dealer and clearly identifies developing trends, some of which need to be exploited while others should be channeled into a new direction.

One of the goals of the NMS was to encourage the creation of wholesaler's who would assume a portion of the distribution burden. A wholesaler is by definition a merchant who sells primarily to retailers for resale. Using this definition and arbitrarily stating that any PDP dealer who sells more than 60% of his total purchases to subdealers is a wholesaler, approximately 20% of the active PDP dealers can be classified as wholesalers. In the OMS only TCCAs could be classified as wholesalers. However, the lack of adequate margins, quantity discounts, and a BADC customer classification

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2. Appendix A summarizes districtwise results of the evaluation.

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Table 18. Summary of Farmers' Responses to Questionnaire

Average N-P <sub>2</sub> O <sub>5</sub> -K <sub>2</sub> O ratio used	8-4.5-1
Proportion of farmers who could not buy fertilizer because it was not available	HUEA, 42%; HUR, 50%; LUEA, 40%; LUR, 31%
Average reduction in use because products were not available, seers/acre	HUEA, 8%; HUR, 6%; LUEA, 9%; LUR, 7%
Proportion of farmers who said that lack of capital reduced their use of fertilizer (overall average, 65.5%)	HUEA, 60%; HUR, 67%; LUEA, 70%; LUR, 63%
Average buying price, TK/md	
Urea	111.77
GTSP	94.97
PTSP	83.29
DAP	112.22
MP	72.71
Available sources of credit	(1) Friends (2) Relatives (3) Bank (4) Moneylenders
Farmers' general comments on fertilizer use constraints	(1) Price is too high (2) We lack capital (3) Full bags are short weight (4) More extension service is needed

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Table 19. Summary of Bag Weight Checks

Total Number of Bags	Type of Fertilizer	Official Weight	Source	Percentage of Bags <sup>a</sup>		
				Under Weight	Even	Over Weight
72	Urea	25 kg/bag	Ghorasal	74	12	14
25	Urea	25 kg/bag	Fenchuganj	64	8	28
26	Urea	50 kg/bag	Saudi Arabia	31	31	38
12	Urea	50 kg/bag	Romania	42	-	58
55	PTSP	50 kg/bag	Chittagong	37	9	54
13	GTSP	50 kg/bag	Tunisia	54	8	38
15	GTSP	50 kg/bag	United States	60	13	27
14	GTSP	50 kg/bag	Denmark	21	-	79
38	MP	50 kg/bag	Canada	50	3	47

a. The allowable weight tolerance is  $\pm 0.1$  kg/bag.

system prevents NMS or the current marketing system from gaining full utilization of the wholesaler/retailer market concept. On the basis of dealer interviews, the impact of the NMS or current marketing system on the dealer indicates:

1. The total combined number of active dealers and subdealers under the NMS is slightly higher than the number of active dealers under the OMS. This is due to two factors:
  - a. There are no registration restrictions--anyone who chooses to become a BADC dealer may do so.
  - b. PDP dealers are allowed to have subdealers.
2. The total number of active dealers and subdealers is declining because of the following three factors:
  - a. Lack of capital (more capital required because of rapid fertilizer price increases).
  - b. Low profit margins.
  - c. Increase in short weight bags.

(Comment: These are disturbing reasons and indicate a need for BADC dealer policy revisions.)
3. NMS dealers make larger individual liftings than in the OMS. The current national average lifting is 87 md compared with less than 40 md in the OMS.
4. Around 41% of all active PDP dealers sell to subdealers and about 20% of all active PDP dealers sell 60% or more of their sales through subdealers. The OMS dealers seldom had subdealers because of BADC restrictions.
5. Sixty-four percent of the NMS dealers operate other commercial business (other than farming) and have substantial

capital invested in these other businesses (average TK 16,700). Eighty-one percent of the dealers are also farmers.

6. The average capital the BADC dealer has invested in the fertilizer business is TK 19,600. This is a substantial increase from previous years as a result of the increased fertilizer costs and larger liftings.
7. Sixty-six percent of the NMS dealers who operate other commercial businesses report the other business is more profitable.
8. Sixty-seven percent of the dealers had significant sales increases in FY 1980/81 over FY 1979/80.
9. The majority of the dealers who experienced sales decreases report that the primary reason was price increase.
10. Sixty-four percent say lack of capital restricted sales.
11. Sixty-four percent of the total farmer sales at retail level were loose (quantities less than full bag).

No specific general comment was solicited by the interviewer. However, in most interviews, if they did not volunteer comments, the dealers were asked if they wished to make any comments.

A district summary of these comments is given in Appendix A.

### Registration

BADC reported dealer registration at the beginning of FY 1979/80 at 44,376; there are now 48,535 registered dealers.

Under the NMS a dealer is permitted to register at more than one PDP and he may also register, if he chooses, at both multiple PDPs and TSCs. Thus, some double counting occurs. Sales records at PDPs and TSCs indicate that 28% of the total registered dealers are active dealers or 13,589 active dealers, but if we assume a 20% multiple registration then the actual total number of active registered dealers becomes 10,871.

Eighty-seven percent of the currently registered dealers were OMS dealers. The average national fertilizer dealer has been in the fertilizer business for 8 years.

Forty-one percent of the registered active dealers sell to subdealers and each one sells to an average of seven subdealers. Interviews with subdealers indicate that they buy from an average of two sources. This would result in 15,601 subdealers; however, 35% of the subdealers do not have shops and function as subdealers on a part-time basis only. From this we can calculate that there are about 22,000 active dealers with full-time shops and an additional 5,000-6,000 part-time (no shop) subdealers.

The only promotional posters or brochures available in dealer shops relate to DAP, and these reach only a small percentage of the dealers.

Currently, the organizational structure of BADC does not provide for a functional sales promotion department.

Sales promotion consists of a wide range of supporting sales activities that in effect supplement personal customer calls and advertising. It fills the gap in the marketing schemes. It is a follow-through process that picks up the loose ends and helps tie the components together.

BADC sales promotion should concentrate on dealer assistance and farmer stimulation. Sales promotion is not a part of dealer training but is the act of complementing dealer training. In addition, it enhances advertising and motivates dealers and BADC personnel.

Dealer promotion is an important part of sales promotion. The BADC dealer profile indicates that the majority are dealers who have a variety of product lines in addition to fertilizer. BADC dealer promotion should be designed to create a desire on the dealer's part to promote fertilizer to a greater extent than the balance of his product line. When the dealer stocks a product and invests in a large inventory, he has the right to expect it to move through his shop to the farmer with a minimum degree of difficulty and with a reasonable margin of profit that will assure him of an acceptable return on his investment.

Point-of-purchase display is an important part of sales promotion. It attracts attention and can help activate the buying process. In-store display is the key to this process. In developing the correct in-store display, the dealer's problems must be studied carefully. His interests are vital to the success of the display, as the dealer is there all of the time, the BADC representative is not. The dealer must be happy with the display or the point of purchase sales promotion will not be effective. Consequently, displays must be designed that will fit the needs of the dealer and of BADC.

Premiums are an effective sales promotional tool that will induce dealers or farmers to buy depending on the type premium. Often the assumed additional value of the premiums is the important difference in the buying decision.

Sales promotions of the premium type can also be used to develop internal motivational programs such as incentives to BADC personnel at various levels.

### Sales Opportunities

BADC's sales to dealers have increased yearly since FY 1975/76; actual sales through 1980/81 are shown in Figure 11. However,

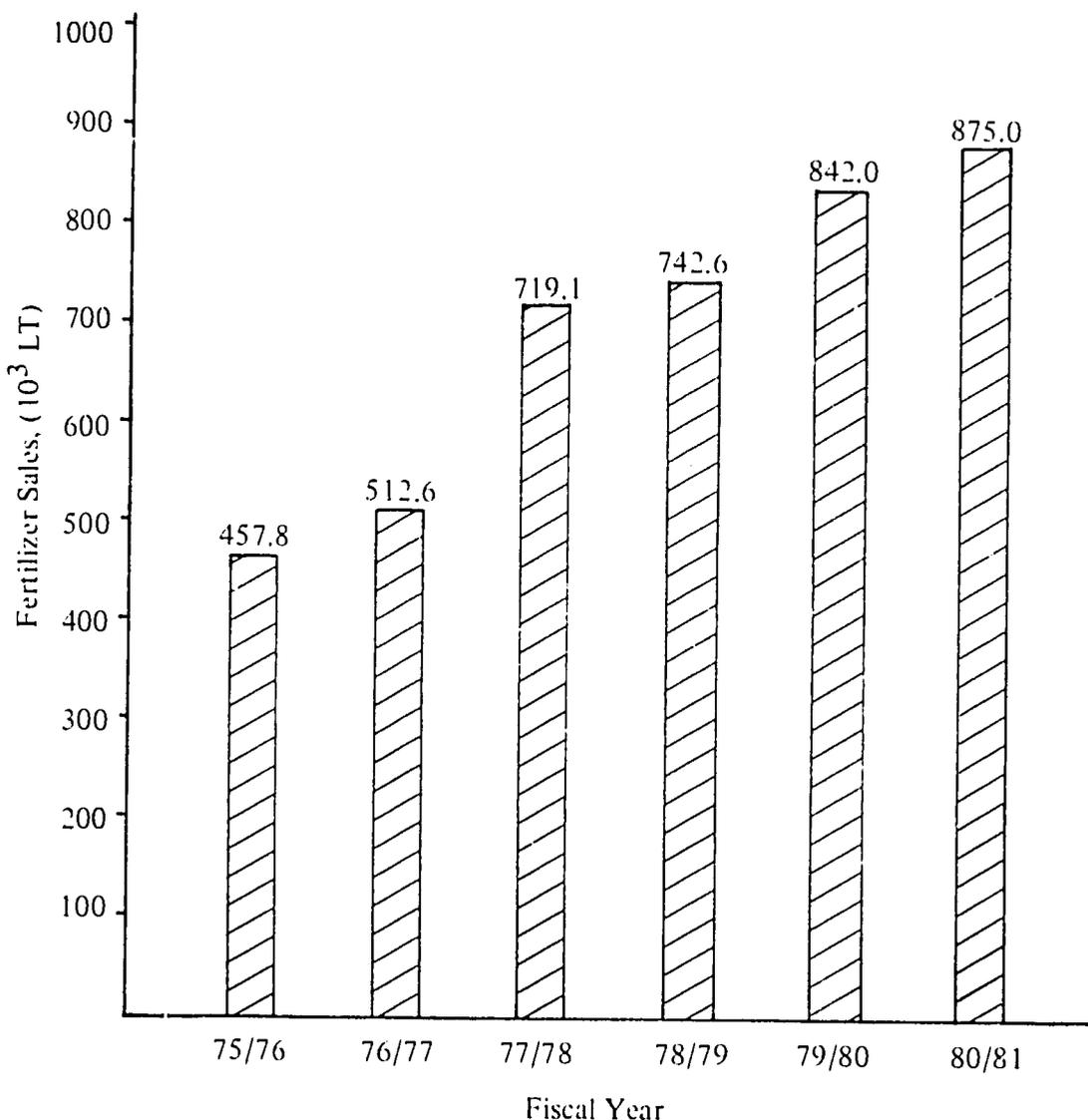


Figure 11. Actual Fertilizer Sales From BADC to Dealers FY 1975/76 Through 1980/81.

sales in recent years are substantially below target and currently represent about 20% of the total potential market based on agronomic requirements as calculated by IFDC.<sup>3</sup>

Provided BADC is to meet the challenge of increasing sales in approximation of the 5-year plan, major organizational changes are needed, new job descriptions must be designed, and increased cooperation is needed between BADC and dealers (see Chapter 6).

3. See Appendix C. Based on market segment the average transportation costs range from a low of 2.9 TK/md in the HUEA areas to a high of 5.09 TK/md in the LUR areas.

## Credit

There are various ongoing credit programs for fertilizer dealers. The Bangladesh Krishi Bank (Agricultural Bank of Bangladesh) has had multiple schemes to provide revolving bank credit to fertilizer dealers, FAO has a pilot credit program being conducted through selected cooperatives (dealer farmer program). The USAID Rural Credit Program is a potential fertilizer dealer credit source. However, less than 500 dealers have been granted loans for fertilizer purchase. Our survey clearly indicates that:

1. Currently banks and other funded programs are not lending the money available to fertilizer dealers. Depending on the program the percent of available funds actually loaned ranges from 15% to 60%.
2. The answers to the questionnaire indicate that many fertilizer dealers are restricted in their purchasing by lack of capital.

Figure 12 shows the percentage of dealers by market segment who report that lack of capital restricts their sales, the percentage with no credit source, and the percentage without adequate credit. Their sources of credit are usually friends or moneylenders. Only in the HUEA areas are the banks ranked as the primary credit source.

## Transportation and Handling Costs

The dealer questionnaire results indicate that transportation and handling costs represent the single largest operating cost.

For many dealers, two modes of transportation are required to reach the shop, such as boat and rickshaw or boat and head load. Dealers use various transport methods depending on the type of transportation available and the volume lifted. For short distances and minimum liftings, rickshaw, push cart, and bullock cart are the most economical; when fertilizer is purchased in truck load quantities and roads are adequate, trucks are the least expensive transportation.

Certain areas of the country can be served only by country boat, and in those areas boatmen negotiate the price on an individual basis. However, our survey indicates that boat transportation costs are comparable to other modes of transportation. Table 16 shows dealer-reported average transport costs by market segment, transportation mode, average distance carried, and average commission after deducting transportation costs. Figure 13 shows the percentage of dealers that use the various modes of transportation.

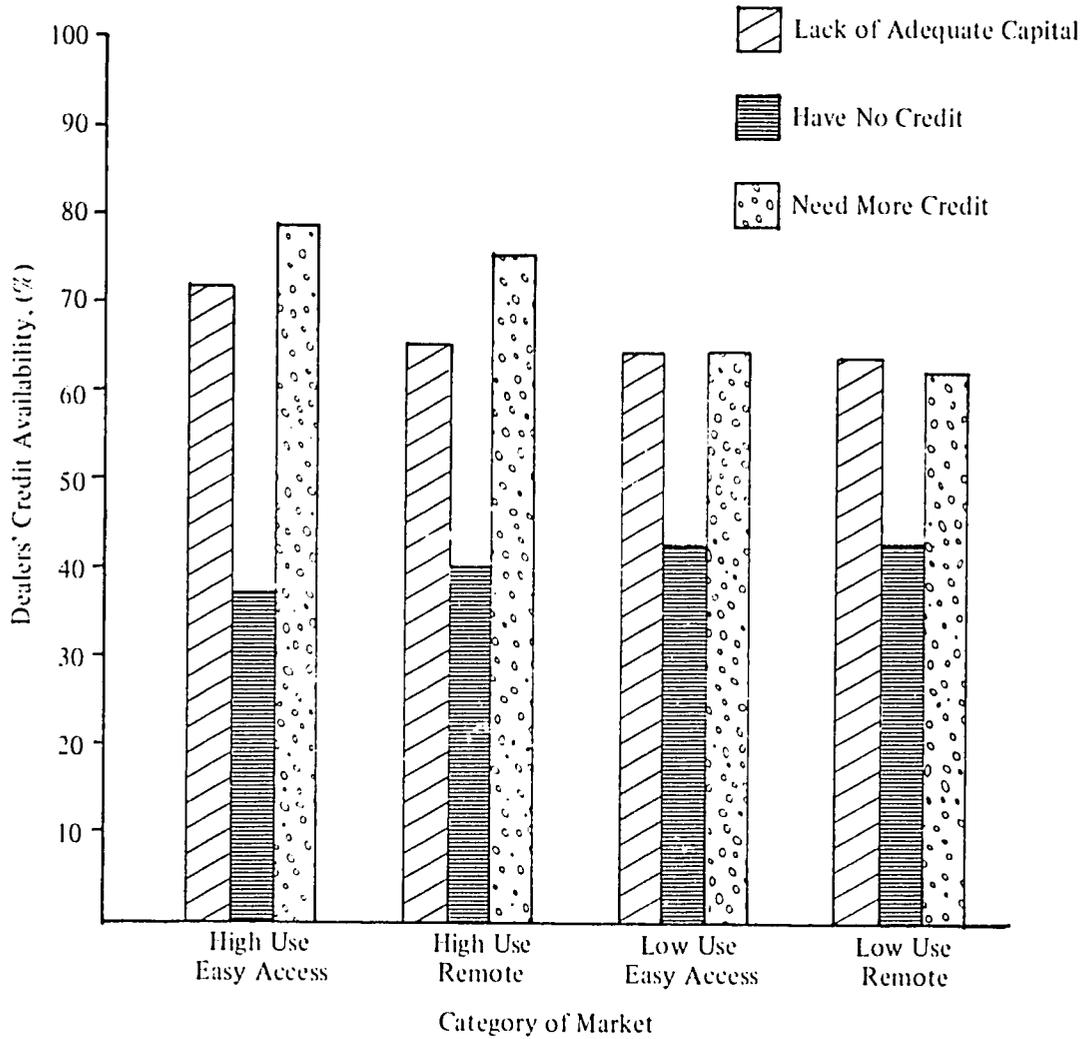


Figure 12. National Average of Availability of Credit to Dealers.

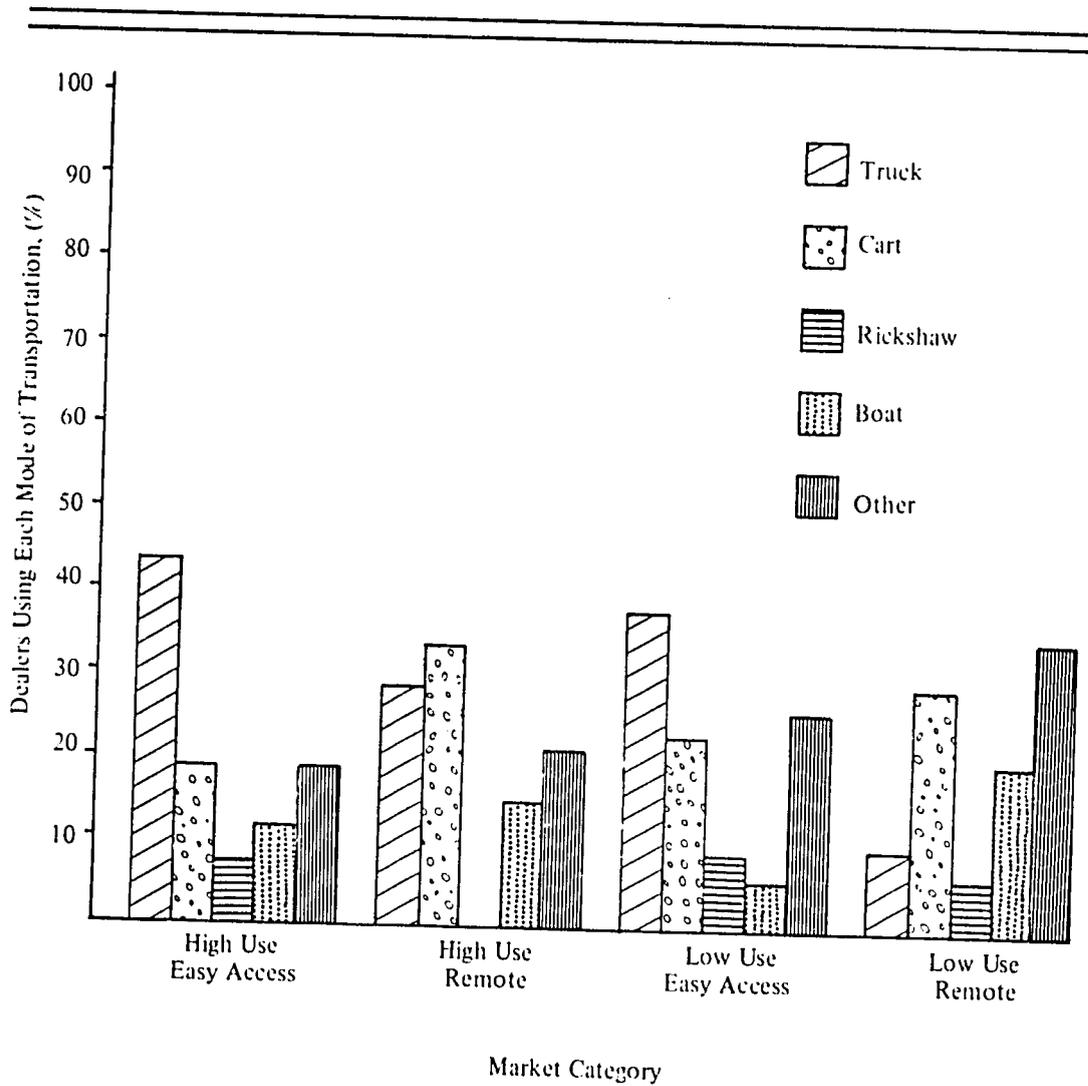


Figure 13. Modes of Transporting Fertilizers to Dealers.

## Training

One of the major deficiencies in expanding fertilizer use in Bangladesh is the absence of a viable system to disseminate information on the benefits and best use of fertilizer.

### Improvement of Performance

BADC General Manager (Supply) and BADC Manager (Sales) have discussed various methods of implementing a BADC program aimed at developing criteria for a preferred dealer status and wholesaler classification.

Requirements discussed for appointment of dealers to this upgraded status stipulated that the dealer must:

1. Provide fertilizer storage capacity of at least 50 tons.
2. Satisfactorily complete the BADC training course.
3. Conduct a predetermined number of farmer meetings.
4. Develop and oversee a minimum of four demonstration plots.
5. Be an active participant in dealer/farmer credit programs.

BADC must give the dealer some reason for wanting the upgraded status such as:

1. Quantity discounts.
2. Priority of purchase when supply is short.
3. BADC-extended term credit.

### Relationship of Irrigation and High-Yielding Varieties to Fertilizer Use

There is an important correlation between irrigation and fertilizer use. Our survey indicates that farmers who use irrigation also use two and one-half to three times as much fertilizer as the farmers in nonirrigated areas. Being assured of a managed source of water during the dry season increases the probability of multiple cropping, improves yield potential, and assures a fair return on investment, all of which enhance fertilizer use.

## High-Yielding Varieties

The increased use of high-yielding cereal varieties is one of the most important factors in fertilizer demand. Farmers appear to be reluctant to commit large acreage to HYVs for the following reasons:

1. Local varieties of grain are generally considered superior in terms of taste when compared with that of HYVs.
2. Many HYVs produce a smaller quantity and lower quality of rice straw than local varieties and as a result reduce livestock fodder.
3. Most HYVs are more subject to pest and disease infestations.
4. The current ratio of paddy sale price to input cost has reduced the profit motive of growing HYVs which stimulated early expansion.

The extension service of Bangladesh has the responsibility of assisting and advising farmers on the best cultivation practices with BADC's assistance on fertilizer use. With 12 million farmers in Bangladesh, it is not practical to expect extension service and BADC personnel to maintain contact with any appreciable percentage of the farmers. With regard to the extension service, fertilizer promotion is only one of its many functions.

The need for transferring improved technology to the farmers is increasing daily as the population increases and requires more food production. Farmers must be kept informed of the best cultivation practices, new technologies, new varieties, and cropping patterns as well as new fertilizer and minor nutrient dosage recommendations.

Since the fertilizer dealers meet the farmers at the time of fertilizer use, the dealers are in a position to help the extension service and BADC in passing this information on to the farmers. If the fertilizer dealers can be made aware of and kept advised of fertilizer use recommendations, etc., they can pass this information along to their customers, the Bangladesh farmers.

There are approximately 22,000 active fertilizer dealers (including subdealers) in Bangladesh and most of them, even though most are also farmers, lack the knowledge needed to conduct their own business and promote fertilizer successfully. With good training and proper incentives, these dealers can be a potent force in the improvement of fertilizer use and "best cultural practices." With good training, they can also be made better businessmen, to give the farmers better service.

## Methodology of Training

The responsibility for training dealers must reside with BADC, with the extension service providing some of the training curriculum. It is not suggested that dealer training be a one-time, formal session, but rather a continual program for keeping the dealers informed of the latest technologies and programs.

In order to accomplish this huge task of "communicating with the farmer," BADC will require an organizational structure with people assigned to training and sales promotions as their primary responsibility. It is suggested that an organizational structure similar to the following be introduced:

1. Manager (Training)--In Dacca, reporting to the General Manager (Supply) with responsibility for in-house training of fertilizer technical people and fertilizer dealers. He would also coordinate the foreign training of fertilizer division personnel.
2. Deputy Manager (Training)--In Dacca, to assist the Manager.
3. District Sales Supervisor--In each district, with the rank of Additional District Manager. He would report to the District Manager, have the responsibility and commensurate authority for sales promotions and dealer training, and receive functional guidance from Manager (Sales) and Manager (Training).
4. Technical Field Representatives--In each agricultural thana, reporting to the District Sales Supervisor and having primary responsibility for sales promotions, dealer training, and maintaining contact and communications with all of his dealers.

It is not suggested that the above positions be additional positions requiring more personnel but be created as part of a complete organization restructuring to assign specific responsibilities and authorities and minimize the layers of management.

The Technical Field Representatives, in order to accomplish their objectives, must have mobility, and it is suggested they each be assigned a motorbike.

Prior to launching the dealer training program, the BADC training people must be trained. The Manager (Training) should develop a training program with assistance from MSS Division Managers for the District Managers, District Sales Supervisors, and Technical Field Representatives to include the following:

1. The art of teaching (training).
2. Planning.
3. Product knowledge.
4. Sales promotion techniques.
5. How to motivate dealers.

6. How to organize demonstration plots--the best cultural practices.
7. Product handling and storage.
8. Business management and simple accounting and recordkeeping.
9. Credit sources and practices.

### Followup Programs

The initial dealer training meetings should be followed up by periodic formal meetings to review earlier training, introduce new ideas, and encourage an exchange of ideas with dealers.

In addition to formal dealer meetings, the Thana Field Representative should regularly contact all dealers in their shops and have informal meetings for exchange of ideas and assistance and guidance in their promotional activities. If the dealers are to become an effective part of the fertilizer promotion program, they should be made to feel a part of the organization.

It is suggested that a monthly "Fertilizer Bulletin" be prepared at headquarters for distribution to all active dealers. Contents of the bulletin might include the following:

1. New research data and technologies.
2. Cropping trends and market data.
3. Fertilizer availability.
4. Promotional programs.
5. Credit programs.
6. Pictures and data on some demonstration plots.
7. Farmer testimonials.

### Suggested General Outline for Dealer Meetings

8:00-8:45 a.m.	Registration Name tags should be provided at time of registration Tea available during registration period
8:45 a.m.	Convene meeting--opening remarks set ton for meeting--welcome
9:00-9:30 a.m.	Managing (own business)

9:30-10.00 a.m.	Accounting, recordkeeping
10:00-11:00 a.m.	Storage, handling, and transport
11:00-12:00 noon	Credit sources, credit policy, etc.
12:00-1:00 p.m.	Product knowledge
1:00-2:30 p.m.	Lunch break (provided by BADC)
2:30-3:00 p.m.	In-store promotion/sales
3:00-3:45 p.m.	Field demonstration plots/field days
3:45-4:40 p.m.	Best cultural practices
4:30 p.m.	Pass out brochure--adjourn

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Attendance at dealer training sessions should be by invitation only. A list of active dealers and subdealers should be prepared and maintained, and only those dealers should be invited. Thana Extension Officers should be invited and included on the program. With about 20,000 active dealers in Bangladesh, there is an average of about 50 in each thana.

Presentation aids will be required and promotional material should be distributed to dealers. A suggested procurement list for consideration is as follows:

40	Slide projectors--two per district
500	Flip chart presentations, briefcase size for Technical Field Representatives
100	Streamers for dealer meetings
40	Public address systems--two per district
60,000	In-shop posters--three per dealer shops
20,000	Special in-store promotional displays
250,000	Brochures for farmers

#### Former Dealer Profile

IFDC consultants interviewed a randomized selection of former dealers. The former dealers were interviewed at their place of business, provided they were still active in business other than fertilizer. Those who did not have a business affiliation were interviewed at various locations, usually at the business location of friends.

The former dealer questionnaire was designed to give insight into why he discontinued his fertilizer business, on what basis he would consider reactivating, how many years he had been a fertilizer dealer, and what his annual sales volume averaged.

On the basis of the average length of time the former dealer was active (8 years), we concluded that he was active in both the OMS and NMS, but that his reasons for leaving the fertilizer business were not related to any disenchantment with the NMS. His primary reasons, in order of importance, were lack of capital, low profits, and short-weight bags. Since short-weight bags

contribute to reduced margins, we could conclude that low profit was the major reason for dropping out of the fertilizer business.

The average increase in the cost of fertilizer (55% since December 1, 1978) has resulted in a substantial reduction in the percentage commission and an increase in fertilizer inventory investment required. Table 17 prepared by K. Z. Rahman of USAID documents the variations in fertilizer costs and commission percentages since December 1978.

A profile of the typical former dealer is summarized in Appendix G.

## CHAPTER 5

### FARMER ACCESS TO FERTILIZER AND FARMER BUYING PRICE

#### Access to Fertilizers

Access to fertilizer under the current NMS was evaluated on three bases:

1. Number of places farmers could buy fertilizer.
2. Distribution of these places of purchase.
3. Availability of the supply of fertilizer.

The number of retail places of sale under the NMS was estimated to be slightly increased over the OMS. Under the OMS total dealer registration was 42,000, of which about 50% were active, equaling 21,000 active dealers. As previously mentioned, on the basis of this evaluation it was calculated that there are currently 22,000 active dealers with shops plus another 6,000-8,000 part-time dealers. Our market segmentation survey indicated that 87% of the currently active registered dealers were also dealers in the OMS. Though the percentage of new registered dealers is slightly higher in the easy access areas, there is no significant variation.

The total number of BADC's godowns is virtually unchanged from the days of the OMS. Dealers serve their farmer customers in about the same way under the NMS as under the OMS.

Product availability during peak demand was a problem in the OMS and remains a problem even though in-country stock has been adequate since FY 1978/79.

IFDC consultants interviewed a randomized selection of farmers on their farms. The interview was completed with only those farmers who were currently fertilizer customers. The interviews were carried out during May and June, 1981. Our dealer profile indicated that just as in the OMS, the NMS dealers were unable to maintain adequate stocks during peak demand periods primarily because of BADC's inability to supply.

The farmer questionnaire was devised to determine:

1. Extent to which nonavailability of fertilizer at the dealer level affects the availability at the farmer level.
2. Extent to which it affects the farmer's planned use of the products.
3. Other constraints to the farmer's increased fertilizer use.
4. Farmer's preferred NPK ratio.

5. Credit availability and source.
6. Extent to which lack of capital reduces fertilizer use.

There was in addition a general section to record comments the farmers volunteered. Responses to the questionnaire are summarized in Table 18.

The farmer profile confirms that he experienced difficulty with product availability during peak use periods and that this results in a 6- to 9-seer/acre reduction in product use.

### General Comments

The four most frequent farmer's comments were:

1. "Fertilizer price is too high."  
(There have been rapid price increases. Current fertilizer prices are, on a weighted average, 55% higher than in December 1978. This is a reflection of both higher world market pricing and a reduction of the subsidy. The corresponding output price has risen only 36%.)
2. "We lack capital."  
(All survey results show this to be a very real constraint to increased fertilizer use. Local moneylender credit is very expensive and bank credit for the average farmer is complicated, not readily available, and not thoroughly understood by the Bangladesh farmer.)
3. "Fertilizer is short weight in full bags."  
(IFDC consultants conducted a randomized bag weighing. The survey was nationwide at the BADC godowns. The bags were selected by point of origin and only bags that were not broken or leaking were chosen. The results are summarized in Table 19. More than half of the 250 bags selected were underweight by more than the  $\pm 0.1$  kg weight tolerance allowed.)
4. "We need more help from the extension service."  
(Less than 10% of the farmers and dealers report being visited by extension personnel. This is not a reflection on the integrity of the extension service; rather it is simply a verification of the impossible task the extension service has in attempting to keep 12 million farmers informed on the best cultural practices. They need help. BADC and BADC fertilizer dealers are logical organizations to supplement the extension service's efforts.)

## Buying Price

There are many factors that affect the price Bangladesh farmers pay for fertilizer. Some of these factors are:

1. Degree of dealer's competition.
2. Dealer's cost.
3. Product availability.
4. Product quality.
5. Whether they purchase for cash or credit.
6. Whether they purchase full bags or loose quantities.
7. Quantity of product purchased at one time.

While a specific marketing system can influence the price structure, there are other important considerations such as the supply/demand balance and dealer efficiency.

Our study indicates that the average buying price per maund is slightly higher than the official price per maund. Analyzed on a market segment basis (HUEA, LUEA, HUR, and LUR), we find that the farmer's buying price in the remote areas often averages 5-7 TK/md higher than the official price. However, in HUEA it is not unusual for the price to be 3-4 TK/md less than the official price. This is as we would expect and simply relates to the transportation cost variable. The dealer profit margin is consistent regardless of market segment.

Based on current raw data from Dr. Ekramul Ahsan's Equity Study, the small farmers buying fertilizer in hand-measured quantities pay slightly more than the national average. The dealers claim they lose about 2 kg per 50-kg bag when they sell in loose quantities. They in turn increase the price accordingly to recover the loss. Following are the small-farmer loose-quantity average purchase prices. However, it should be noted that these are preliminary figures; Dr. Ahsan's final data may vary from this.

<u>Urea/Loose</u>	<u>TSP/Loose</u>	<u>DAP/Loose</u>	<u>MP</u>
116.5 TK/md	102.5 TK/md	112.5 TK/md	73 TK/md

Appendix C shows:

1. Dealer/customer discount from official retail fertilizer price.
2. Bangladesh subsidized official retail fertilizer prices.
3. Fertilizer sales comparisons by district, compared with target sales and agronomic potential.
4. Districtwise targets and actual sales of fertilizer for FY 1980/81.

## CHAPTER 6

### BADC ORGANIZATION

Interviews with BADC management, whether at the district, division, or home-office level, revealed that without exception they were of the opinion that organizational adjustments were required.

The question of organizational adjustment and evolving a suitable staffing pattern in the context of the NMS is under consideration, as is a review of all job descriptions.

Organizing a company is not unlike developing managerial action; the results of both must be the accomplishment of pre-determined objectives. On the basis of the survey results, we would recommend the following positions be considered as part of any organizational adjustments.

1. Manager (Credit) and appropriate staff
2. Manager (Training) and appropriate staff
3. District Sales Supervisor
4. District Operations Supervisor
5. Technical Field Representative
6. Program Monitor

#### Manager (Credit)

Our market research reveals that:

1. Currently Bangladesh banks are not lending the total amount of money available for farmer and dealer loans.
2. A high percentage of farmers and dealers say that lack of capital reduces the amount of fertilizer they purchase and use.
3. A high percentage of dealers complain that one of their primary lifting problems is BADC's present bank draft policy.

There are many apparent restraints to the full development of fertilizer wholesaler/dealer structure in Bangladesh; difficulty in dealers getting credit on a timely basis is a significant one.

A major objective should be to develop a fully functioning credit system serving the specific needs of the fertilizer dealer. The system should be complete with practical policies, proce-

dures, and institutional arrangements. It is obvious from the evaluation that this type of credit is not readily available through normal banking channels. While we do not recommend that BADC replace the banks as a primary source of short- and long-term loans to dealers and farmers, we do recommend that a credit system be established to provide credit to the dealers through the BADC offices. It is not envisioned that the BADC credit department will lend money; the credit department will simply extend short-term credit to the dealer. Perhaps in the early stages this would be only from one lifting to the next. This step alone would alleviate a substantial portion of the time-consuming lifting process.

We are aware that BADC departmental policies and procedures need to be examined and, wherever needed, updated, revised, and implemented as early as possible so that this credit constraint can be, if not eliminated, at least reduced. In expediting the credit program, the credit department should understand that they will do all possible to minimize constraints and unnecessary requirements while being aware of the need for a system that will assure timely payment.

The BADC credit department, once established, should be ready to provide short-term credit to all eligible dealers in Bangladesh, monitor activities of the dealers, and collect on credit accounts when due.

To the extent possible, BADC's purpose should be providing all eligible dealers with the necessary credit to maintain adequate fertilizer stock, to contribute to the reduction of the current complicated lifting procedure, and to encourage the dealers in turn to offer short-term credit to the farmer.

There is a need to provide Bangladesh fertilizer dealers with a comprehensive credit program with reasonable terms so that they can achieve fair returns and provide better service to the Bangladesh farmer.

The credit manager's scope of activities, then, would include:

1. Establish policies as to dealer credit limits, terms of credit, collection procedures, as well as other credit policy matters.
2. Refine procedures for contacting dealers requiring credit; prepare, evaluate, and approve credit applications.
3. Determine the annual credit program and budget and prepare timely reports on credit activities as directed by the General Manager.
4. Help select, train, and organize the staff needed to conduct the credit program in a timely and efficient manner and the orientation of the relevant BADC staff outside the credit department, such as those in operations, marketing, and finance.
5. Determine the necessary equipment required to conduct the credit program.

6. Administer, supervise, and monitor all phases of the program.
7. Receive and process credit applications and supervise collection procedures.
8. Monitor dealer credit applications and BADC collection activities.

### Manager (Training)

Training, specifically dealer training, has received considerable attention, and we have examined two proposed dealer training formats which have been submitted for approval and implementation. However, no action to initiate either has occurred.

It is apparent that one of the reasons is that the current organizational structure does not provide a person or department for this function. It has been assigned to various people and departments who can give it only sporadic attention on those occasions when their regular day-to-day duties allow the time.

It is suggested that training should be a continuous procedure and not a one-time effort, and that it should include training for BADC personnel as well as dealer training.

The initial training course could be a formalized classroom program directed towards those BADC personnel whose authorities, responsibilities, and functions have changed as a result of the NMS and those BADC people who will be responsible for dealer training.

### District Sales Supervisor

The evaluation results indicate that BADC field sales contact with the dealer (BADC promotional calls at the dealer shops) are minimal, which suggests a need for a mobilized field group and someone to supervise them.

It is suggested that the District Sales Supervisor could be responsible for all sales in the district and the continuous field training of the technical field group. To accomplish this he would need to develop a good, well organized field staff. The District Sales Supervisor could be responsible for analysis of all conditions existing in the district and determine the best plan for meeting objectives and ensure that the plan is put into effect. It would be important that he properly coordinate the efforts of the technical field staff.

The supervisor would vigorously promote genuine rapport between BADC and the dealers.

It would be the Sales Supervisor's job to see that the technical field staff adhere to the classroom training they receive when they enter their proposed new assignments.

Experience tells us that to ensure optimum results of the formalized training a vigorous and detailed followup during the early field period is necessary. Supervision, strictly speaking, means giving instructions and seeing that they are carried out.

### District Operations Supervisor

Lifting procedures are slow at the BADC godowns, indicating a need to specialize and emphasize the operational management of the godowns.

A district operations supervisor would be responsible for developing and supervising a well-organized and smoothly functioning godown organization.

His primary responsibilities could be summarized as:

1. Godown management
  - a. Customer service
  - b. Operations
  - c. Maintenance
2. Stock accounting
  - a. Maintaining control of district records
  - b. Auditing godown records
  - c. Periodic physical verification of stock
3. Stock control
  - a. Indenting to provide stock for sales targets
  - b. Followup to ensure that dispatches are received
  - c. Control of internal movement

### Technical Field Representative

The majority of the district managers recommended that the Thana Inspector could become the Technical Field Representative, be provided with a motor bike, and be assigned duties and responsibilities such as:

1. Make a minimum number of visits to the dealer in his shop over a given period of time. The visits would be to assist the dealer in sales promotion and the development of other methods of getting the fertilizer from the dealer's shop to the farmer as well as explain the technical aspects of fertilizer use and the best cultural practices.

2. Cooperate with the dealer in planning and conducting informational meetings with farmers that will inform the farmer about improved farming practices as they relate to his specific area.
3. Assist in dealer training meetings and conduct field followup.
4. Establish farm demonstration plots that will provide the farmer with an additional opportunity to learn more about the practices and benefits of improved farming methods. (It is recommended that this activity be coordinated with the extension service.)
5. Assist the dealer in determining good business economics.

### Program Monitor

It is suggested that the position of Program Monitor be established and that he report to the Member-Director (Supply).

The Program Monitor would have a key role in monitoring the general progress of BADC's fertilizer activities. The position would have the specific task of monitoring and assessing the physical activities of various departments as measured against stated objectives.

Program monitoring at this level fills a specific gap caused by the lack of anyone else with the time or objectivity to assess the road level of activity and its likelihood of achieving predetermined targets.

It is envisioned that the Program Monitor, who would develop and maintain trend graphs and ratio analysis charts, would have the good business acumen to arrive at sound business deductions. The Program Monitor should be involved in strategic planning, where his objective knowledge of current activities would be of great help.

The Program Monitor would be a staff position with no "line" authority; consequently, he could not direct the departments, but could report to the Member-Director (Supply). Once the Member-Director (Supply) along with the Chairman and General Manager determined directives to correct any deviation from plan, the Program Monitor would evaluate the resultant actions to ensure that the directive had the desired results.

This important position would not have decisionmaking authority, but for a line executive to make good decisions, he needs expert and objective information. Staff personnel do not and cannot substitute for line management, but adequate staff work does result in exposing different points of view. Sometimes it reconciles conflicting information and clarifies options available to the line manager who has the ultimate decisionmaking authority.

### Job Descriptions

It is difficult for people to perform satisfactorily in their work and difficult to judge the level of performance unless everyone knows what work is required in specific job assignments.

BADC job descriptions were last revised in 1969. The jobs have changed but the descriptions have not.

A job description need not be lengthy, but it should clearly identify the duties, responsibilities, and authorities of the positions.

Blank and completed sample job descriptions follow.





BADC  
JOB DESCRIPTION (Sample)

This Position

Title  Godown Supervisor
--------------------------------

- (1) Duties
- (2) Responsibilities
- (3) Authorities

Reporting to

Title District  Oprns. Supervisor
---

Unit Location  Chittagong
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Chittagong District

Dept  Fertilizer Division
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Brief description this position	Responsible for all operations relating to the godowns assigned.	Procedure followed in this position	Stock Control and Accounting Manual, Godown Operating & Maintenance Manual

Duties:

1. Maintaining contact with sales and supply personnel to ensure that adequate stocks are indented and available to meet sales requirements.
2. Planning personnel requirements to properly handle the anticipated work load.
3. Supervising all godown operations and personnel, ensuring a high standard of performance.
4. Maintaining the prescribed stock and records to account for stock, sales proceeds, and equipment.
5. Processing customer orders quickly and efficiently.
6. Completing movement programs as directed.
7. Completing in a timely manner all reports and response to communications.
8. Maintaining equipment and facilities in good condition.
9. Assuring that the godown is properly supervised in his absence.
10. Any other duties that may be assigned by his supervisor.

Responsibilities:

Responsible for the safeguarding of corporation stock,  
equipment and facilities; for the performance of  
personnel under his supervision; for maintaining good  
customer service and relations; for assuring that  
contractors perform according to agreement; and for  
following corporation orders and operating procedures.

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Authorities:

1. To recommend the hiring or terminating of storekeepers.
  2. To hire and terminate other employees under his supervision.
  3. To control the operation of contractors providing services at his godowns and recommend action for non-performance.
- 
- 
-

APPENDIX A

QUESTIONNAIRES USED IN INTERVIEWS

1. List of Actual Interview Areas
2. Examples of Questionnaires Used in the Interviews
3. Districtwise Summary of Information Gathered From Dealers' Questionnaires

List of Actual Interview Areas

District	Actual Locations Interview Conducted			
	HUEA	LUEA	HUR	LUR
Dacca	Joydevpur Munshiganj Narsingdi Kaliakoir Monohordi Sirajdikhan Tongibari	Kapasia Shibpur Rupganj B. Bazar Araihazar	Balaboo Chalakchar Kaliganj	Daulatpur Nawabganj Gazaria
Kishoreganj	Kuliarchar Polarghat Kishoreganj Nilganj Sararchar (Bajitpur) Manikdi (Kuliarchar)	Pakundia Karimganj Marikhali (Karimganj) Molkhola Sukia (Pakundia)	Itna Monoharpur (Kuliarchar) Domra Kottahgar (Kishoreganj) Kanda (Bajitpur)	Hilochia (Bajitpur) Tarakanda (Kuliarchar) Laxmipur (Bajitpur)
Tangail	Natiapara Mirjapur Karalia Deohata Hamidpur Gopalpur Brahmanshaha	Silimpur Elasin Kashil Banga Habla Motra (Kashil)	Dolapara Shakipur Hatubhanga Kachua Tipikosharia Bohairatoil (Augarkhola) Shandanpur Chunabazar	Kalidaspara Kirtonkhola Pacharhat Basail Naluabazar
Mymensingh	Isshorganj Fulpur Fulbaria Dapunia Tarakanda Payaree Magbagh Batkandi Danikhola Gogra	Muktagacha Babukhali Shambuganj Balian Daponia Ramgopalpur Gouripur	Borohit Uchakila Sirta Borochar Kanihari Kalirbazar Boylor Ashim Deokhola	Moylakanda Banogram Mowha Taraghat Bhangabari Bowla, Deopara Charnilakhi Shibganj, Dollah Kalodaha, Balia Gobindapur Showhati
Faridpur	Kotwali (PS) Bhanga (PS) Madaripur (PS) (Nutonbazar)	Sadarpur (PS) Rajbari (PS)	Boalmari Nagarkanda	Charbhadrasan Rajoir Hoksudpur Baliakandi
Chittagong	Potiya Hathazari Mirsarai Rangunia Sitakunda Cox's Bazar Ramu Chokaria Nazirhat	Raozan Chandanaish Hathazari Mirsarai Cox's Bazar Satkania	Miar Bazar (Banshkhalii) Keranihat (Satkania) Iddgaon (Cox's Bazar)	Aburhat (Mirsarai) Dulahazar (Chakaria)
Noakhali	Selonia Sarsadi Chaumuhani Feni	Senbagh	Chaprashirhat Chhagalnaiya Chatkhil	Charjabbar Charvata Chardarbush Sundaripur Thanarhat
Comilla	Kangshanagarbazar Kabila Bazar Bijoypur Elliotganj Chandina	Barura Jafarganj	Kutibazar Panchtobi	Ramchandrapur Jodda Pomgaon
Sylhet	Sylhet Sadar Sreemangol Habiganj	Tajpur Jaintapur Moulvibazar Biswanath	Gowainghat Balaganj	

(Continued)

List of Actual Interview Areas  
(Continued)

District	Actual Locations Interview Conducted			
	HUEA	LUEA	HUR	LUR
Rajshahi	Poba Naogaon Nawabganj Singra Natore	Badalgachi Puthia Charghat	Damurhat Niamatpur	Shibganj Bagatipara
Palna	Kotwali Iswardi Ullahpara	Atghorai Bera	Faridpur (PS) Vangra Saratnagar	Chatmohar Rly. Station Bazar
Bogra	Kahaloo Adamdighi	Dupchachia Dupchachia Bazar	Dhunat Kantanagar	Nandigram (PS) Boyalgram
Rangpur	Kotwali (PS) Sayedpur (PS) Gobindaganj (PS)	Mithapukur (PS) Kaunia (PS)	Lalmonirhat (PS) Kaliganj (PS)	Hatibandha Barakhata
Dinajpur	Phulhari Kotwali Birganj	Pirganj Boda	Chirirbandar Biorol	Sochaganj Kharole
Khulna	Satkhira Bagerhat Kolaroa Jagannathpur	Daulatpur Phultala Fakirhat	Chitolmari Depara Basantapur Sarassati Ramkrishnapur	Batiaghata Terokhada Paikgachha Kachua
Jessore	Rupdia Singia Bazar Noapara Choramankathi Jhikargacha Navaroon	Tularampur Fultola	Basundia Rajganj	Digulia Bordia Searbor
Patuakhali	Baufal Betagi	Puran Bazar Lewkhati Hatkhola Botolbunia Muradia Kalikapur Rajakhali Madarbunia Labukhali Kamalapur Serakhali	Mirjaganj Amtali	Dosmina Bakulbaria Golachina Charboonabad Awliapur Amkhola Sologabua Ratandi Charhosnabad
Kushtia	Mirpur Gangni	Khoksha Alamdanga Bazar	Kamalapur Durbachara Allahur Dargah	Alamdanga Khoksha Daulatpur Choraikati Ektherpur
Barisal	Bakerganj Gournadi	Kotwali Banoripara Jhalakathi	Lalmohon Bhola Borhanuddin	Swarupkathi Nalchity

SAMPLE QUESTIONNAIRE FOR FORMER DEALERS

Date \_\_\_\_\_  
Market \_\_\_\_\_  
Thana \_\_\_\_\_  
Subdivision \_\_\_\_\_  
District \_\_\_\_\_  
Name of Interviewer \_\_\_\_\_  
Location of Interview \_\_\_\_\_

1. Name of former dealer \_\_\_\_\_
2. What was your registration No.? \_\_\_\_\_
3. Are you still registered? Yes \_\_\_\_\_ No \_\_\_\_\_
4. How long were you a fertilizer dealer? \_\_\_\_\_ Years
5. What was your sales volume the last full years you were a dealer? \_\_\_\_\_ Tons
6. Are you still operating any other business?  
Yes \_\_\_\_\_ No \_\_\_\_\_
7. If yes, identify type(s) of business \_\_\_\_\_
8. Why did you stop being active in the fertilizer business?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
9. On what basis would you consider reactivating your fertilizer dealership? \_\_\_\_\_
10. General comments of dealer \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\*If interviewer determines that dealer has registered but in fact is not and never has been active check here. \_\_\_\_\_

SAMPLE QUESTIONNAIRE FOR FARMERS

Nearest PDP \_\_\_\_\_ Distance \_\_\_\_\_ Date \_\_\_\_\_  
District \_\_\_\_\_  
Nearest TSC \_\_\_\_\_ Distance \_\_\_\_\_ Subdivision \_\_\_\_\_  
Village \_\_\_\_\_  
Name of Interviewer \_\_\_\_\_

1. What quantity did you purchase (in seers):  
Urea \_\_\_\_\_, GTSP \_\_\_\_\_, PTSP \_\_\_\_\_, DAP \_\_\_\_\_, MP \_\_\_\_\_, OTHER \_\_\_\_\_  
\_\_\_\_\_
2. Was purchase in full bags? \_\_\_\_\_ 25 Kg \_\_\_\_\_ 50 Kg \_\_\_\_\_
3. How much did you pay for the fertilizer you are carrying:  
UREA \_\_\_\_\_ GTSP \_\_\_\_\_ PTSP \_\_\_\_\_ DAP \_\_\_\_\_ MP \_\_\_\_\_ OTHER \_\_\_\_\_  
TK \_\_\_\_\_ TK \_\_\_\_\_ TK \_\_\_\_\_ TK \_\_\_\_\_ TK \_\_\_\_\_ TK \_\_\_\_\_
4. How far is your farm from a fertilizer source? \_\_\_\_\_ miles
5. How are you transporting fertilizer to your place?  
\_\_\_\_\_
6. What is your transport cost? TK/md \_\_\_\_\_
7. Was credit available for this purchase? \_\_\_\_\_  
If so, what is the source? Dealer \_\_\_\_\_  
Bank \_\_\_\_\_  
Credit voucher \_\_\_\_\_  
Moneylender \_\_\_\_\_
8. Were you unable to purchase the fertilizer product of your choice today? Yes \_\_\_\_\_ No \_\_\_\_\_
9. Product not available:  
UREA \_\_\_\_\_ GTSP \_\_\_\_\_ PTSP \_\_\_\_\_ DAP \_\_\_\_\_ MP \_\_\_\_\_ OTHER \_\_\_\_\_
10. Will it affect your total product use? Yes \_\_\_\_\_ No \_\_\_\_\_
11. If yes, how many average seers/acre? \_\_\_\_\_

12. Do you get any information/advice on fertilizer use?

Yes \_\_\_\_ No \_\_\_\_

13. If yes, where do you obtain information on best fertilizer use? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

14. Any comments? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



SAMPLE QUESTIONNAIRE FOR THANA INSPECTORS

Date \_\_\_\_\_

Name of  
PDP/TSC \_\_\_\_\_

Subdivision \_\_\_\_\_

District \_\_\_\_\_

1. What is the total number of registered dealers to date at the PDP/TSC? \_\_\_\_\_
2. How many dealers have lifted fertilizer from the PDP/TSC since January 1, 1981, up to date? (DO NOT DUPLICATE A SINGLE DEALER, I.E., ONE DEALER MAY LIFT MORE THAN ONCE DURING THE PERIOD, BUT HE IS TO BE COUNTED ONCE) \_\_\_\_\_
3. In this past season were the HYV plantings in your area higher or lower than previous season? \_\_\_\_\_
4. Estimated percent: Up \_\_\_\_\_, Down \_\_\_\_\_
5. Were irrigation pump sales and rentals: Up \_\_\_\_\_, Down \_\_\_\_\_
6. Estimated percent: Up \_\_\_\_\_, Down \_\_\_\_\_

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SAMPLE QUESTIONNAIRE FOR DEALERS

Date: \_\_\_\_\_  
Market: \_\_\_\_\_  
Thana: \_\_\_\_\_  
Subdivision: \_\_\_\_\_  
District: \_\_\_\_\_  
Name of Interviewer: \_\_\_\_\_  
Location of Interview: \_\_\_\_\_

1. Name of Dealer: \_\_\_\_\_  
Registration No. \_\_\_\_\_  
(If not registered write "none.")
2. Name of PDP/TSC/TCCA or any other organization from where he buys  
\_\_\_\_\_  
\_\_\_\_\_
3. Name of markets where he operates shops and distances from places  
of purchase \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
4. What is dealer's buying price per maund?  
TK \_\_\_\_\_ TK \_\_\_\_\_ TK \_\_\_\_\_ TK \_\_\_\_\_ TK \_\_\_\_\_  
Urea GTSP PTSP DAP MP  
TK \_\_\_\_\_  
Others
5. Have these buying prices changed recently? \_\_\_\_\_ If so, explain  
\_\_\_\_\_  
\_\_\_\_\_
6. Fertilizer sales 1979/80 \_\_\_\_\_ maunds
7. Estimated total sales 1980/81 \_\_\_\_\_ maunds
8. If estimated sales are low compared to last year, explain why. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
9. How long has he been a fertilizer dealer? \_\_\_\_\_ years
10. Dealer's warehouse capacity \_\_\_\_\_ maunds
11. Rented or owned \_\_\_\_\_

(Continued)

12. If rented, rate/month TK \_\_\_\_\_. Percent of warehouse used for fertilizer annual average \_\_\_\_\_ Maximum \_\_\_\_\_ Minimum \_\_\_\_\_.
13. What is average quantity of stock maintained? \_\_\_\_\_
14. How many times does he normally lift fertilizer every month? \_\_\_\_\_
15. What is the average quantity per lifting? \_\_\_\_\_
16. Would he like to increase average quantity lifted and if so, why does he not? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
17. How does he transport fertilizer to his store (what mode)? \_\_\_\_\_  
\_\_\_\_\_
18. What is his cost for transport? \_\_\_\_\_ TK/maund  
Loading? \_\_\_\_\_ TK/maund  
Unloading? \_\_\_\_\_ TK/maund
19. Other expenses, if any. \_\_\_\_\_
20. What is his total capital investment in fertilizer business  
TK \_\_\_\_\_
21. Does lack of capital restrict his sales? \_\_\_\_\_
22. What are the difficulties he faces for purchase of higher quantity?  
\_\_\_\_\_  
\_\_\_\_\_
23. Can he borrow capital? \_\_\_\_\_ If so, from which source? \_\_\_\_\_  
\_\_\_\_\_
24. What other business does the dealer operate? \_\_\_\_\_
25. For how many years? \_\_\_\_\_
26. How much capital has he invested in other business? \_\_\_\_\_
27. What is his annual return on capital in other business? \_\_\_\_\_
28. Which business is more profitable? \_\_\_\_\_
29. What is the number of dealer employees? \_\_\_\_\_
30. Rate of pay, if any, per month, TK. \_\_\_\_\_
31. Percent of time the employees work in fertilizer business? \_\_\_\_\_  
\_\_\_\_\_
32. How many fertilizer dealers are there in his market? \_\_\_\_\_
33. Does he sell fertilizer to people who resell (subdealers)? \_\_\_\_\_
34. If yes, then to how many? \_\_\_\_\_ Location \_\_\_\_\_

(Continued)

35. Name of subdealers \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
36. Does the subdealer have a store? \_\_\_\_\_ Location \_\_\_\_\_
37. What percent of his total sales are to subdealers? \_\_\_\_\_
38. What is his selling price per maund to subdealers?  
 TK \_\_\_\_\_ TK \_\_\_\_\_ TK \_\_\_\_\_ TK \_\_\_\_\_ TK \_\_\_\_\_  
     Urea           GTSP           PTSP           DAP           MP  
 TK \_\_\_\_\_  
     Others
39. Have these selling prices changed recently? \_\_\_\_\_ If so, explain  
 \_\_\_\_\_
40. What percentage of different kinds of fertilizer does he buy in  
 a year? \_\_\_\_\_% \_\_\_\_\_% \_\_\_\_\_% \_\_\_\_\_% \_\_\_\_\_% \_\_\_\_\_%  
           Urea           GTSP           PTSP           DAP           MP           Others
41. What is the percentage of fertilizer he sells from his retail  
 shop to farmers, by full bags and loose?  
 Full bags: \_\_\_\_\_% \_\_\_\_\_% \_\_\_\_\_% \_\_\_\_\_% \_\_\_\_\_% \_\_\_\_\_%  
                   Urea           GTSP           PTSP           DAP           MP           Others  
 Loose:        \_\_\_\_\_% \_\_\_\_\_% \_\_\_\_\_% \_\_\_\_\_% \_\_\_\_\_% \_\_\_\_\_%  
                   Urea           GTSP           PTSP           DAP           MP           Others
42. Does the dealer extend credit? \_\_\_\_\_  
 If so, what percent of his sales is:  
 To farmers: \_\_\_\_\_  
 At what terms \_\_\_\_\_  
 What kind of interest does he charge? \_\_\_\_\_  
 To subdealers \_\_\_\_\_  
 At what terms? \_\_\_\_\_  
 What kind of interest does he charge? \_\_\_\_\_
43. To his knowledge has there been a significant change in cropping  
 pattern which would increase or decrease fertilizer volume?  
 Yes \_\_\_\_\_ No \_\_\_\_\_
44. Identify crop \_\_\_\_\_
45. Extent of variation percent \_\_\_\_\_

(Continued)

46. How does it correspond to his estimated sales? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

47. Does his retail shop have promotional posters on display?

Yes \_\_\_\_\_ No \_\_\_\_\_

48. Are brochures available in the shop? \_\_\_\_\_

49. Is he a farmer as well as a dealer? Yes \_\_\_\_\_ No \_\_\_\_\_

50. If yes, how many acres does he farm? \_\_\_\_\_

51. Does he buy fertilizer from other districts if it is easily accessible? Yes \_\_\_\_\_ No \_\_\_\_\_

52. If yes, what percentage of his total purchase are of those kinds?  
\_\_\_\_\_

53. What is the average loss per maund of fertilizer when sold loose (in seers)?

_____	_____	_____	_____	_____	_____
_____%	_____%	_____%	_____%	_____%	_____%
Urea	GTSP	PTSP	DAP	MP	Others

54. What is the dealer's selling price to farmers at his shop?

In full bags, TK/bag:

_____	_____	_____	_____	_____	_____
Urea	GTSP	PTSP	DAP	MP	Others

Loose, TK/Seer

_____	_____	_____	_____	_____	_____
Urea	GTSP	PTSP	DAP	MP	Others

55. Are there any difficulties with the purchase transaction procedure?

If so, explain \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

56. Explain any sales promotional activities performed:

To dealers \_\_\_\_\_  
\_\_\_\_\_

To farmers \_\_\_\_\_  
\_\_\_\_\_

(Continued)

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57. Does T.I. visit his shop? \_\_\_\_\_

58. If so, for what purpose? \_\_\_\_\_

59. Does anybody from the extension department visit his shop? \_\_\_\_\_

60. If so, for what purpose? \_\_\_\_\_

61. Are you aware of any demonstration plot in the area? \_\_\_\_\_

62. If yes, are you aware of any result? \_\_\_\_\_

63. Who is supervising the plot? \_\_\_\_\_

Any general comments the dealer wants to make:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

64. Have there been days when the BADC godown was out of a particular product? Yes \_\_\_\_\_, No \_\_\_\_\_

65. If yes, how many consecutive days were you unable to lift? \_\_\_\_\_

66. Did you lose sales as a result? Yes \_\_\_\_\_, No \_\_\_\_\_

67. If yes, what percent of your total sales? \_\_\_\_\_%

68. Were you able to purchase from a more distant godown?  
Yes \_\_\_\_\_, No \_\_\_\_\_

Any general comments the dealer wants to make: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Districtwise Summary of Information Gathered From Dealers' Questionnaires

	<u>Dacca</u>	<u>Tangail</u>	<u>Mymensingh</u>	<u>Faridpur</u>	<u>Kishoreganj</u>	<u>Chittagong</u>	<u>Noakhali</u>	<u>Comilla</u>	<u>Sylhet</u>	<u>Rajshahi</u>
<u>Dealers' Sales Trend</u>										
% increased in 1980/81	55	50	76	65	70	43	46	65	64	57
% decreased in 1980/81	45	50	18	31	25	49	36	32	25	39
% with no change	-	-	6	5	5	8	18	4	11	4
<u>Dealer Godown</u>										
% having own godown	59	79	72	73	72	54	60	67	65	84
% renting godown	41	21	28	27	28	46	40	33	35	16
Average capacity (md)	1,195	799	788	640	537	653	1,215	1,176	869	536
Average annual rent/100 md (TK)	166	171	232	199	215	519	222	331	325	283
Dealers current average lifting (md)	112	111	55	115	53	156	104	128	60	54
<u>Average Margin After Transportation Cost Deducted</u>										
At PDP (TK/md)	4.98	0.79	3.94	5.94	3.80	4.72	2.76	4.01	4.99	4.48
At TSC (TK/md)	1.54	-2.55	0.50	2.50	0.36	1.28	-0.68	0.57	1.55	1.04
% dealers lack of capital restrict sales	60	39	48	33	61	83	83	82	82	77
<u>Dealer Business</u>										
% own just more than fertilizer business	77	50	56	75	36	91	86	61	69	60
% own only fertilizer business	23	50	44	25	65	9	14	39	31	40
% also in pesticides business	25	12	16	54	12	51	59	62	29	37
% who are also farmers	92	74	94	99	100	85	44	57	20	73
% who say other business is more profitable	64	73	59	89	63	76	78	56	89	45
<u>Average Capital</u>										
Fertilizer business (TK)	19,981	16,070	11,416	17,197	11,953	36,067	22,110	18,948	10,947	11,733
Other business (TK)	24,894	24,469	15,124	18,787	18,867	38,822	23,778	14,210	30,080	16,474
% of dealers selling to subdealers (S.D.)	39	46	32	25	37	54	47	50	25	39
Average number of S.D. per dealer	8	9	8	5	5	10	13	8	4	6
Dealer average % of total sales to subdealers	46	49	55	58	35	55	54	48	57	45
Average commission offered to subdealer (TK/md)	2	1	6	4	4	3	-3	3	2	3
<u>Dealer Average Sales</u>										
% full bags	28	25	23	42	22	57	38	49	17	34
% loose	72	75	77	58	78	43	62	51	83	66
<u>% Extending Credit</u>										
To farmers	98	93	80	97	70	84	77	92	48	61
To dealers	68	67	22	17	33	64	38	38	14	16
% of dealers who were also dealers in OMS	88	87	85	72	95	89	93	81	64	98
<u>Dealer Buying Pattern</u>										
% buying from PDP only	36	54	51	61	66	85	73	90	58	39
% buying from TSC only	40	15	32	2	3	5	14	-	22	53
% buying from TCCA only	-	-	-	-	-	2	2	1	-	-
% buying from PDP or TCCA	24	31	18	37	31	8	12	9	20	9
<u>% Dealers Engaged in Sales Promotional Activities</u>										
With farmers	35	12	5	12	23	23	3	16	28	13
With subdealers	-	-	-	3	-	16	8	13	-	1
<u>% Dealers Reporting on Visits on Sales Promotional Activities</u>										
By thana inspector	-	-	-	10	-	-	-	-	-	-
By extension people	1	-	4	1	10	17	19	31	38	-
% aware of demonstration plot	37	21	71	58	60	42	61	48	78	16
% having promotional posters to his store	2	8	16	3	8	30	3	5	17	37
% having brochures available at his store	12	15	9	8	16	44	2	-	13	29
<u>Nonavailability</u>										
% unable to purchase from BADC godown in current year	95	62	74	61	85	65	26	78	23	35
% incurred loss	93	91	98	94	96	78	49	100	100	75
Average % of loss	9	7	4	7	9	13	6	10	15	12

(Continued)

Districtwise Summary of Information Gathered from Dealers' Questionnaires  
(Continued)

	<u>Dinajpur</u>	<u>Rangpur</u>	<u>Bogra</u>	<u>Pabna</u>	<u>Khulna</u>	<u>Patuakhali</u>	<u>Jessore</u>	<u>Kushtia</u>	<u>Barisal</u>	<u>National Average</u>
<u>Dealers' Sales Trend</u>										
% increased in 1980/81	72	54	74	55	58	34	55	46	38	57
% decreased in 1980/81	19	42	26	33	29	66	26	46	62	37
% with no change	19	4	-	12	13	-	19	7	-	7
<u>Dealer Godown</u>										
% having own godown	83	73	55	75	64	81	62	77	81	71
% renting godown	17	27	35	25	36	19	38	23	19	29
Average capacity (md)	549	309	1,257	446	341	475	1,111	1,057	505	761
Average annual rent/100 md (TK)	288	291	640	648	762	506	100	248	345	342
Dealers current average lifting (md)	95	88	98	59	35	110	73	79	60	87
<u>Average Margin After Transportation Cost Deducted</u>										
At PDP (TK/md)	5.78	5.89	5.69	5.59	5.26	3.45	4.49	5.26	5.30	4.59
At TSC (TK/md)	2.34	2.45	2.25	2.15	1.82	0.01	1.05	1.82	1.86	1.15
% dealers lack of capital restrict sales	88	67	59	70	60	70	74	79	34	66
<u>Dealer Business</u>										
% own just more than fertilizer business	57	61	51	55	78	72	50	45	70	64
% own only fertilizer business	43	39	49	35	22	28	50	55	30	36
% also in pesticides business	62	42	42	74	50	62	32	23	84	44
% who are also farmers	91	92	100	95	57	96	66	77	88	79
% who say other business is more profitable	77	88	41	68	78	67	84	58	81	70
<u>Average Capital</u>										
Fertilizer business (TK)	20,522	16,333	24,536	20,113	6,352	14,133	11,515	12,196	13,346	16,604
Other business (TK)	20,491	13,375	18,668	18,938	20,157	18,500	12,709	18,233	22,126	19,984
% of dealers selling to subdealers (S.D.)	23	37	44	25	35	32	48	34	18	41
Average number of S.D. per dealer	4	5	14	2	5	3	9	7	3	7
Dealer average % of total sales to subdealers	19	40	36	16	45	41	57	43	48	45
Average commission offered to subdealer (TK/md)	2	3	3	1	5	2	5	5	3	3
<u>Dealer Average Sales</u>										
% full bags	32	44	48	31	30	36	45	43	42	26
% loose	68	56	52	69	69	64	55	57	58	64
<u>% Extending Credit</u>										
To farmers	75	90	73	81	68	100	79	85	85	81
To dealers	22	26	26	13	20	33	19	18	19	30
% of dealers who were also dealers in OMS	69	62	84	88	98	92	96	100	80	85
<u>Dealer Buying Pattern</u>										
% buying from PDP only	43	58	31	25	31	33	60	49	32	51
% buying from TSC only	45	36	53	63	51	8	33	45	43	30
% buying from TCCA only	-	-	-	-	-	-	-	3	-	-
% buying from PDP or TCCA	12	10	16	13	18	59	8	4	25	19
<u>% Dealers Engaged in Sales Promotional Activities</u>										
With farmers	59	55	62	75	17	26	22	-	27	27
With subdealers	32	13	-	-	-	9	-	-	6	5
<u>% Dealers Reporting on Visits on Sales Promotional Activities</u>										
By thana inspector	6	-	-	-	-	-	-	-	-	1
By extension people	-	5	10	5	-	5	-	-	-3	8
% aware of demonstration plot	24	49	40	63	52	50	42	17	41	46
% having promotional posters to his store	37	8	6	38	28	47	30	19	28	20
% having brochures available at his store	17	15	9	8	31	1	27	13	3	14
<u>Nonavailability</u>										
% unable to purchase from BADC godown in current year	60	79	38	28	48	100	24	21	68	56
% incurred loss	73	87	50	75	100	90	50	100	77	83
Average % of loss	4	10	3	7	13	4	8	10	2	8

APPENDIX B

STATUS OF PRIMARY DISTRIBUTION POINTS AND THANA SALES CENTERS

- Table B-1. Number and Location of Existing and Proposed Primary Distribution Points (PDP)
- Table B-2. Number of PDPs; Number of TSCs Proposed for Retention, Proposed for Closing, and Actually Closed, By District
- Table B-3. Comparative Sales at Thana Sales Centers by Locations
- Table B-4. Storage Capacity of Existing and Proposed Godowns at Primary Distribution Points
- Table B-5. Capacity of Godowns Controlled by Primary Distribution Points Compared With the Total Capacity of All Godowns in Bangladesh
- Table B-6. Average Monthly Inventory by District and Division During 1979 and 1980
- Table B-7. Average Utilization of Storage Capacity by District and Division
- Table B-8. Comparison of PDP Sales in the First 12 Months of NMS With Total Sales in the PDP Home Thanas in the Previous 12 Months

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Table B-1. Number and Location of Existing and Proposed Primary Distribution Points (PDP)

<u>District</u>	<u>Current PDP Locations</u>	<u>Additional PDP Locations Proposed by BADC</u>
Chittagong	Chittagong Dohazari Cox's Bazar Chakaria	Sawndip
Noakhali	Choumohani (Begumganj) Feni Laksmipur	Hatia
Comilla	Comilla Brahmanbaria Chandpur Laksham Hajiganj	Daudkandi
Sylhet	Sylhet Sreemangal Habiganj	Sunamganj Jamalganj Azmiriganj Kulaura Saistaganj
Dacca	Narayanganj (Kalirbazar) M.M. Oil Mill Joydebpur Mirkadim Narsingdi Manikganj	Savar
Kishoreganj	Kishoreganj Bhairab Kuliarchar Sararchar Netrokona	Zaria
Mymensingh	Mymensingh Shambuganj Fulbaria Gaffargaon	
Subtotal Number	30	10

(Continued)

Table B-1. Number and Location of Existing and Proposed Primary Distribution Points (PDP) (Continued)

<u>District</u>	<u>Current PDP Locations</u>	<u>Additional PDP Locations Proposed by BADC</u>
Jamalpur	Jamalpur Sherpur Melandahbazar	
Tangail	Tangail Madhupur	Mirjapur
Faridpur	Faridpur (Tepakhola) Rajbari Madaripur	Sariatpur Gopalganj
Rajshahi	Rajshahi Natore Atrai Noagaon Rohanpur Chapai Nawabganj	Amnura
Dinajpur	Dinajpur Shibganj (Thakurgaon) Panchagarh Charkhai Parbatipur	
Rangpur	Rangpur Saidpur Gaibandah Kurigram Lalmonirhat Domar	
Bogra	Bogra Santahar Joypurhat	
Pabna	Pabna Ishurdi/Muladi Ullapara Shahajadpur Serajganj	Baghabarighat Nagarbari
Khulna	Khulna (Boyra & Rajapur) Satkhira Bagerhat	
Subtotal Number	36	6

(Continued)

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Table B-1. Number and Location of Existing and Proposed Primary Distribution Points (PDP) (Continued)

<u>District</u>	<u>Current PDP Locations</u>	<u>Additional PDP Locations Proposed by BADC</u>
Jessore	Jessore Kaliganj Jhinaidah Magura Narail Jhikargacha	
Kushtia	Kushtia Chuadanga Meherpur	
Barisal	Barisal Bhola	Mathbaria
Patuakhali	Patuakhali Barguna	
Subtotal Number	13	1
TOTAL	79	17

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Table B-2. Number of PDPs; Number of TSCs Proposed for Retention, Proposed for Closing, and Actually Closed, By District

<u>Division and District</u>	<u>Number of Thanas</u>	<u>Number of PDPs Existing &amp; Proposed</u>	<u>Number of TSCs Proposed for Retention</u>
<u>Chittagong Division</u>			
Chittagong		5	6
Chittagong Hill Tracts		-	13
Noakhali		4	3
Comilla		6	2
Sylhet		8	13
Total	103	23	37
<u>Dacca Division</u>			
Dacca		7	7
Kishoreganj		6	4
Mymensingh		7	7
Tangail		3	2
Faridpur		5	2
Total	112	28	22
<u>Khulna Division</u>			
Khulna		3	4
Jessore		6	2
Kushtia		3	0
Barisal		3	1
Patuakhali		2	1
Total	90	17	8
<u>Rajshahi Division</u>			
Rajshahi		7	4
Dinajpur		5	3
Rangpur		6	7
Bogra		3	2
Pabna		7	5
Total	113	28	21
<b>TOTAL</b>	<b>418</b>	<b>96</b>	<b>88</b>

Note: Some current TSCs are proposed PDPs.

Table B-3. Comparative Sales at Thana Sales Centers by Locations

<u>TSC Location</u>	<u>Sales in Tons</u>		<u>% Variation, Plus or Minus</u>
	<u>January-December (1979)</u>	<u>January-December (1980)</u>	
	<u>Dacca</u>		
Nawabganj	781	435	44.3 (-)
Keraniganj	1,355	212	84.35 (-)
Dohar	305	311	1.97 (+)
Sreepur	1,816	324	82.16 (-)
Kapasias	1,621	191	88.22 (-)
Kaliakoir	2,096	No sales	-
Dhamrai	3,360	2,059	38.72 (-)
Shavar	5,337	665	87.54 (-)
Sales Center	45	28	37.78 (-)
Fatullah	995	No sales	-
Baydder Bazar	1,155	352	69.52 (-)
Araihazar	1,045	570	45.45 (-)
Rupganj	1,430	925	35.31 (-)
Raipura	1,637	223	86.38 (-)
Monohordi	2,278	1,287	43.50 (-)
Shibpur	1,285	473	63.13 (-)
Balaboo	2,483	681	72.57 (-)
Lakpur	1,906	991	48.01 (-)
Tongibari	4,469	145	96.76 (-)
Sirajdikhan	4,128	1,033	74.98 (-)
Gazaria	1,290	198	84.65 (-)
Sreenagar	1,386	825	40.48 (-)
Louhajang	1,832	683	62.72 (-)
Shibaloy	736	712	3.26 (-)
Singair	2,075	1,334	35.71 (-)
Daulatpur	447	373	16.55 (-)
Ghoir	661	540	18.31 (-)
Saturia	864	720	16.67 (-)
Harirampur	461	421	8.68 (-)
	<u>Mymensingh</u>		
Muktagacha	2,814	849	69.83 (-)
Trishal	1,510	No sales	-
Bhaluka	2,222	2,055	7.52 (-)
Goyespur	2,038	587	71.20 (-)
Nandail	2,301	1,000	56.54 (-)
Iswarganj	1,192	660	44.63 (-)
Gouripur	713	572	19.78 (-)
Phulpur	1,377	1,286	6.61 (-)
Tarakanda	652	463	28.99 (-)
Haluaghat	2,100	1,474	29.81 (-)
Islampur	1,755	956	45.53 (-)
Dewanganj	1,306	1,830	40.12 (+)
Madarganj	1,173	1,072	8.61 (-)

(Continued)

Table B-3. Comparative Sales at Thana Sales Centers by Locations  
(Continued)

TSC Location	Sales in Tons		% Variation, Plus or Minus
	January-December (1979)	January-December (1980)	
<u>Mymensingh (Continued)</u>			
Sharishabari	2,325	1,988	14.49 (-)
Nalitabari	1,455	980	32.65 (-)
Srebordi	818	1,013	23.84 (+)
Nakla	1,678	1,621	3.40 (-)
<u>Kishoreganj</u>			
Tarail	951	1,059	11.36 (+)
Karimganj	1,860	1,024	44.25 (-)
Hossainpur	1,667	1,492	10.50 (-)
Pakundia	2,121	1,081	49.03 (-)
Katiadi	3,365	844	74.92 (-)
Ashtagram	4,961	1,399	71.80 (-)
Nikli	992	651	34.38 (-)
Mitamoin	1,954	893	54.30 (-)
Itna	3,356	1,397	58.37 (-)
Purbadhala	622	749	20.42 (+)
Jari (Int. Godown)	807	1,045	29.49 (+)
Kendua	1,539	1,355	11.96 (-)
Durgapur	468	643	37.39 (+)
Barhatta	598	365	38.96 (-)
Atpara	652	622	4.60 (-)
Mohanganj <sup>a</sup>	438	564	28.77 (+)
Kaliajuri <sup>a</sup>	1,448	1,523	5.18 (+)
Madan	517	619	19.73 (+)
Balali	563	365	35.17 (-)
Kalmakanda	347	560	61.38 (+)
Manik Khali	No sales	120	-
Shahipur	No sales	256	-
<u>Tangail</u>			
Basail	1,851	1,710	7.62 (-)
Ghatail	3,146	1,805	42.63 (-)
Nagarapur	1,471	1,458	0.88 (-)
Dhanbari	1,857	622	64.35 (-)
Bhuapur	1,312	835	36.36 (-)
Kalihati	2,670	900	66.29 (-)
Mirjapur	2,600	No sales	-
Gopalpur	2,383	No sales	-
<u>Faridpur</u>			
Charvadrasan	199	103	48.24 (-)
Sadarpur	446	332	25.56 (-)

(Continued)

Table B-3. Comparative Sales at Thana Sales Centers by Locations  
(Continued)

TSC Location	Sales in Tons		% Variation, Plus or Minus
	January-December (1979)	January-December (1980)	
<u>Faridpur (Continued)</u>			
Boalmari	2,296	1,522	33.71 (-)
Alfadanga	140	53	62.14 (-)
Goalundaghat	149	164	10.07 (+)
Pangsa	786	1,018	29.52 (+)
Baliakandi	499	393	21.24 (-)
Gopalganj	276	394	42.75 (+)
Kashiani	348	151	56.61 (-)
Kotalipara	131	68	48.09 (-)
Shibchar	767	603	21.38 (-)
Jajira	245	144	41.22 (-)
Vederganj	533	335	37.15 (-)
Palong	738	789	6.91 (+)
Goshairhat	659	615	6.68 (-)
Naria	755	725	3.97 (-)
<u>Chittagong</u>			
Sandwip	2,008	1,352	32.67 (-)
Mirsarai	662	Closed	-
Fatikchari	418	Closed	-
Sitakunda	454	Closed	-
Rawzan	149	Closed	-
Rangunia	946	Closed	-
Anwara <sup>b</sup>	368	Closed	-
Banskhali	345	65	2.34 (-)
Boalkhali	271	Closed	-
Patiya	229	Closed	-
Satkania	639	Closed	-
Kutubdia	705	Closed	-
Ramu	850	Closed	-
Moheskhali	678	376	44.54 (-)
Teknaf	654	489	25.23 (-)
<u>Noakhali</u>			
Hatiya	2,651	2,156	18.67 (-)
Ramgati	1,216	1,009	17.02 (-)
Ramganj	571	959	67.95 (+)
Chatkhil <sup>c</sup>	547	651	19.01 (+)
Sudharam <sup>d</sup>	423	50	88.18 (-)
Parsuram <sup>d</sup>	990	911	7.98 (-)
Senbag	424	176	58.49 (-)
Sonagazi <sup>e</sup>	480	135	71.88 (-)
Companiganj	-	Closed	-
Raipur	1,219	1,513	24.12 (+)
Chagalnaiya <sup>f</sup>	724	115	84.12 (-)

(Continued)

Table B-3. Comparative Sales at Thana Sales Centers by Locations  
(Continued)

TSC Location	Sales in Tons		% Variation, Plus or Minus
	January-December (1979)	January-December (1980)	
<u>Comilla</u>			
Muradnagar <sup>g</sup>	1,510	118	92.19 (-)
Daudkandi	1,883	1,169	37.92 (-)
Sarail	91	Closed	-
Nabinagar	1,395	491	64.80 (-)
Nasirnagar	1,880	199	89.41 (-)
Kachua			
Faridganj <sup>h</sup>	1,290	909	29.53 (-)
Chatalpar <sup>h</sup>	No sales	770	-
<u>Sylhet</u>			
Goainghat	92	53	42.39 (-)
Balaganj	45	33	26.67 (-)
Tajpur	173	137	20.81 (-)
Biswanath	94	Closed	-
Fenchuganj	90	101	12.22 (+)
Golapganj	226	Closed	-
Jaintapur	131	107	18.32 (-)
Kanaighat	99	108	9.09 (+)
Zakiganj	176	181	2.84 (+)
Beanibazar	120	112	6.67 (-)
Moulvibazar	399	218	45.36 (-)
Rajnagar	284	251	11.62 (-)
Kuluara	1,133	1,463	29.13 (+)
Kamalganj	507	484	4.54 (-)
Barlekha	295	597	102.37 (+)
Chhatak	635	702	10.55 (+)
Sunamganj	737	886	20.22 (+)
Jagannathpur	166	150	9.64 (-)
Tahirpur	298	310	4.03 (+)
Dinarmapasa	870	378	56.55 (-)
Dherai	520	651	25.19 (+)
Sullah	574	789	37.46 (+)
Jamalganj	983	765	22.18 (-)
Badaghat	-	48	-
Madhabpur <sup>i</sup>	653	21	96.78 (-)
Chunarughat	391	Closed	-
Bahubal	377	314	16.71 (-)
Baniachong	702	681	2.99 (-)
Nabiganj	144	162	12.5 (+)
Lakhai	1,164	1,085	6.79 (-)
Azmiriganj <sup>j</sup>	1,625	2,460	51.38 (+)
Madhynagar <sup>j</sup>	-	610	-

(Continued)

Table B-3. Comparative Sales at Thana Sales Centers by Locations  
(Continued)

<u>TSC Location</u>	<u>Sales in Tons</u>		<u>% Variation, Plus or Minus</u>
	<u>January-December (1979)</u>	<u>January-December (1980)</u>	
	<u>Rajshahi</u>		
Godagari	1,390	730	47.48 (-)
Puthia	477	476	0.21 (-)
Durgapur	361	271	24.93 (-)
Baghmara	435	487	11.95 (+)
Charghat	437	462	5.72 (+)
Mohanpur	670	473	29.40 (-)
Tanore	1,294	1,184	8.50 (-)
Raninagar	549	48	91.26 (-)
Manda	1,720	1,340	22.09 (-)
Niamatpur	833	517	37.94 (-)
Mohadevpur	2,133	778	63.53 (-)
Potnitola	1,707	569	66.67 (-)
Dhamurhat	1,330	747	43.83 (-)
Badalgachi	774	204	73.64 (-)
Shibganj	310	230	25.81 (-)
Bholahat	62	79	27.42 (+)
Porsha	1,478	831	43.78 (-)
Nachole	1,344	953	29.09 (-)
Baraigram	421	201	52.26 (-)
Lalpur	1,199	934	22.10 (-)
Gurundashpur	415	339	18.31 (-)
Singra	1,386	400	71.14 (-)
Bagatipara	454	374	17.62 (-)
	<u>Pabna</u>		
Atgharia	554	450	18.77 (-)
Chatmohar	718	489	31.89 (-)
Santhia	545	281	48.44 (-)
Faridpur	779	670	13.99 (-)
Bera	463	405	12.53 (-)
Sujanagar	218	95	56.42 (-)
Kazipur	1,348	820	39.17 (-)
Rayganj	974	248	74.54 (-)
Tarash	775	372	0.52 (-)
Kamarkhand	478	380	20.5 (-)
Belkuchi	489	453	7.36 (-)
Chowhali	287	69	75.96 (-)
	<u>Bogra</u>		
Dhupchachia	281	1,208	329.89 (+)
Kahaloo	1,608	562	65.05 (-)
Gabtali	3,063	1,443	52.89 (-)
Shibganj	2,829	1,469	48.07 (-)

(Continued)

Table B-3. Comparative Sales at Thana Sales Centers by Locations  
(Continued)

TSC Location	Sales in Tons		% Variation, Plus or Minus
	January-December (1979)	January-December (1980)	
<u>Bogra (Continued)</u>			
Sariakandi	1,486	102	93.14 (-)
Sherpur	1,807	No sales	-
Dhunat	1,353	1,570	16.04 (-)
Nandigram	1,361	786	42.25 (-)
Panchbibi	1,949	1,123	42.38 (-)
Khetlal	3,349	1,278	61.84 (-)
Akkelpur	1,099	789	28.21 (-)
<u>Rangpur</u>			
Kaunia	300	378	26.00 (+)
Gangachara	1,727	563	67.40 (-)
Mithapukur	1,258	644	48.81 (-)
Pirganj	1,539	1,696	10.20 (+)
Kaliganj	443	716	61.63 (+)
Hatibandha	259	434	67.57 (+)
Pirgacha	488	620	27.05 (+)
Patgram	365	680	86.30 (+)
Palashbari	788	362	54.06 (-)
Gobindaganj	2,238	2,683	19.88 (+)
Saghata	949	575	39.41 (-)
Sundarganj	639	841	31.61 (+)
Sadullahpur	450	251	44.22 (-)
Fulchari	86	140	62.79 (+)
Nilphamari	1,106	770	30.38 (-)
Dimla	240	402	67.50 (+)
Jaldhaka	480	654	36.25 (+)
Kishoreganj	624	297	52.40 (-)
Ulipur	325	282	13.23 (-)
Rowmari	448	399	10.94 (-)
B. Mari	365	459	25.75 (+)
Nageswari	355	440	23.94 (+)
Chilmari	72	150	108.33 (+)
Fulbari	127	199	56.69 (+)
Badarganj	1,050	681	35.14 (-)
<u>Dinajpur</u>			
Chirir Bandar	1,295	638	50.73 (-)
Phulbari	2,546	825	67.60 (-)
Hakimpur	1,519	1,152	24.16 (-)
Biral	1,031	522	49.37 (-)
Bochaganj	1,308	1,790	36.85 (+)
Birganj	909	1,177	29.48 (+)
Nawabganj	1,124	447	60.23 (-)

(Continued)

Table B-3. Comparative Sales at Thana Sales Centers by Locations  
(Continued)

<u>TSC Location</u>	<u>Sales in Tons</u>		<u>% Variation, Plus or Minus</u>
	<u>January-December (1979)</u>	<u>January-December (1980)</u>	
<u>Dinajpur (Continued)</u>			
Ghoraghat	792	258	67.42 (-)
Kaharole	478	358	25.10 (-)
Khanshama	293	200	31.74 (-)
Pirganj	1,215	929	23.54 (-)
Boda	594	505	14.98 (-)
Atwari	387	364	5.94 (-)
Ranisankail	761	600	21.16 (-)
Baliadangi	614	400	34.85 (-)
Deviganj	123	233	89.43 (+)
Tetulia	84	150	78.57 (+)
Haripur	251	123	51.00 (-)
Panchagar	-	803	-
<u>Khulna</u>			
Daulatpur	124	43	65.32 (-)
Fultala	322	252	21.74 (-)
Dumuria	501	489	2.40 (-)
Dacope	95	24	74.74 (-)
Paikgacha	187	153	18.18 (-)
Batiaghata	46	61	32.61 (+)
Terokhada	103	56	45.63 (-)
Fakirhat	224	181	19.20 (-)
Mollarhat	309	300	2.91 (-)
Morolganj	625	748	19.68 (+)
Sarankhola	588	597	1.53 (+)
Kachua	286	189	33.92 (-)
Rampal	87	51	41.38 (-)
Kolaroa	1,699	2,354	38.55 (+)
Kaliganj	765	990	29.41 (+)
Tala	698	1,003	43.70 (+)
Debhata	350	526	50.29 (+)
Ashashuni	325	214	34.15 (-)
Shamnagar	251	360	43.43 (+)
<u>Jessore</u>			
Sharsha	3,731	No sales	-
Manirampur	1,412	988	30.03 (-)
Keshabpur	1,010	763	24.46 (-)
Bagharpara	1,117	460	58.82 (-)
Avoy Nagar	1,214	815	32.87 (-)
Court Chandpur	897	843	6.02 (-)
Mohespur	1,890	1,575	16.83 (-)
Harinakunda	1,456	1,343	7.76 (-)

(Continued)

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Table B-3. Comparative Sales at Thana Sales Centers by Locations  
(Continued)

<u>TSC Location</u>	<u>Sales in Tons</u>		<u>% Variation, Plus or Minus</u>
	<u>January-December (1979)</u>	<u>January-December (1980)</u>	
<u>Jessore (Continued)</u>			
Shailakupa	4,773	2,030	57.47 (-)
Sreepur	1,996	820	58.92 (-)
Mohammadpur	455	299	34.29 (-)
Shalikka	1,175	742	36.85 (-)
Lohagara	511	329	35.62 (-)
Kalia	115	144	25.22 (+)
<u>Patuakhali</u>			
Baufal	1,563	524	66.47 (-)
Mirjaganj	362	168	53.59 (-)
Golachipa	689	387	43.83 (-)
Khepupara	459	249	45.75 (-)
Amtali	1,150	355	69.13 (-)
Betagi	583	233	60.03 (-)
Bamna	692	-	-
Patharghata	410	127	69.02 (-)
<u>Barisal</u>			
Babuganj	770	632	17.92 (-)
Bakerganj	988	512	48.18 (-)
Ujirpur	465	650	39.78 (+)
Gauranadi	904	820	9.29 (-)
Hijla	502	459	8.57 (-)
Muladi	524	687	31.11 (+)
Mehendiganj	1,544	1,125	27.14 (-)
Jhalakathi	340	350	2.94 (+)
Nalchity	509	468	8.06 (-)
Rajapur	340	258	24.12 (-)
Kathalia	319	199	37.62 (-)
Pirojpur	1,009	584	42.12 (-)
Mathbaria	2,901	2,851	1.72 (-)
Bhandaria	511	464	9.20 (-)
Nazirpur	480	449	6.46 (-)
Kowkhali	201	145	27.86 (-)
Swarupkathi	262	209	20.23 (-)
Banaripara	188	171	9.04 (-)
Daulatkhan	1,466	632	56.89 (-)
Borhanuddin	1,895	1,102	41.85 (-)
Tajumuddin	510	682	33.73 (+)
Lalmohan	1,759	2,192	24.62 (+)
Charfassion	1,346	1,446	7.43 (+)

(Continued)

Table B-3. Comparative Sales at Thana Sales Centers by Locations  
(Continued)

TSC Location	Sales in Tons		% Variation, Plus or Minus
	January-December (1979)	January-December (1980)	
	<u>Kushtia</u>		
Kamarkhali	1,273	1,192	6.36 (-)
Ponti			
Addl. Godown	1,074	58	94.60 (-)
Khoksa	703	658	6.40 (-)
Veramara	2,082	1,834	11.91 (-)
Mirpur	4,381	1,975	54.92 (-)
Daulatpur	3,256	No sales	-
Alamdanga	3,157	671	78.75 (-)
Damurhuda	4,529	3,690	18.53 (-)
Jibannagar	1,628	1,696	4.18 (+)
Gangni	2,744	1,423	48.14 (-)

- a. Data for the second fortnight were not available.  
b. Closed on December 31, 1979, but sales continued till February 1981.  
c. Closed on December 31, 1979, but sales continued till January 1981.  
d. Second fortnight of December was not available.  
e. Closed on December 31, 1979, but sales continued till September 1980.  
f. Closed on December 31, 1979, but sales continued till January 1980.  
g. Closed on December 31, 1979, but sales continued till February 1980.  
h. Additional godown--sales started January 1, 1980.  
i. Closed on December 31, 1979, but sales continued till September 1980.  
j. Additional godown opened from January 1980.

Table B-4. Storage Capacity of Existing and Proposed Godowns at Primary Distribution Points

<u>District</u>	<u>Currently Owned PDP Capacity</u>	<u>Currently Rented PDP Capacity</u>	<u>Total Current PDP Capacity</u>	<u>Total Capacity of Currently Owned and Future PDPs<sup>a</sup></u>	<u>Capacity Proposed for or Currently Under Construction</u>
Dacca	6,800	10,266	17,066	25,300	18,500
Mymensingh	8,300	7,270	15,570	31,300	23,000
Kishoreganj	10,400	15,091	25,491	21,400	11,000
Tangail	3,200	705	3,905	12,200	9,000
Faridpur	3,700	5,175	8,875	11,700	8,000
Dacca division total	32,400	38,507	70,907	101,900	69,500
Chittagong	6,600	10,550	17,150	16,600	10,000
Noakhali	5,400	5,308	10,708	18,400	13,000
Comilla	4,500	1,353	5,853	35,500	31,000
Sylhet	2,000	3,140	5,140	18,000	16,000
Chittagong division total	18,500	20,352	38,852	88,500	70,000
Rajshahi	2,500	10,109	12,609	27,500	25,000
Dinajpur	12,300	5,680	17,980	38,300	26,000
Rangpur	11,800	8,575	20,375	40,800	29,000
Pabna	3,700	2,605	6,305	13,700	10,000
Bogra	5,900	4,450	10,350	43,900	38,000
Rajshahi division total	36,200	31,419	67,619	164,200	128,000
Khulna	2,400	1,000	3,400	5,400	3,000
Barisal	2,000	3,667	5,667	21,000	19,000
Patuakhali	700	514	1,214	13,700	13,000
Jessore	6,100	3,349	9,449	20,100	14,000
Kushtia	1,400	4,634	6,034	11,400	10,000
Khulna division total	12,600	13,164	25,764	71,600	59,000
NATIONAL TOTAL	99,700	103,442	203,142	426,200	326,500

a. Proposed construction or currently under construction.

Table B-5. Capacity of Godowns Controlled by Primary Distribution Points Compared With the Total Capacity of All Godowns in Bangladesh

<u>District</u>	<u>Total Godown Capacity</u>	<u>Total Currently (Owned and Rented) PDP Godown Capacity</u> (tons)	<u>% of Total</u>
Dacca	31,248	17,066	54.61
Mymensingh	23,967	15,570	64.96
Kishoreganj	34,045	25,491	74.87
Tangail	5,941	3,905	65.73
Faridpur	14,987	8,875	59.22
Chittagong	24,175	17,150	70.94
Noakhali	15,251	10,709	70.22
Comilla	11,079	5,853	52.83
Sylhet	13,279	5,140	38.71
Rajshahi	23,295	12,609	54.13
Dinajpur	26,175	17,980	68.69
Rangpur	36,087	20,375	56.46
Pabna	12,415	6,305	50.79
Bogra	14,002	10,350	73.92
Khulna	8,714	3,400	39.02
Barisal	13,219	5,667	42.87
Patuakhali	4,905	1,214	24.75
Jessore	13,282	9,449	71.14
Kushtia	9,783	6,034	61.68
TOTAL	335,849	203,142	60.49

Note: Total godown capacities mentioned above exclude transit godowns.

Table B-6. Average Monthly Inventory by District and Division  
During 1979 and 1980

District	1979 Monthly Inventory - - - - (tons)	1980 Monthly Inventory - - - -	Variation Plus-Minus (%)
Dacca	17,385	19,657	+ 13.1
Mymensingh	15,674	19,312	+ 23.2
Kishoreganj	14,577	22,644	+ 55.3
Tangail	6,559	6,816	+ 3.9
Faridpur	4,694	11,100	+136.5
Dacca division total	59,889	79,529	+ 35.1
Chittagong	19,450	18,197	- 6.4
Chittagong Hill Tracts	2,101	2,321	+ 10.5
Noakhali	11,320	14,549	+ 28.5
Comilla	11,997	10,693	- 10.9
Sylhet	8,891	12,088	+ 36.0
Chittagong division total	53,759	57,848	+ 7.6
Rajshahi	12,570	15,675	+ 24.7
Dinajpur	14,187	21,151	+ 49.1
Rangpur	15,810	24,970	+ 57.9
Pabna	8,628	11,711	+ 33.7
Bogra	9,658	14,079	+ 45.8
Rajshahi division total	60,854	87,586	+ 43.9
Khulna	4,966	8,049	+ 62.1
Barisal	11,028	14,905	+ 35.2
Patuakhali	3,383	4,916	+ 45.3
Jessore	12,527	14,085	+ 12.4
Kushtia	8,962	16,347	+ 82.4
Khulna division total	40,867	58,302	+ 42.7
TOTAL	214,367	283,265	+ 32.1

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Table B-7. Average Utilization of Storage Capacity by District and Division

<u>District</u>	<u>Total Godown Capacity</u> ----- (tons)	<u>Average Monthly Inventory</u> -----	<u>Utilization of Capacity</u> (%)	<u>Sales-to- Capacity Ratio</u>	<u>Sales-to- Inventory Ratio</u>
Dacca	31,748	29,657	61.9	2.5:1	4.1:1
Mymensingh	24,350	19,312	79.3	2.1:1	2.8:1
Kishoreganj	34,590	22,644	65.5	1.5:1	2.3:1
Tangail	6,036	6,816	112.9	5.5:1	4.9:1
Faridpur	15,227	11,100	72.9	1.2:1	1.6:1
Dacca division total	111,951	79,529	71.0	2.1:1	3:1
Chittagong	24,562	18,197	74.1	2.5:1	3.4:1
Chittagong Hill Tracts	5,932	2,321	39.1	0.8:1	2:1
Noakhali	15,495	14,549	93.9	2.3:1	2.4:1
Comilla	11,256	10,693	95.0	11:1	11.6:1
Sylhet	13,491	12,088	89.6	2:1	2.2:1
Chittagong division total	70,739	57,848	81.8	3.6:1	4.4:1
Rajshahi	23,668	15,674	66.2	2.5:1	3.8:1
Dinajpur	26,594	21,151	79.5	1.7:1	2.1:1
Rangpur	36,665	24,970	68.1	1.4:1	2.1:1
Pabna	12,614	11,711	92.8	2.7:1	2.9:1
Bogra	14,226	14,079	99.0	4.7:1	4.7:1
Rajshahi division total	113,767	87,586	77.0	2.3:1	2.9:1
Khulna	8,853	8,049	90.9	1.6:1	1.8:1
Barisal	13,431	14,905	111.0	1.9:1	1.7:1
Patuakhali	4,983	4,916	98.7	1.6:1	1.6:1
Jessore	13,495	14,085	104.4	3:1	2.9:1
Kushtia	9,940	16,347	164.5	4.3:1	2.6:1
Khulna division total	50,701	58,302	115.1	2.6:1	2.3:1
TOTAL	347,156	283,265	81.6	2.5:1	

a. Values rounded off to nearest ton.

Note: Godown capacities and inventory levels reflect only district operations, and exclude transit godowns.

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Table B-8. Comparison of PDP Sales in the First 12 Months of NMS With Total Sales in the PDP Home Thanas in the Previous 12 Months

District	Location of PDP	Total Sales			
		In PDP Home Thanas January 1979-December 1979 (OMS)	At PDP January 1980-December 1980 (NMS)	Amount of Increase	% of Increase
<u>Dacca Division</u>					
Dacca	Tejgaon	2,281	10,543	8,262	362
	Kaliganj	657	1,475	818	125
	Joydebpur	2,232	8,831	6,600	296
	Narayanganj	1,512	8,725	7,213	477
	Narsingdi	1,752	9,066	7,314	417
	Munshiganj	5,116	17,226	12,110	237
	Manikganj	1,437	7,334	5,897	410
	TOTAL	14,987	63,200	48,213	322
Tangail	Tangail (Sadar)	4,546	15,161	10,615	234
	Modhupur	2,411	11,109	8,699	361
	TOTAL	6,957	26,270	19,313	278
Mymensingh	Kotwali	1,614	6,391	4,777	296
	Gaffargaon	3,986	6,698	2,712	68
	Jamalpur	4,069	6,534	2,465	61
	Sherpur	2,206	3,905	1,699	77
	Melendha	3,348	4,595	1,247	37
	TOTAL	15,223	28,123	12,900	85
Faridpur	Kotwali	1,455	4,623	3,168	218
	Rajbari	1,113	1,114	1	9
	Madaripur	816	5,160	4,344	532
	TOTAL	3,384	10,897	7,513	222

(Continued)

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Table B-8. Comparison of PDP Sales in the First 12 Months of NMS With Total Sales in the PDP Home Thanas in the Previous 12 Months (Continued)

<u>District</u>	<u>Location of PDP</u>	<u>Total Sales</u>			
		<u>In PDP</u> <u>Home Thanas</u> <u>January 1979-</u> <u>December 1979</u> <u>(OMS)</u>	<u>At PDP</u> <u>January 1980-</u> <u>December 1980</u> <u>(NMS)</u> <u>(tons)</u>	<u>Amount of</u> <u>Increase</u>	<u>% of</u> <u>Increase</u>
<u>Dacca Division</u>					
Kishoreganj	Kishoreganj	2,487	8,033	5,546	223
	Bajitpur	2,044	4,560	2,516	123
	Kuliarchar	2,366	5,499	3,133	132
	Bhairab	1,954	12,503	10,549	540
	TOTAL	8,851	30,595	21,744	246
<u>Chittagong Division</u>					
Chittagong	Chittagong	8,117	34,321	26,204	325
	Dohazari	2,695	10,674	7,979	296
	Cox's Bazar	2,698	7,700	5,002	185
	TOTAL	13,510	52,695	39,185	290
Noakhali	Begumganj	4,062	8,649	4,587	113
	Feni	5,589	14,461	8,872	159
	TOTAL	9,651	23,110	13,459	139
Comilla	Kotwali	10,660	39,111	28,451	267
	Laksham	8,049	13,266	5,217	65
	Brahmanbaria	8,389	31,537	23,184	276
	Chandpur	3,378	21,442	18,064	535
	Hajiganj	3,078	8,689	5,611	182
	TOTAL	33,554	114,045	80,491	240

(Continued)

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Table B-8. Comparison of PDP Sales in the First 12 Months of NMS With Total Sales in the PDP Home Thanas in the Previous 12 Months (Continued)

District	Location of PDP	Total Sales			
		In PDP Home Thanas January 1979-December 1979 (OMS)	At PDP January 1980-December 1980 (NMS)	Amount of Increase	% of Increase
<u>Chittagong Division</u>					
Sylhet	Sylhet	1,623	2,566	943	58
	Srimongal	639	1,591	952	150
	Chhatak	899	643	(256)	28
	Habiganj	1,985	2,821	836	42
	TOTAL	5,146	7,621	2,475	48
<u>Rajshahi Division</u>					
Rajshahi	Rajshahi (Poba)	1,530	3,676	2,146	140
	Naogaon	932	4,515	3,583	384
	Atrai	1,244	2,842	1,598	128
	Nowabganj	1,843	3,302	1,459	79
	Rohanpur (Gomostapur)	985	1,543	558	57
	Natore	970	2,248	1,278	132
	TOTAL	7,504	18,126	10,622	142
Dinajpur	Kotwali	2,743	5,441	2,698	98
	Parbatipur	1,519	1,503	(16)	-1
	Thakurgaon	5,111	5,859	748	15
	Panchagarh	1,293	2,414	1,121	87
	TOTAL	10,666	15,217	4,551	43

(Continued)

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Table B-8. Comparison of PDP Sales in the First 12 Months of NMS With Total Sales in the PDP Home Thanas in the Previous 12 Months (Continued)

District	Location of PDP	Total Sales			% of Increase
		In PDP Home Thanas January 1979-December 1979 (OMS)	At PDP January 1980-December 1980 (NMS)	Amount of Increase	
<u>Rajshahi Division</u>					
Rangpur	Kotwali	2,425	6,409	3,984	164
	Pirganj	1,539	1,696	157	10
	Gaibandha	853	2,133	1,280	150
	Gobindaganj	2,238	2,683	445	20
	Saidpur	1,382	4,334	2,952	214
	Domar	468	705	237	51
	Kurigram	211	693	482	228
	Lalmonirhat	932	1,918	986	106
	TOTAL	10,048	20,571	10,523	105
Bogra	Kotwali	2,359	11,458	9,099	386
	Joypurhat	3,601	8,481	4,880	99
	Shantahar (Adamdighi)	1,975	6,353	4,378	222
	TOTAL	7,935	26,292	18,357	231
Pabna	Kotwali	907	1,571	664	73
	Iswardi	665	661	(4)	-1
	Sirajganj	1,075	2,349	1,274	119
	Ullapara	4,537	7,011	2,474	55
	Shahjadpur	3,575	4,598	1,023	29
	TOTAL	10,759	16,190	5,431	50

(Continued)

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Table B-8. Comparison of PDP Sales in the First 12 Months of NMS With Total Sales in the PDP Home Thanas in the Previous 12 Months (Continued)

District	Location of PDP	Total Sales			
		In PDP Home Thanas January 1979- December 1979 (OMS)	At PDP January 1980- December 1980 (NMS)	Amount of Increase	% of Increase
<u>Khulna Division</u>					
Khulna	Kotwali	309	676	367	119
	Bagerhat	596	1,512	916	154
	Satkhira	2,053	3,493	1,440	70
	TOTAL	2,931	5,681	2,750	94
Patuakhali	Sadar	807	2,773	1,966	244
	Barguna	1,467	3,091	1,624	111
	TOTAL	2,274	5,864	3,590	158
Barisal	Kotwali	1,276	2,086	810	63
	Bhola	3,002	6,987	3,985	133
	TOTAL	4,278	9,073	4,795	112
Jessore	Kotwali	2,095	12,572	10,477	500
	Jhenaidha	2,854	5,443	2,589	91
	Khaliganj	3,475	6,398	2,923	84
	Magura	2,329	4,462	2,133	92
	Narail	212	1,067	855	403
	TOTAL	10,965	29,942	18,977	173
Kushtia	Kushtia (Sadar)	4,253	14,843	10,590	249
	Chuadanga	2,728	9,011	6,283	230
	TOTAL	6,981	23,854	16,873	242
NATIONAL TOTAL		185,604	690,501	504,897	272

APPENDIX C

PRICE AND SALES OF FERTILIZER IN BANGLADESH

- Table C-1. Bangladesh Subsidized Official Retail Fertilizer Prices
- Table C-2. Dealer/Customer Discount From Official Retail Fertilizer Price
- Table C-3. Summary of National Fertilizer Sales by District
- Table C-4. Districtwise Target and Sales of Fertilizer for FY 1980/81

Table C-1. Bangladesh Subsidized Official Retail Fertilizer Prices

Date of Effect	Subsidized Price							
	Urea	DAP	TSP		MP	HP	NPK	SSP
			Powdered	Granular				
Tk/mã								
From 1960 to 1971/72	10.12	-	-	10.12	6.37	-	-	-
July 1, 1972	20.00	-	-	14.50	10.00	-	-	-
July 1, 1973	40.00	-	-	30.00	20.00	-	-	-
July 10, 1973	30.00	-	-	20.00	15.00	-	-	-
April 1, 1974	50.00	-	-	40.00	30.00	-	-	-
February 9, 1974	-	-	-	-	-	25.00	-	-
February 5, 1975	-	-	-	-	-	-	40.00	-
June 17, 1975	-	-	-	-	-	-	-	20.00
July 1, 1976	60.00	-	-	48.00	40.00	-	-	-
December 15, 1976	-	-	-	-	-	30.00	45.00	22.00
July 1, 1978	70.00	-	-	55.00	45.00	-	-	-
October 3, 1978	-	-	-	-	-	-	55.00	-
October 16, 1978	-	70.00	-	-	-	-	-	-
October 31, 1978	-	-	-	-	-	55.00	-	-
August 27, 1979	90.00	90.00	60.00	70.00	55.00	-	-	-
November 2, 1980	110.00	110.00	80.00	90.00	70.00	-	90.00	-
January 1, 1981	-	-	-	-	-	60.00	-	30.00
TK/long ton								
1960-72	275.46	-	-	275.46	173.39	-	-	-
July 1, 1972	544.40	-	-	394.69	272.20	-	-	-
July 1, 1973	1,088.40	-	-	816.60	544.40	-	-	-
July 10, 1973	816.60	-	-	544.40	408.30	-	-	-
April 1, 1974	1,361.00	-	-	1,088.40	816.60	-	-	-
February 9, 1974	-	-	-	-	-	680.50	-	-
February 5, 1975	-	-	-	-	-	-	1,088.40	-
June 17, 1975	-	-	-	-	-	-	-	544.40
July 1, 1976	1,633.00	-	-	1,306.56	1,088.40	-	-	-
December 15, 1976	-	-	-	-	-	816.60	1,224.90	598.84
July 1, 1978	1,905.40	-	-	1,497.10	1,224.90	-	-	-
October 3, 1978	-	-	-	-	-	-	1,497.10	-
October 16, 1978	-	1,905.40	-	-	-	-	-	-
October 31, 1978	-	-	-	-	-	1,497.10	-	-
August 27, 1979	2,449.80	2,449.80	1,633.20	1,905.40	1,497.10	-	-	-
November 2, 1980	2,994.20	2,994.20	2,177.60	2,449.80	1,905.40	-	2,449.80	-
January 1, 1981	-	-	-	-	-	1,633.20	-	816.60

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Table C-2. Dealer/Customer Discount From Official Retail Fertilizer Price

	Product				
	<u>Urea</u>	<u>Granular TSP</u>	<u>Powdered TSP</u>	<u>DAP</u>	<u>MP</u>
Official retail price, TK/ton	2,994.20	2,449.80	2,177.60	2,994.20	1,905.40
<u>NMS</u>					
PDP discount, TK/ton	230.00	230.00	230.00	230.00	230.00
% of retail price	7.7	9.4	10.6	7.7	12.1
TSC discount, TK/ton	136.10	136.10	136.10	136.10	136.10
% of retail price	4.5	5.6	6.3	4.5	7.1

Table C-3. Summary of National Fertilizer Sales by District

<u>Districts</u>	<u>Agronomic Potential<sup>a</sup></u>	<u>1977/78 Actual</u>	<u>1978/79 Actual</u>	<u>1979/80 Actual</u>	<u>1980/81 Actual</u>	<u>1981/82 Target</u>	<u>Target % Increase Over 1980/81</u>	<u>1981/82 Target % of Potential</u>
Dacca	235.5	65.7	70.6	69.8	80.8	150.0	30.0	44.6
Kishoreganj	183.3	40.8	41.3	44.3	53.2	62.0	16.5	33.8
Mymensingh	350.4	51.1	50.0	51.4	53.9	78.0	44.7	22.3
Tangail	134.0	22.5	27.5	29.3	35.1	48.0	36.8	35.8
Faridpur	190.8	12.9	14.6	17.8	14.5	30.0	106.9	15.7
Chittagong	178.1	69.1	65.7	63.8	59.5	71.0	19.3	39.9
Chittagong Hill Tracts	34.0	2.7	2.9	3.5	4.6	5.0	8.7	14.7
Noakhali	196.7	32.8	31.2	36.9	32.7	53.0	62.1	26.9
Comilla	263.0	98.8	115.3	127.2	119.8	140.0	16.9	53.2
Sylhet	292.9	23.7	20.4	27.4	26.4	44.0	66.7	15.0
Rajshahi	288.7	41.8	42.1	57.7	58.7	75.0	27.8	26.0
Dinajpur	190.0	35.2	35.4	43.5	45.1	65.0	44.1	34.2
Rangpur	370.9	38.8	42.0	43.5	55.6	85.0	52.9	22.9
Bogra	167.9	43.0	47.8	58.3	70.1	83.0	18.4	49.4
Pabna	159.0	31.6	29.1	31.8	34.5	60.0	73.9	37.7
Khulna	149.4	11.9	9.5	12.2	16.6	22.0	32.5	14.7
Barisal	225.1	25.1	21.9	25.8	24.1	46.0	90.9	20.4
Patuakhali	104.4	7.1	7.6	9.0	6.2	15.0	141.9	14.4
Jessore	176.5	33.3	30.4	41.3	40.6	58.0	42.9	32.9
Kushtia	94.6	31.4	28.5	43.6	42.7	55.0	28.8	58.1
NATIONAL TOTAL	3,985.2	719.3	733.8	838.1	874.7	1,200.0	37.19	30.2

a. From IFDC's "A Micro Study of Potential Agronomic Fertilizer Requirements for Bangladesh."

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Table C-4. Districtwise Target and Sales of Fertilizer for FY 1980/81 (tons)

Districts	Sales Target for 1980/81				Actual Sales of Fertilizer for 1980/81						% Achieved
	Urea	TSP/DAP	MP	Total	Urea	TSP	DAP	MP	Others	Total	
Dacca	60,000	26,000	6,000	92,000	50,400	24,160	2,058	3,382	759	80,759	88
Kishoreganj	40,000	15,000	5,000	60,000	40,165	9,538	1,675	1,378	412	53,168	89
Mymensingh	48,000	24,000	4,000	76,000	41,739	7,673	2,926	1,589	5	53,932	71
Tangail	25,000	14,000	3,000	42,000	19,626	11,832	1,468	2,099	104	35,129	84
Faridpur	24,000	10,000	4,000	38,000	9,541	2,972	575	1,380	6	14,474	38
Chittagong	60,000	20,000	6,000	86,000	47,535	8,008	1,911	1,675	394	59,523	69
Chittagong Hill Tracts	3,000	2,000	1,000	6,000	2,505	1,964	4	144	4	4,621	77
Noakhali	33,000	15,000	2,000	50,000	27,255	3,048	1,726	492	162	32,683	65
Comilla	8,200	52,000	20,000	154,000	63,717	36,244	5,482	6,390	7,962	119,795	78
Sylhet	25,000	12,000	3,000	40,000	18,085	5,354	1,420	1,402	144	26,405	66
Rajshahi	43,000	20,000	10,000	73,000	34,202	17,597	3,340	3,527	17	58,683	80
Dinajpur	33,000	23,000	10,000	66,000	20,527	14,121	2,962	5,253	2,276	45,139	68
Rangpur	39,000	21,000	10,000	70,000	36,406	12,109	2,953	3,965	475	55,638	79
Bogra	40,000	22,000	10,000	72,000	44,086	14,870	7,358	3,813	6	70,133	97
Pabna	30,000	16,000	4,000	50,000	21,047	10,499	1,249	1,706	3	34,504	69
Khulna	15,000	6,000	2,000	23,000	13,371	2,516	331	331	7	16,556	72
Barisal	25,000	11,000	2,000	38,000	16,983	5,819	879	435	14	24,130	64
Patuakhali	10,000	4,000	1,000	15,000	5,089	1,000	61	18	-	6,168	41
Jessore	30,000	16,000	6,000	52,000	24,613	11,918	1,481	2,479	60	40,551	78
Kushtia	25,000	16,000	6,000	47,000	23,643	13,735	785	3,892	596	42,651	91
NATIONAL TOTAL	690,000	345,000	115,000	1,150,000	560,535	214,977	40,644	45,080	13,406	874,642	76

APPENDIX D

SALES PROMOTIONAL ACTIVITIES

Table D-1. National Summary of Sales Promotional Activities

Table D-1. National Summary of Sales Promotional Activities

Category of Market <sup>a</sup>	Percentage of Dealers Who Were						
	Engaged in Sales Promotional Activities		Visited by Thana Inspector at Stores on Sales Promotional Activities	Visited by Extension Personnel on Sales Promotional Activities	Aware of Demonstra- tion Plots <sup>b</sup>	Displaying Promotional Posters at Their Store	Providing Customers With Brochures at Their Store
	With Subdealers	With Farmers					
HUEA	6	25	1	8	31	25	18
HUR	3	25	-	10	22	18	9
LUEA	10	27	2	3	47	15	15
LUR	1	29	2	10	32	16	9

a. HUEA = high use, easy access; HUR = high use, remote; LUEA = low use, easy access; LUR = low use, remote.

b. Most of the plots were sponsored by dealers.

APPENDIX E

EFFECTS OF CROPPING PATTERNS ON FERTILIZER SALES

Table E-1. National Summary of Reported Effects of Cropping Patterns

Table E-1. National Summary of Reported Effects of Cropping Patterns

Category of Market <sup>a</sup>	Percentage of Dealers Who Were					Name of Crop Most Frequently Reported by Dealers to Have Positive Effect on Sales	Name of Crop Most Frequently Reported by Dealers to Have Negative Effect on Sales
	Aware of Changes in Cropping Patterns Which Would Change Fertilizer Sales Volume	Reporting Changes in Cropping Patterns Which Would Increase Sales	Average % of Increase Reported	Reporting Changes in Cropping Patterns Which Would Decrease Sales	Average % of Decrease Reported		
HUEA	72	94	20	6	3	1. IRRI 2. Wheat 3. Sugarcane	1. Robi crop 2. Local IRRI
HUR	71	90	16	10	2	1. IRRI 2. Wheat 3. Sugarcane	1. Local IRRI
LUEA	69	95	18	5	1	1. IRRI 2. Wheat 3. Sugarcane	1. Robi crop 2. Local aus
LUR	68	97	19	3	2	3. Sugarcane	1. Local aus

a. HUEA = high use, easy access; HUR = high use, remote; LUEA = low use, easy access; LUR = low use, remote.

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APPENDIX F

DEALERS' COMPLAINTS ABOUT THE NEW MARKETING SYSTEM

Table F-1. National Summary of Dealers' Complaints

Table F-2. Summary of Dealers' Complaints, by Districts

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Table F-1. National Summary of Dealers' Complaints

Category <sup>a</sup> of Market	Percentage of Dealers Who Complained About							
	BADC Officials Extracting Payments In Addition To Official Price	Lifting Procedure Being Too Time- Consuming and Complicated	Problems In Obtaining A Bank Draft	Being Forced To Take Specific Fertilizer Ratios	Rebagged Fertilizer Containing Too Much Trash And Dirt	Being Forced To Take Underweight Bags	BADC Being Short Of The Desired Fertilizers	Transportation Problems
HUEA	49	17	25	7	7	38	20	2
HUR	65	16	19	4	6	32	18	9
LUEA	51	9	12	12	4	35	25	5
LUR	48	15	19	13	10	28	23	16

a. HUEA = high use, easy access; HUR = high use, remote; LUEA = low use, easy access; LUR = low use, remote.

NOTE: No specific comments from the dealers were solicited by the interviewer. However, in most cases if no general comments were made during the interview, the dealers were asked whether they wished to make any comments. The percentages do not total 100 because of multiple comments.

Table F-2. Summary of Dealers' Complaints, by Districts

<u>District</u>	<u>Rank 1</u>	<u>%</u>	<u>Rank 2</u>	<u>%</u>	<u>Rank 3</u>	<u>%</u>
Dacca	BADC officials extract payments in addition to official price	71	Lifting procedure is too time-consuming	25	Obtaining a bank draft is difficult	22
Tangail	BADC officials extract payments in addition to official price	82	Bags are underweight	29	Obtaining a bank draft is difficult	18
Mymensing	BADC officials extract payments in addition to official price	61	Bags are underweight	59	BADC is often out of desired fertilizer	30
Faridpur	Bags are underweight	63	BADC is often out of desired fertilizer	53	Obtaining a bank draft is difficult	43
Kishoreganj	BADC officials extract payments in addition to official price	55	Obtaining a bank draft is difficult	24	Lifting procedure is too time-consuming	24
Chittagong	BADC officials extract payments in addition to official price	71	Lifting procedure is too time-consuming	68	Obtaining a bank draft is difficult	24
Noakhali	Lifting procedure is too time-consuming	36	BADC officials extract payments in addition to official price	34	BADC is often out of desired fertilizer	8
Comilla	BADC officials extract payments in addition to official price	38	BADC is often out of desired fertilizer	19	Obtaining a bank draft is difficult	14
Sylhet	BADC is often out of desired fertilizer	33	Dealers' commission is too low	12	Bags are underweight	5
Rajshahi	BADC officials extract payments in addition to official price	62	Bags are underweight	27	Obtaining bank draft is difficult	14
Dinajpur	BADC officials extract payments in addition to official price	46	BADC is often out of desired fertilizer	29	Bags are underweight	22
Rangpur	BADC officials extract payments in addition to official price	89	Rebagged fertilizer has too much trash and dirt	18	Lifting procedure is too time-consuming	15
Bogra	BADC officials extract payments in addition to official price	64	Bags are underweight	41	Rebagged fertilizer has too much trash and dirt	9
Pabna	Bags are underweight	88	BADC officials extract payments in addition to official price	28	Rebagged fertilizer has too much trash and dirt	15
Khulna	BADC officials extract payments in addition to official price	42	Bags are underweight	33	Dealers' commission is too low	11
Patuakhali	BADC officials extract payments in addition to official price	78	BADC is often out of desired fertilizer	66	Obtaining a bank draft is difficult	55
Jessore	Bags are underweight	60	BADC officials extract payments in addition to official price	15	Obtaining a bank draft is difficult	14
Kushtia	Bags are underweight	84	BADC is often out of desired fertilizer	6	Dealers' commission is too low	6
Barisal	BADC is often out of desired fertilizer	59	Obtaining a bank draft is difficult	52	BADC officials extract payments in addition to official price	51

- NOTES: 1. The reported payments to BADC varied from an average high in Chittagong of TK 4.57/md to an average low in Khulna of TK 3/md.
2. Dealers report that 3-5 days are required to complete each lifting (purchase).
3. Dealers report that shortages of the desired fertilizers occur mostly during the peak demand periods, the average duration being 2-10 days.
4. The percentages do not total 100 because of multiple complaints or no complaints.

APPENDIX G

PROFILE OF FORMER DEALERS

Table G-1. Former Dealer Profile

Table G-1. Former Dealer Profile

Average time he was fertilizer dealer	8 years
Average sales volume when active (annual)	1,833 md/year
% still active in business other than fertilizer	67%
Dealer's most frequent stated reasons for discontinuing his fertilizer business <sup>a</sup>	<ol style="list-style-type: none"> <li>1. 49% lack of capital</li> <li>2. 48% low commission and less profitable compared to other business</li> <li>3. 25% short weight bags</li> <li>4. 12% transportation problem</li> <li>5. 9% corruption at PDP/TSC</li> <li>6. 7% competitive market</li> <li>7. 3% quantity restriction</li> </ol>
% registered but never active	3%
Dealer's most frequent stated basis for considering reactivating dealership <sup>a</sup>	<ol style="list-style-type: none"> <li>1. 68% increased commission</li> <li>2. 54% financial help or stability</li> <li>3. 8% correct weight bags</li> <li>4. 6% elimination of BADC corruption</li> </ol>

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a. Total more than 100% due to multiple answers to single question.