FERTILIZER PRICING AND MARKETING REFORM PROGRAM
(615-0243)
MID TERM EVALUATION
JANUARY 1992
VOLUME I - EXECUTIVE SUMMARY

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1 INTRODUCTION

This report presents a summary of the mid term evaluation of the Fertilizer Pricing and Marketing Reform Program (FPMRP) funded by USAID in Kenya. The evaluation was undertaken by Price Waterhouse Associates between October and December 1991.

The report is in two volumes. Volume I presents the evaluation's executive summary and recommendations. Volume II is the main report which covers the study in greater detail.

The main objectives of the study are to evaluate the FPMRP's performance in establishing market structures that will enable increased smallholder use of fertilizer. Further details can be found in Volume II, Annex I. The study involved the review of past studies and documentation relating to the sector, field visits and interviews with bankers and fertilizer traders. Civil servants were also interviewed on their role in policy development and to evaluate the training programs.

Background to FPMRP Project

Kenya is primarily an agricultural country whose population is growing fast. Achieving food self sufficiency and increasing the agriculture sector's capacity to provide raw materials for industrial growth are of major concern. The availability of appropriate and affordable fertilizer, in all parts of the country, is an important ingredient for agricultural growth.

Fertilizer availability and its appropriate use have been important government concern since the oil crisis in the early 1970's. Efforts were made to redress shortcomings in the 1980's with the implementation of donor fertilizer aid-in-kind and budgetary support programs. A total of ten donor countries have participated in the programs over the years.

The purpose of FPMRP is to increase fertilizer use by smallholder farmers in the rural areas. USAID has been very active in supplying fertilizer aid-in-kind since 1983/84. Its programs have also involved assistance in policy reforms in fertilizer pricing and marketing.

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2 DECONTROL OF PRICES AND LIBERALIZATION OF IMPORTS

Prior to December 1989, fertilizer prices were gazetted following annual price reviews. Maximum prices were established for 42 selling points. In addition to being difficult to calculate, maximum prices did not provide distributors with an incentive to push fertilizers to remote farming areas. This limited farmer access to fertilizer.

The GOK's June, 1989 National Policy for Fertilizer Pricing and Marketing states that in the long term, "fertilizer importation should be liberalised, with the role of the Government limited to monitoring the types and quantities imported". However, the policy statement consistently reiterated the Government's short-term role in fixing and announcing fertilizer prices. Because of this statement, fertilizer sector participants, including government and donor officials and fertilizer traders, were surprised by the December, 1989 price decontrol announcement. Nonetheless, the Ministry of Agriculture, the Kenya National Fertilizer Association (KNFA), and interested donors supported price decontrol. USAID was in favour of eventual price decontrol as evidenced by an FPMRP covenant requiring a price decontrol study during the program's second year.

3 POST DECONTROL DECISIONS

Within a month of price decontrol KGGCU, which was a founder member of the KNFA and the largest fertilizer player at that time, lowered fertilizer prices by about 18%. Given KGGCU's price leadership role, this pricing strategy reduced margins throughout the industry. Fertilizer traders complained to the Government via the KNFA. However, the Government took no action preferring to leave the market to take its own course. Fertilizer prices recovered towards the end of 1990. Nonetheless, KGGCU's arguably artificially low prices had the net effect of making the fertilizer trade unprofitable and unpredictable.

The government made other policy changes which included the deregulation of fertilizer import licencing requirements and quotas in November 1990. Several other institutional changes have also been implemented within the recent past.

These include:

- the strengthening of the Farm Inputs Unit by recruiting more staff and the elevation of the unit to a Farm Input Branch. The Branch is now directly answerable to the Director of Agriculture

- the formation of fertilizer committees both at the National and District levels. These committees group together policy makers and other interested parties (including private traders) into non-regulatory advisory teams

- subject matter specialists on soils and fertilizers have been mobilised at the district and provincial levels.

- further support to KNFA. The Government is debating whether the KNFA should be the future body to allocate donor fertilizers to fertilizer dealers.

Fertilizer consumption in Kenya has decreased over the last five years. This is partly associated with the current slump in coffee prices (from KSh 60,000/tonne in 1988 to KSh 39,000 in 1990). Another contributing factor was KGGCU's post-price decontrol pricing decision and the uncertainty this created regarding the profitability of importing and distributing fertilizer. Finally, as outlined in the following section, certain forces external to the fertilizer industry are affecting industry profitability.

4 IMPACT OF MACROECONOMIC VARIABLES OF FPMRP PURPOSE

4.1 The Present Macro-economic Framework

Kenya has experienced increased budget deficits, accelerated inflation, high interest rates and rapid devaluation of the shilling since 1988. These four characteristics are strongly interrelated. They also have a considerable impact on the profitability of smallholder fertilizer use and the ability of traders to finance their working capital requirements in fertilizer import and distribution.

Budget Deficit: Government expenditure has reached nearly 40 percent of Gross Domestic Product (GDP). The GOK's desired deficit level, as illustrated in agreements with IBRD and the IMF, is 2.5%. The current budget deficit, excluding donor grants, exceeds 9.5% of GDP. When grants are incorporated into the budget as revenues, the deficit at mid-1991 was estimated at 6.5% of GDP.

Increased government financial requirements must be seen against a background of stagnant or falling real GDP, falling domestic savings and shrinking donor financing. The parastatal sector is seen as an ever burgeoning contributor to the government's budget deficit. Unofficial estimates indicate that the parastatals absorb 19% - 20% of GDP.

Budget deficits, and the subsequent Government borrowings have a crowding out effect on the economy. The "crowding out" results in less money available to private individuals such as fertilizer traders and higher interest rates for that money that is available. Deficits also affect operations of Ministries charged with providing extension services. Farmers receive poor or inadequate advice and apply farm inputs inefficiently.

Money Supply and Inflation: Since government cannot fully finance the deficit through domestic and foreign borrowing, there has been a continuous increase in borrowing from the Central Bank. This has resulted in nearly a 20% increase in the money supply spurring a rise in inflation from 16% in 1989 to about 23% in 1991.

High inflation results in more expensive basic consumer goods that draw heavily on smallholder income. Increased inflation also results in higher fertilizer costs as inflation induces devaluation. Smallholder incomes, however, tend to grow by less than the general inflation rate. The total result is that farmers are less capable of buying fertilizer. Households under stress give low priority to production inputs such as fertilizer as direct consumer goods are needed more urgently.

Exchange Rates: Inflation in Kenya of 20% - 25% means exports would become prohibitively expensive, and imports exceedingly cheap, unless there were parallel adjustments of foreign exchange rates. Inflation in Kenya's major export markets in on average below 5 per cent. Thus, in order to maintain existing ratios between domestic and foreign prices, it has been necessary to devalue the currency at an annual rate of about 15% - 30%. In addition, as the import regime is liberalized, demand for imports increases. Foreign Exchange rates have to be adjusted to counter structural changes in demand. As a result the Kenya Shilling is devalued a few percentage points more than relative domestic inflation rates.

This structural exchange rate adjustment, which is one of the success stories of Kenyan economic policy in recent years, means that imports gradually rise in price faster than do domestic agricultural commodities. Thus fertilizer is becoming more expensive relative to the price controlled foodcrops, and internationally traded price depressed beverage crops, on which it is applied.

From this follows some inescapable conclusions with respect to fertilizer prices and demand in Kenya:

a) fertilizers are gradually becoming expensive, relative to maize and other domestic food crop prices, whose prices generally do not increase faster than the domestic inflation rate. If government policies aim at holding down basic food prices via official pricing, without adjustments in food marketing policies, smallholders will not be able to maintain even the present demand for fertilizers.

b) smallholders producing maize and other domestic food crops will experience a gradual reduction in value-cost ratios of at least 3% - 4% per year; rapid structural adjustment could mean a 40% increase in the relative cost of fertilizer.

c) increased fertilizer use for maize and domestic food crops will have to be especially encouraged in areas where the existing VCR's are sufficiently high to remain attractive, despite falling by about 3% - 4% per year

d) smallholder demand for fertilizers for export crops will, in principle, be less affected (or not affected at all) by structural adjustment.

e) importers and distributors of fertilizers will therefore gradually find producers of export crops as more profitable customers than producers of domestic food crops.

PART II - INDUSTRY ANALYSIS

5 INDUSTRY STRUCTURAL ANALYSIS

5.1 Description of industry structure

The majority (over 98%) of the fertilizer used in Kenya is imported. A small quantity of fertilizer is produced locally using imported raw materials.

Figure 1 summarizes, in diagrammatic form, the flow of imported fertilizer from the international fertilizer suppliers to the ultimate consumers, the farmers, in the period 1988 to 1991.

It can be seen that the industry has a tiered marketing channel structure. However, this tiered structure is not rigid and there are multiple channels through which the fertilizer can reach the end-users.

5.2 Analysis of industry structural forces

In any given industry, the shape of the industry structure, the intensity of competition and the ultimate long-term average profitability of the industry players is determined by the nature and intensity of the industry's structural forces. Where such forces are intense few players earn spectacular returns.

The basic industry structural forces apply to all firms equally. These forces determine the types of competitive responses the individual firms can develop. However, firms within the industry differ in their ability to plan and implement competitive strategies that reduce (or amplify) the effect of the industry structural forces. Firms that can implement competitive strategies successfully can consistently earn above average profits.

Analyzing the industry structural forces, and the way in which they change over time, can therefore help in understanding the actions of the industry players. The framework can further be used to analyze the potential impact of major changes in the fertilizer sector on fertilizer traders.

One analytical framework that can be used to analyze industry structural forces is the Porter "Five Forces" model as modified for developing countries[1]. Under this framework there are seven main industry forces that drive industry competition. This framework is summarized in Figure 2.

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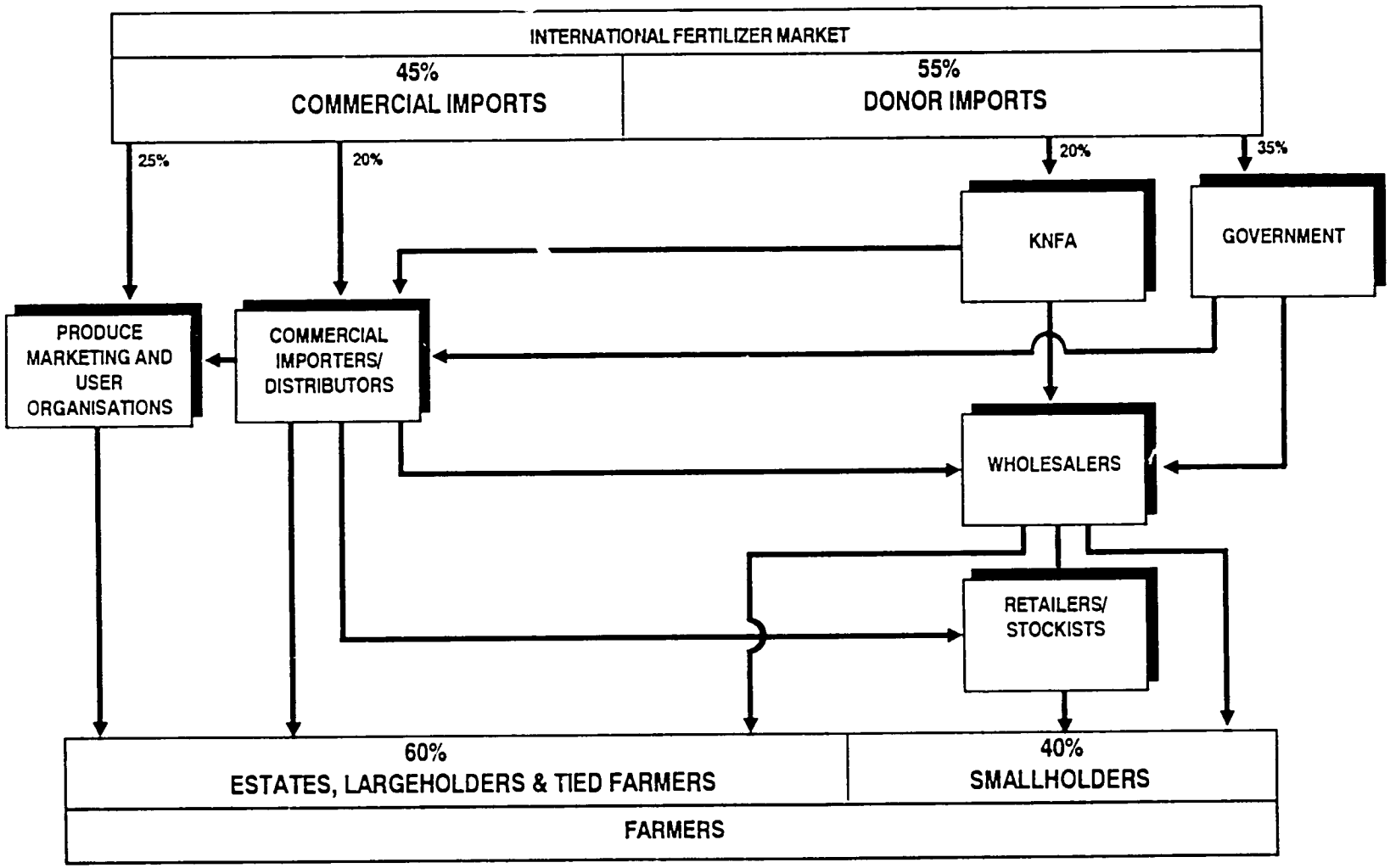
[1] As outlined in Austin, 1990.

Figure 1

KENYA FERTILIZER INDUSTRY STRUCTURE - 1989/91



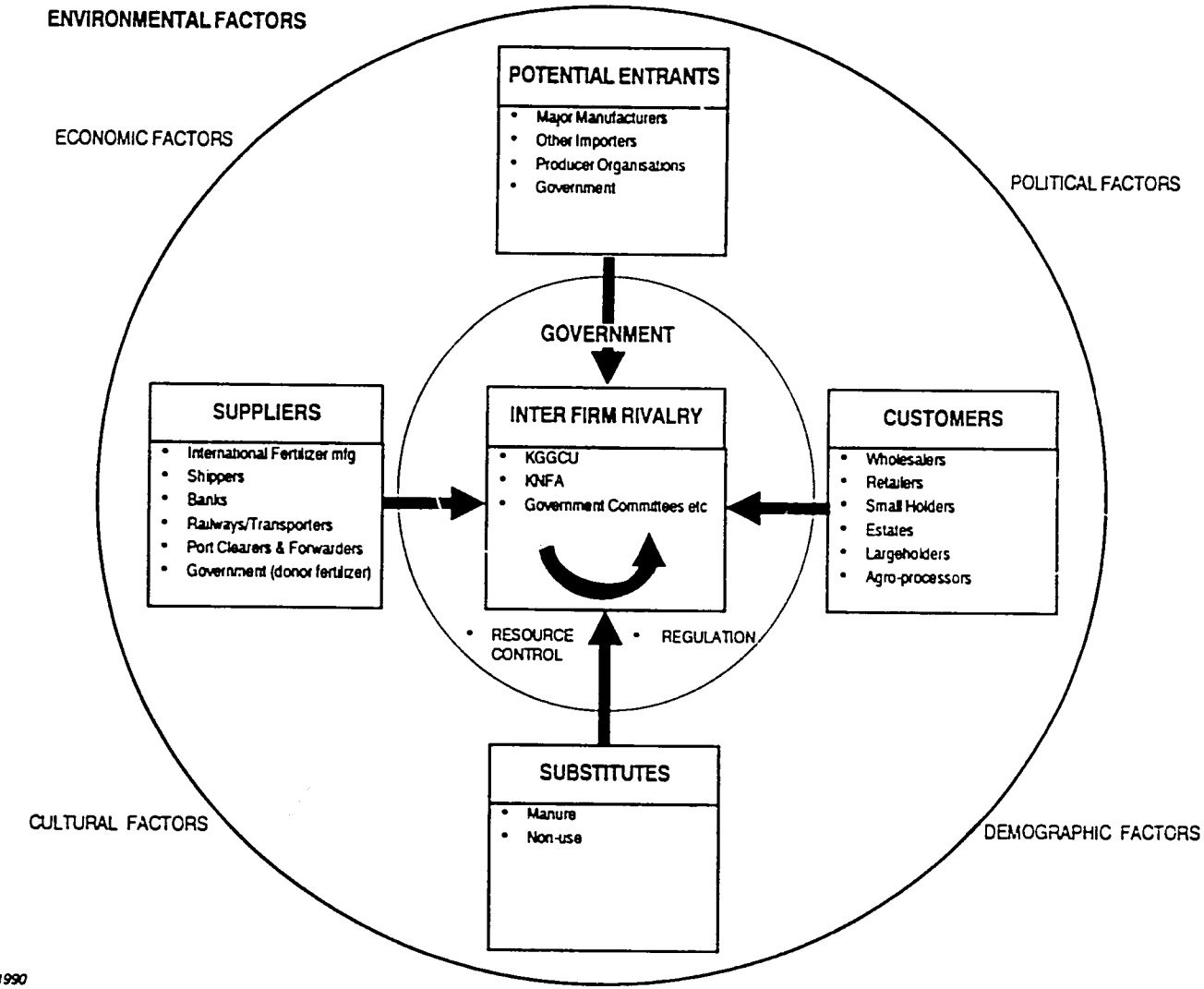
KEY: → *Title Flow*

NOTE: 1 *Percentages relate to average tonnages in 1989/90 & 1990/91*
2 *Breakdown of consumption is based on mid 1980 estimates*

Figure 2

FERTILIZER INDUSTRY - STRUCTURAL FORCES

ANALYSIS OF SOURCES



Based on Porter, 1980 and Auston, 1990

Through our interviews with fertilizer traders and reviews of previous documentation, we have analyzed the relative intensity of the fertilizer industry structural forces from the point of view of importer / distributors. The results of this analysis are summarized in diagrammatic form in Figure 3.

In summary, the significant forces that shape the fertilizer industry are:

- the significant bargaining power that customers (end-users and distribution channels) hold over importers / distributors. This limits the margins that importers / distributors can earn

- the relatively high threat of new entrants to the industry. This means that importers / distributors cannot earn high margins without attracting new private sector entrants or direct government involvement in importation

- government actions which still have a major impact on the industry, although their impact has been declining. This is because the government:

  - controls and rations essential resources (eg foreign exchange) and allocates fertilizer procured under donor programmes. This means that firms can develop a competitive advantage through better informal relationships and contacts with government officials

  - directly participates in the market (through imports by parastatals such as KNTC and KTDA), and can therefore influence the level and type of competition

  - has an impact on the demand for fertilizer through the actions of the NCPB, Coffee Board of Kenya and KTDA (which influence the prices and the timing of payments farmers receive for their crops), the provision of subsidized agricultural credit through the Agricultural Finance Corporation and the provision of subsidized extension services.

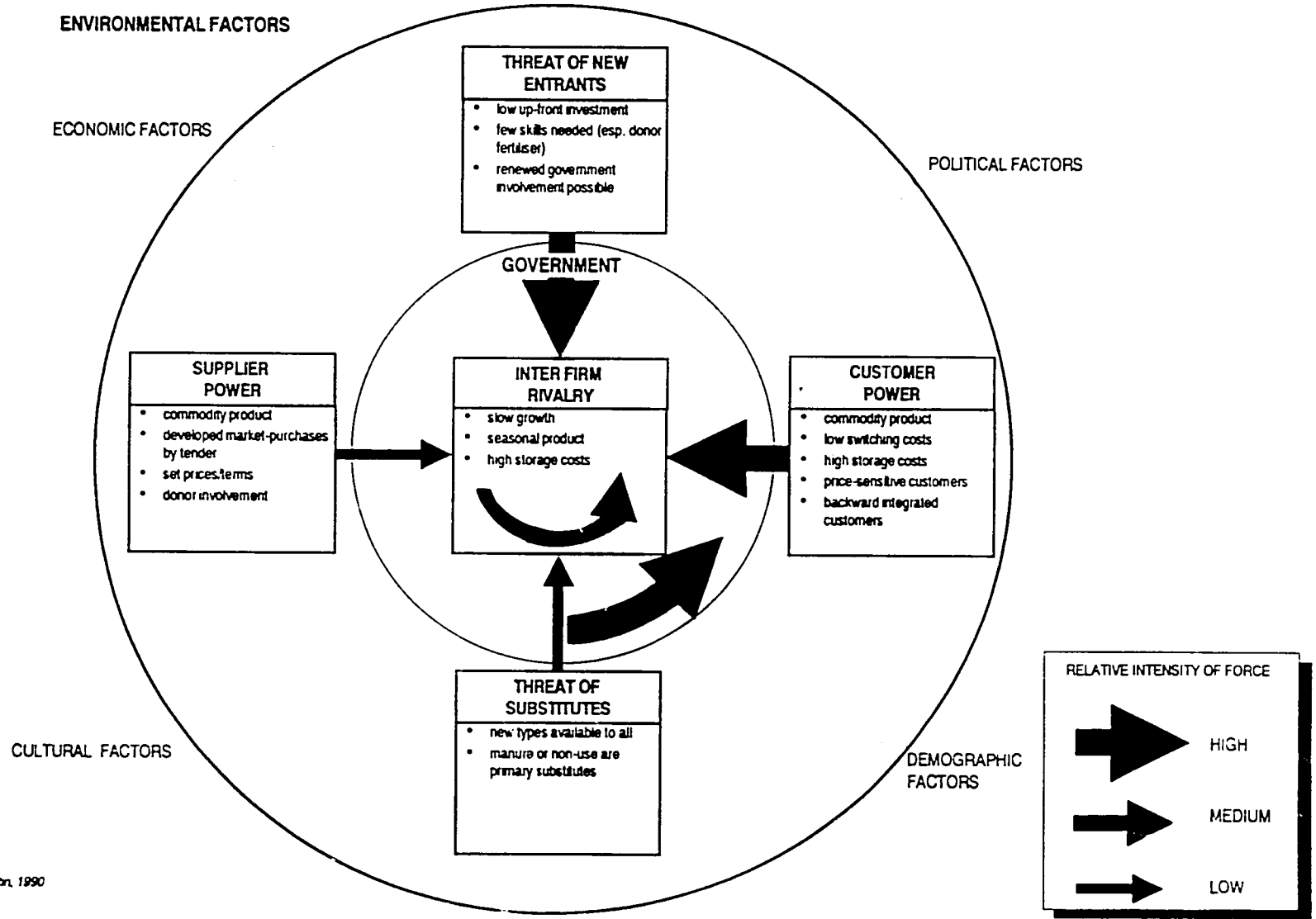
- environmental factors also have a major influence on the industry. The main factors are:

  - economic factors eg foreign exchange constraints, inflation rates, shilling devaluations and lack of bank credit

gure 3

FERTILIZER INDUSTRY - STRUCTURAL FORCES

SUMMARY OF ANALYSIS



...d on Porter, 1980 and Austin, 1990

political factors, mainly the relationships with donor countries that provide over half of the fertilizer imports

5.3 Sources of competitive advantage

To earn higher margins, individual firms within an industry must seek to develop 'competitive advantage'. In general this means carrying out some activities better and/or at a lower cost than other competitors which help increase sales volumes and earn higher margins.

Competitive advantage can stem from the many discrete activities that firms perform in designing, producing, delivering and supporting their products. One method of analyzing these potential sources is to use the concept of the firms 'value chain'. This disaggregates the firm into its strategically relevant activities and is shown diagrammatically in Figure 3. 'Value' can be created in each individual activity.

Figure 4 summarizes the typical activities that a fertilizer trader could do better or more cheaply to increase the value they create and gain competitive advantage. Because of the nature of the industry, the most value is created by the activities associated with inbound and outbound logistics and the procurement function. Few firms use operations (eg repacking, blending etc) at present to add value. Fertilizer traders have also paid little attention to developing a competitive advantage through marketing and service activities.

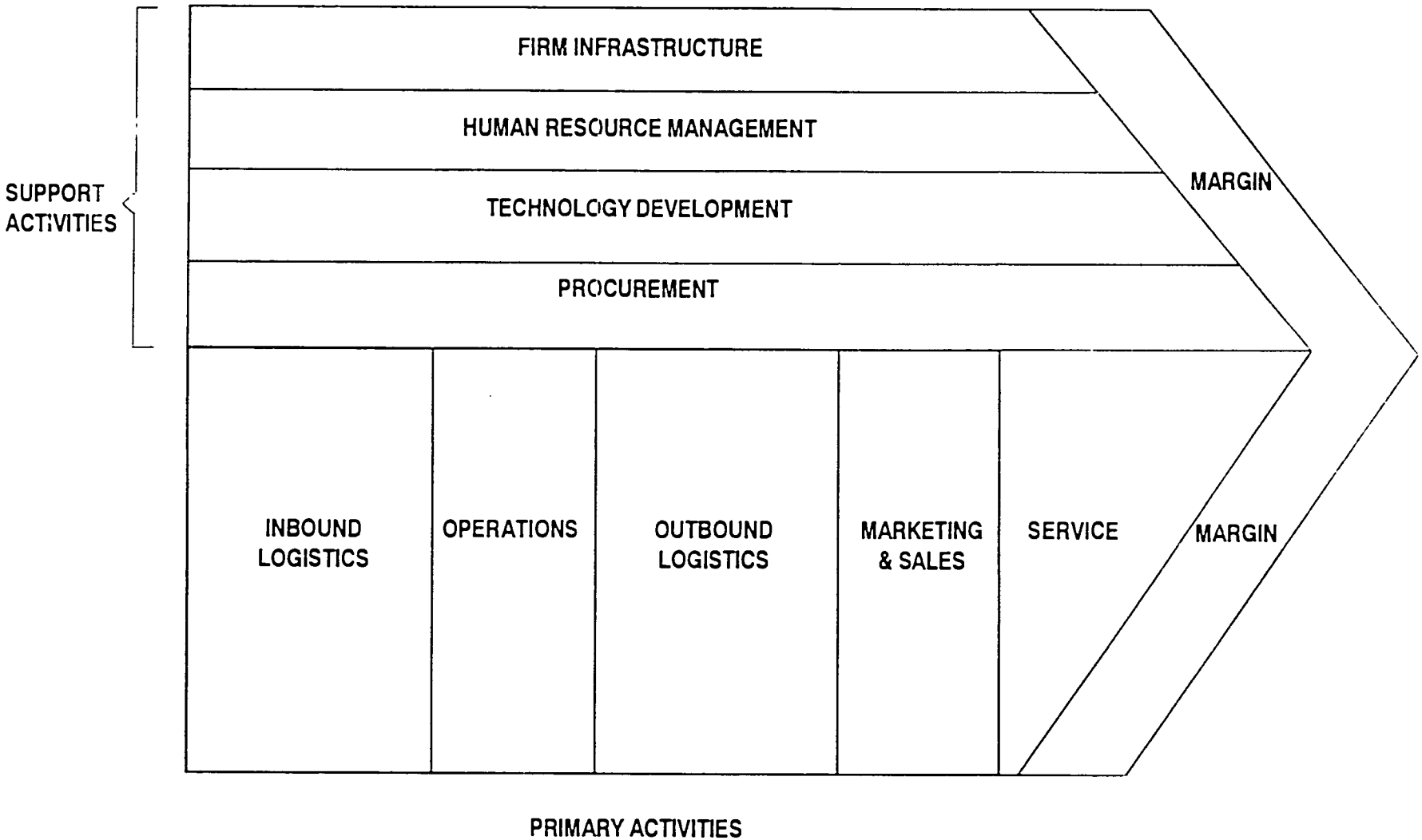
5.4 Impact of structural forces on key firm level strategic decisions

The industry structural forces have a direct impact on the relative difficulties and uncertainties fertilizer traders face in making key strategic decisions. Key strategic decisions include capacity, sourcing and pricing decisions. The level of difficulty or uncertainty will have an impact on the type and level of investment that fertilizer traders undertake. There are three main types of decisions:

Capacity decisions are especially difficult in the fertilizer industry because individual industry players can easily expand or contract the amount of fertilizer that they handle

Figure 4

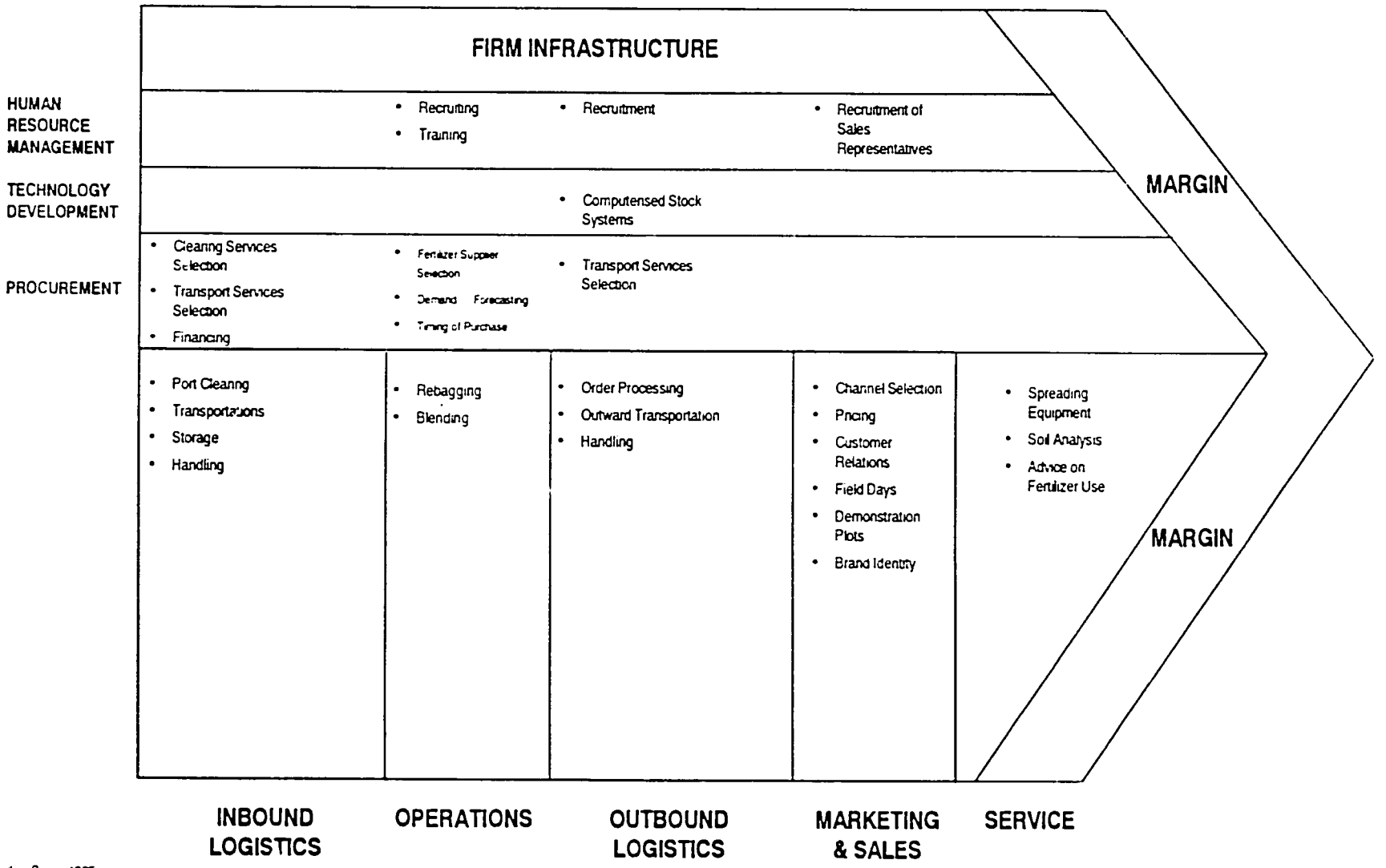
GENERIC VALUE CHAIN



Based on Porter 1985

Figure 5

FERTILIZER IMPORTERS - TYPICAL VALUE CHAIN ACTIVITIES



Based on Porter, 1985

- **Sourcing decisions** are vital because of the volatility of international fertilizer prices. Importers purchase their yearly requirements in one or two lots and in general are not tied to any one source. They therefore need to ensure that they buy from the lowest cost source

- **Pricing decisions**. Following price decontrol, traders' freedom to set their own prices is limited by the price sensitivity of the end users and the pricing policies followed by the dominant competitor (KGGCU) in the market place.

5.5 Impact of FPMRP and price decontrol on industry structural forces

The industry structural forces outlined above have changed over time. Both price decontrol and other policy changes, have had a major impact on the structural forces. These policy changes have reduced the impact of government actions and changed the nature of the barriers to new entrants. Relationships with the government and knowledge of the 'system' are less important. The bargaining power of distribution channels has increased.

Other policy changes that have had (or may have) an impact include:

- strengthening of the role of the KNFA. The KNFA has helped shape government actions, disseminated information and acted as a stabilizing force reducing inter-firm rivalry

- creation of the National and District Fertilizer Committees. They will have an impact on industry structural forces when they start operating effectively

- strengthening the Inputs Unit of the MOA. This may make information more widely available thus reducing the competitive advantage that can be gained through informal sources

- using KNFA to procure and allocate USAID donated fertilizer. Because of the allocation policies applied (eg 2,000 tonne limit, need for bank guarantee etc), the barriers to new entrants and for wholesalers to bypass the larger distributors have been raised.

6 TRADER RESPONSES TO INDUSTRY STRUCTURAL FACTORS

In a well developed fertilizer marketing system, free from inappropriate government actions, one would expect firms to develop competitive advantage in one or more aspects of the generic value chain outlined in section 5.2.

For example, importers would develop competitive advantage in procurement and inbound logistics. Wholesalers would concentrate on outbound logistics, marketing and service and focus on market segments that are at present not well served (mainly smallholders).

It can thus be seen that any factors internal to a fertilizer business that result in the business gaining a competitive advantage are central to the achievement of the FPMRP's objectives. This is because, as traders specialize and gain competitive advantage:

- the average total fertilizer marketing costs should reduce and the savings passed on to the farmers

- traders would develop specific marketing programs to increase smallholder fertilizer use to increase their market share and expand the served market.

Traders have adapted their competitive responses to cope with the changing industry structural forces. Prior to price decontrol and import liberalization, the key sources of competitive advantage were procurement of government fertilizer and reduction of cost of inbound and outbound logistics. After price decontrol, traders began to concentrate on marketing activities albeit mainly on pricing activities (eg discounting).

Traders have now begun to explore and build other sources of competitive advantage. These include promotion campaigns, repacking and blending of fertilizer and branding. Other traders have explored alternative sources of fertilizer and innovative methods to reduce total fertilizer importation costs.

The continued availability of donor fertilizer at terms that are cheaper than direct commercial imports will, however, limit the incentive for traders to develop competitive advantage in commercial fertilizer procurement and inbound logistics.

CHANGES IN POST-DECONTROL FERTILIZER MARKETING STRUCTURE

The main changes in the marketing structure at the different levels that were noted are:

Importer / Distributor level

Changes as a result of FPMRP and other donor programs include:

- increase in the number of distributors (and wholesalers) due to lower barriers to new entrants obtaining donor fertilizer
- reduction in direct commercial imports from 173,000 tonnes four years ago to 113,000 tonnes in 1990/91.
- introduction of smaller (10 and 25 kg) fertilizer packages

Changes as a result of price decontrol include:

- KGGCU prices now used as a benchmark for pricing decisions
- distributors have started to offer larger margins and/or free delivery services to wholesalers and retailers.
- an increasing percentage of sales are through third party distributors and diversification into related lines

Wholesaler level

Changes as a result of FPMRP and other donor programs include:

- Wholesalers are able to bypass importers / distributors and thereby increase their bargaining power and margins. This is because wholesalers can buy their requirements on the same terms are large distributors directly from the Government or KNFA.

Changes as a result of price decontrol include:

- wholesalers have increased their retail networks
- widespread use of discounting and direct price competition
- greater demand for smaller bag sizes

Retailer level

Changes due to FPMRP include:

- wider availability of DAP in retail outlets
- USAID DAP recognized as a 'quallty' brand

Changes as a result of price decontrol include:

- higher margins for retailers and stockists
- increase in the number of competing retailers

The above changes have increased the potential for smallholder fertilizer use through wider retail network coverage and increased availability of fertilizer in smaller bag sizes. Also, there is now a stronger wholesale and retail network in place.

8 IMPACT OF DECONTROL ON INFORMATION NEEDS

8.1 Traders' information needs

The information needs of fertilizer traders can be divided into:

- short-term (or tactical) information needs to help them make their capacity, sourcing and pricing decisions
- long-term (or strategic) information needs to make their long-term investment decisions.

Price decontrol and import liberalization have had little impact on the short-term information needs for capacity decisions. Information needed for sourcing decisions has changed substantially as traders now have a wider choice of local sources and terms. Also because of import liberalization and implementation of new rules for USAID fertilizer allocations, traders are exploring the possibility of importing directly. Traders also need better information on their costs and competitors prices for their pricing decisions.

The nature of long-term information needs has changed. The uncertainty relating to government set prices has been replaced by uncertainty as to pricing moves by KGGCU and other competitors.

In summary, fertilizer decontrol has increased the traders' need for information.

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Traders currently obtain most of their information through discussions with others in the trade. Some information is obtained from the government and from donor organizations. They would like the KNFA to provide more information through an independent secretariat.

8.4 Impact on Policy Maker Information Needs

At present the policy makers are required to understand both the international and domestic fertilizer markets and trade much more than before. In the past the policy makers had peak information demand just before the end of the fertilizer year when setting new prices. There was little follow up after that.

In a price decontrolled environment policy makers will be expected to monitor any collusion or monopolistic tendencies in the market, an activity that was unimportant in the past.

9 IMPACT OF POST DECONTROL PRICING POLICIES ON FPMRP PURPOSE

It is now evident that fertilizer prices have responded to supply and demand imbalances and thus acted as price signals to both suppliers and consumers.

Fertilizer prices have a major impact on fertilizer trader capacity, sourcing and marketing decisions. Fertilizer traders have started to shift their marketing emphasis towards those markets which offer them the highest margins. They feel that the long term effect of price decontrol will be to increase smallholder fertilizer use. This is because, as traders seek to increase market share and profits, they will increasingly target smallholders, especially those producing crop with high VCR's eg horticultural crops.

In the long run, smallholders will pay higher prices than the larger farmers but this will only reflect the minimum extra marketing costs of marketing to them. Smallholders will however benefit from wider availability and from marketing programs tailored to their needs.

10 IMPACT OF CURRENT ECONOMIC AND POLICY VARIABLES ON INVESTMENT IN FERTILIZER IMPORTATION AND DISTRIBUTION

Fertilizer traders identified a number of economic and policy variables as having a major impact on the profitability and growth of their business. The three most important of these were identified as:

- producer prices for foodstuffs relative to input prices

availability of credit to farmers

timeliness of payments to farmers

All the above factors have deteriorated from the viewpoint of the farmer and have thus had a negative impact on the profitability and growth of fertilizer businesses.

Banks believe that lending to fertilizer traders has become more risky since price decontrol. They expressed mixed views as to whether they would increase lending to fertilizer traders in the future. Bank credit is likely to become more difficult and expensive to obtain in the future.

Traders themselves feel that price decontrol will result in a minor increase in the profitability of fertilizer marketing in the long-term. They also feel that the main external critical success factors which will impact their long-term profitability is having higher producer prices and more timely payments to farmers.

The uncertainty about future improvements in the key economic and policy environmental factors affecting their businesses and the likelihood of tighter credit markets are both likely to have an adverse impact on investment by fertilizer traders. Few of the traders interviewed had invested significantly in the trade since price decontrol or have plans to invest in the future.

PART III - PROGRAM EVALUATION AND RECOMMENDATIONS

11 IMPACT OF OTHER DONOR PROGRAMS AND ANALYSIS OF POTENTIAL FUTURE IMPACT

Many donors have participated effectively in supplying fertilizer aid to Kenya. Norway, Denmark, Finland, The Netherlands, Japan, Italy, Germany, FAO and USA have all been important fertilizer donors. The proportion of donor fertilizer of total fertilizer imports has increased from 12% in 1983/84 season to 63% in 1987/88.

The total number of donors participating in any one year has declined since 1984/85 period. Earlier, donors were involved either through reallocation of unrelated unspent project funds, import support programs or direct fertilizer donations. Donors have now limited their involvement to specific fertilizer programs

All the other donor programs have boosted the supply hence the availability of fertilizer in the country. The ceasation of the Netherlands donations after 1989 for what it considered lack of any fertilizer policy by the government may have influenced the decision to decontrol fertilizer prices.

World Bank has been implementing fertilizer policy programs under the Agriculture Sector Adjustment Programs - ASAO I and II. The goal of the fertilizer component is to promote an increased and more efficient use of fertilizers particularly by smallholders in a liberalised and competitive market environment. The program objectives are therefore essentially the same as those adopted by FPMRP.

12 ASSESSMENT OF POLICY CHANGES PURSUED BY FPMRP

12.1 Policy Changes Persued by FPMRP and Current Achievements

The policy reform component outlined in the Program Assistance and Approval Document (PAAD) includes these areas:

Fertilizer pricing: This would permit a more realistic determination and setting of official fertilizer prices as well as move towards price liberalization. This has been a success since the government decided to decontrol fertilizer prices very early after the initiation of FPMRP.

Liberalization of fertilizer imports and the allocation system: The program proposed to support the government in liberalizing commercial fertilizer imports and in enforcing the government allocation criteria in rationing the donor financed fertilizer. Once more, the government largely pre-empted the gradual reform program envisaged in the PAAD.

Promotion of fertilizer use: This is an ongoing exercise. Some pamphlets, written in Swahili, on general fertilizer use and advice on the use of DAP on acidic prone soils have been circulated to farmers.

There is no doubt that GoK/donor discussions have resulted in the dismantling of the administrative system surrounding fertilizer marketing and pricing. The general result has been a more competitive market structure with greater potential fertilizer availability to smallholder farmers.

12.2 Effect of other policy changes as a result of FPMRP

The other major policy changes that have come about as a result of the FPMRP are in relation to the procument and sale of USAID donated fertilizer. The KNFA is now responsible for the procurement and has instituted new policies for the allocation and sale of the fertilizer to its members. These policies include a minimum sale limit of 2,000 tonnes and the requirement for traders to supply bank guarantees in advance of purchasing the fertilizer.

The new changes have increased the barriers to small traders and/or new entrants to the fertilizer trade from obtaining allocations of USAID donated fertilizer. However, those traders who obtain an allocation still benefit from 180 days interest free credit, a fixed exchange rate (without the cost of purchasing forward cover) and fixed prices for all quantities above the minimum.

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These changes do address and correct some of the deficiencies of the previous allocation system. However, unless the price and terms under which the USAID fertilizer is sold are equivalent to commercial import costs, traders will still prefer to purchase aid fertilizer and will not develop a competitive advantage in direct commercial importation.

13 IMPACT OF TRAINING UNDER FPMRP

Training under the program fell under study tours, short courses and in-house training for MOA's staff. The study tours to South East Asia countries were appropriately chosen and implemented. Two officers from MOF toured India, Singapore and Indonesia. The main objective was for the officers to familiarise themselves with the general fertilizer activities in this area.

Formal training under IFDC, Muscle Shoals-Alabama, was given to two officers from KGGCU and one officer from MOA headquarters. This was a useful, broad based course for those marketing fertilizers. However, the participants have been unable to put into practice what they learnt as they do not have direct responsibility for key decisions in their organisations. There is therefore a need to select the course participants based on both their responsibilities prior to the training and on their planned future responsibilities.

On-job training was scheduled to run intermittently for a year as requested by MOA. This training was not effective for lack of a stable group of staff to work with the Consultant and because of abrupt policy and institutional changes. This type of training is required more than ever after the past policy changes. The Farm Inputs Branch has been strengthened and is apparently more stable now.

14 ADDITIONAL POLICY CHANGES NECESSARY TO ASSURE INCREASED SMALLHOLDER FERTILIZER USE

14.1 Demand Sided Policies

High fertilizer prices relative to output prices and lack of cash or seasonal credit at the right time are the two main constraints cited for non-use or sub-optimal use of fertilizer by smallholders. Figure 6 indicates the decision making mechanism in fertilizer use. Smallholders have been hard pressed in recent years because of increases in cost of living, increased local authority and central government cesses, increased harambee collections and delayed payments for produce delivered to parastatal market boards and cooperatives. Payments that do eventually reach the farmer are subject to increasing deductions.

Figure 6: Smallholder "Decision tree" on Fertilizer use

* -ve incase of labour shortage

Many smallholders producing maize have, in spite of some market liberalization, met administrative and logistical difficulties in moving their crops to market. Such experiences have discouraged production for off-farm sales and thus reduced demand for fertilizers.

Active implementation of generally agreed agricultural market liberalization policy reforms is essential to ensure increased smallholder fertilizer use. The reforms should include liberalizing produce marketing and price controls, implementing consistent local authority cesses and impositions and prioritising the development of rural access roads.

14.2 Supply sided policies

One of the key supply sided objectives is to put into place a fertilizer marketing structure that is able and willing to import Kenya's fertilizer needs commercially. However, reliance on donor fertilizer has increased in the past five years.

Government actions in the form of import licencing controls and inappropriate procedures for procuring and allocating donor fertilizer have contributed to the low level of commercial importation. Many of the distortions have been removed, although some significant ones still remain.

Differing government, donor and trader objectives make the design of a perfect set of policies and procedures difficult. At best, the 'system' can be designed to satisfy chosen objectives decided upon after consultation between the government, donors and traders. Such a system could include the following key elements:

- the move by donors to long-term commodity programs. The government should develop in consultation with the KNFA, a unified list of fertilizer types required to present to the donors

- KNFA be made responsible for the procurement and allocation of all aid fertilizer on terms that are equivalent to commercial importations (including interest and forward cover costs)

- fertilizer imports moved to the essential commodity import schedule and thereby getting priority for foreign exchange allocations.

15 CONCLUSIONS AND RECOMMENDATIONS ON FPMRP

Having completed our analysis we conclude that the FPMRP purpose of strengthening and promoting a fertilizer market network at prices that reflect costs including adequate profits to importers and distributors has been accomplished.

This is because:

- importers and distributors now use pricing policies which reflect the cost of fertilizer to them including a profit margin which is driven primarily by competitive forces

- there is a wider retail distribution network in place in the country. Retailers are earning higher margins which has provided the incentive for them to set up in new areas and in competition with existing retailers

- fertilizer traders are beginning to develop new sources of competitive advantage in strategic activities such as marketing and sales and service activities

However there are still a few areas of concern relating to the development of the fertilizer marketing network. These include:

- continued and increasing reliance on donor imports in preference to direct commercial imports

- general lack of investment in physical distribution capacity by importers and distributors

We further believe that this stronger market network has increased the potential for increased smallholder fertilizer use. The terms of reference for this evaluation study did not require direct estimation of the actual changes in smallholder fertilizer use. However, over the duration of the program, total fertilizer consumption in Kenya has fallen from 272,000 tonnes in 1988/89 to 228,000 tonnes in 1990/91, a decline of 16%. It is likely that fertilizer use by smallholders over the period will have declined by more than 16%.

We believe that this decline in use can be explained mainly by factors other than lack of fertilizer availability. These factors include:

- low official producer prices for scheduled crops and delays in payments to farmers

- low international prices for tea and coffee exports

- general lack of seasonal credit to smallholders.

We also believe that the major covenants specified in the PAAD have been complied with in all material respects. USAID appears to have complied in most respects with the implementation procedures as set out in the PAAD. However, some of the tasks and activities outlined in the monitoring and evaluation plan have not yet been fully accomplished.

We recommend that:

- the FPMRP should be continued for the foreseeable future, albeit with modifications to reflect new policy reform objectives

- the farm Inputs Branch should be strengthened through further training and in provision of support services (office and logistic support). The project should work closely with the World Bank's program on this

- more extensive and intensive promotion of fertilizer use through the distribution of appropriate literature increased supply of aid fertilizer in smaller packages be undertaken

- KNFA be assisted in setting an independent secretariat which will represent the wishes and aspirations of most of the importers/distributors

- The project should assist in implementing an active monitoring and evaluation of the impact of fertilizer policy changes on fertilizer imports, use and total effect on agriculture in Kenya.

PD ABI-172

FERTILIZER PRICING AND MARKETING REFORM PROGRAM (615-0243)

MID-TERM EVALUATION

DECEMBER 1991

VOLUME II - MAIN REPORT

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10 December 1991

Mr D Soroko
FPMRP Program Manager
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Dear Mr Soroko

MID-TERM EVALUATION OF THE FERTILIZER PRICING AND MARKETING REFORM PROGRAM

We are pleased to enclose twenty five copies of our final report of the mid-term evaluation of the Fertilizer Pricing and Marketing Reform Program (FPMRP). Amendments have been made to the report as per your comments on the draft report.

The report is divided into two volumes. Volume I is the executive summary. It provides an overall summary of the findings and recommendations.

Volume II is the main report and is divided into three main parts. Following an introduction and background to the study, Part one covers the analysis of policy changes and macroeconomic factors in Kenya. Part two presents analysis of the market structure changes, and Part three summarises our evaluation of the program and presents recommendations on additional changes necessary to assure increased smallholder fertilizer use.

We have enjoyed working on this assignment and in particular holding discussions with public officials and fertilizer traders. Thank you for giving Price Waterhouse the opportunity to work on this important sub-sector in Kenya.

Yours sincerely

W.V Bouch.

W V Bouch
Director

CC Deputy Executive Officer
USAID/Kenya

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FERTILIZER PRICING AND MARKETING REFORM PROGRAM (615-0243)
MID-TERM EVALUATION
VOLUME II - MAIN REPORT

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1 INTRODUCTION

1.1 BACKGROUND TO FPMRP PROJECT

One of the most challenging tasks for Kenya has been to maintain a broad self-sufficiency in locally produced food for the expanding population. The national population growth of nearly 4% is one of the fastest in the world. Agriculture is also looked upon to provide raw materials for the industrial sector; save or generate foreign exchange and offer employment to the rapidly growing labour force These objectives, with a greater emphasis on food security, have been emphasised in Sessional paper No 1 of 1986 on "Economic Management for Renewed Growth."

Kenya is land scarce since only about 20% of the country's 571,000sq km is suitable for rainfed cultivation. Farming is characterised by both large and small-scale holdings. Smallholder agriculture, which is associated with low-input operations, now dominates the agricultural operations in Kenya.

It is estimated that over two thirds of the 2.1 million smallholdings in Kenya are below 1.6 ha and nearly 40% of these are less than half this size. These smallholdings are common despite the fact that studies have indicated that 1.5 ha is the minimum size of land required to maintain an average family in high rainfall areas under traditional subsistence farming. Continuous use of these small parcels of land, with little or no return to the soil or improved husbandry, has resulted in sub-optimal yields from them.

The country has emphasised the need to increase crop yields, particularly food crops, through widespread adoption of the already available high yield seed varieties and more intensive and extensive use of fertilizers. Most large scale commercial estates and a limited number of smallholder farmers have adopted the technology with resultant high yields. Most of the smallholders have as yet to adopt intensive use of fertilizer as recommended by the agriculturalists. Lack of proper use of fertilizer and inadequate crop husbandry are the main reasons why smallholder yields are below both those from research and large scale farms.

It is now widely accepted that the greatest potential for increasing national food outputs lies with the smallholder producers. Table 1 indicates the variability in research and small-scale farm yields, hence the potential from increased production of a selected few crops in Kenya.

Table 1 Crops Yields Under Research and Farmers Environment

(Tonnes/ha)

Crop	Research Yields	Farmers' Yield
Katumani Maize	3 - 4.5	0.8 - 1.2
Wheat	3 - 4	0.9 - 1.8
Banana	15 - 20	3 - 12
Grape	10 - 15	5 - 10
Mango	20	5 - 15
Passion Fruit	14	2 - 5
Paw Paw	15	10 - 12
Carrots	10 - 15	6 - 8
Tomato	20 - 35	10 - 15
Sweet Potato	20	7 - 12

Source: World Bank - Growth Prospects

Lack of fertilizer use by the smallholders has been a government concern for the last twenty years. Smallholder use of fertilizer was widespread between 1963 and 1971 following the introduction of hybrid maize, subdivision of large scale farms, diversification to coffee, tea and also in response to existing subsidies during the period.

The oil crisis of early 1970s increased fertilizer prices and this, together with increased transport costs and a general collapse in agricultural commodity prices reduced fertilizer consumption in the country. The Government became involved in the fertilizer sector by requesting donors to provide fertilizer which was subsequently chanelled mainly through the Kenya Farmers Association (KFA). The main aim was to make cheap fertilizer available to the farmers. This involvement reduced the role of private sector in the trade.

Low fertilizer use continued to be a concern even in 1980s resulting in changes in government policies and strategies for the fertilizer sector. The focus changed to emphasising the need for sustainable pricing and marketing systems that would involve private sector in the trade, commercialise distribution and retailing, improve Government's planning for the sector and increase farmers awareness in the proper use of fertilizers.

By 1982, USAID had recognized and become concerned with the inadequate fertilizer marketing system in Kenya. An agreement was therefore reached that fertilizer supplied under the 1982 USAID Development Assistance Grant, delivered in 1983/84, be distributed through the private sector. Seven firms were subsequently involved in the distribution of the grant fertilizer.

Two studies by IFDC done in 1984 and 1986 confirmed that the fertilizer marketing system in Kenya needed reform. In 1986 USAID launched the Fertilizer Marketing Development Program (FMDP) as a component of the Development Assistance (DA) Grant and Economic Support Fund Agreement (ESF). The objectives of the program included; increasing the involvement of the private sector in fertilizer marketing in Kenya, encouraging investment in retail marketing networks and increasing the overall supply of fertilizer in the country. The long term objectives included putting in place the foundations of a viable commercial marketing system and increasing fertilizer availability and use in Kenya particularly by smallholders.

A program impact study carried out in 1988 showed that the FMDP was by and large successful. Other studies pinpointed shortcomings and made specific recommendations for improvement, especially for the development of a viable commercial fertilizer marketing system.

The current Fertilizer Pricing and Marketing Reform Program (FPMRP) was launched in 1989 for a three year period. The purpose of the program is to increase fertilizer use by smallholder farmers in rural areas. This is to be accomplished by strengthening and promoting a fertilizer market network at prices that reflect costs including adequate profits to importers and distributors.

The program is expected to provide credit worth US$46,100,000 ($30,000,000 ESF and $16,100,000 DFA) to cover fertilizer imports and fertilizer policy reform. The policy objectives to be covered include:

- moving away from the government administered fertilizer allocation toward a more market-oriented approach
- adopting a realistic and timely fertilizer pricing policy
- initiating the analysis and eventual adoption of measures to decontrol fertilizer prices
- strengthening the fertilizer inputs unit in the Ministry of Agriculture in order to make its work more effective.
- increasing the effectiveness of fertilizer use at the farm level
- assisting the private sector in developing a marketing network.

1.2 THE STUDY OBJECTIVE

This is a mid-term evaluation being undertaken two years into the 3 year program period. The objective of the current study is to evaluate the Fertilizer Pricing and Marketing Reform Program's performance in establishing market structures that will enable increased smallholder fertilizer use.

The study concentrates on policies, activities and changes in institutions, marketing and distribution systems before and after the decontrol of fertilizer prices and liberalisation of allocation systems. The TOR for the study is indicated in Annex 1.

1.3 STUDY METHODOLOGY

The study started with a review of documentation of USAID/Kenya past and present fertilizer sector activities. The documents (listed in Annex II) reviewed included Government of Kenya (GOK) documents, other donors documents relating to agriculture and documents concerning the USAID fertilizer program. The Sessional Paper No 1 of 1986, the Sixth Five Year Development Plan (1989/93) and the 1991 Public Investment programme all emphasise the need for broad self sufficiency in food production in Kenya. Policy issues are enumerated on the draft document on "National Policy for fertilizer Pricing and Marketing".

The crucial role of the small scale farmer in food production and the need to intensify production through efficient utilization of inputs, particularly fertilizer and improved seeds is emphasised in the GOK documents. The documents are, however, silent on procedures to be adopted towards either price decontrol or liberalization of imports. The documents also indicate that country would use appropriate pricing and marketing as a means to increasing production.

Other donor documents have equally emphasised the need to remove food production constraints through more appropriate input use, appropriate prices better crop husbandry and marketing. Timely availability of sufficient fertilizers in the rural areas is emphasised as being crucial to increased food production in the country.

The third set of documents reviewed covers historic documentation on USAID fertilizer, impact of the program, fertilizer use at the farm level, recommendation for improvement of the program etc. These documents take on the premises adopted in the program and analyses the effect and role of government in the fertilizer sector.

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The documents also analyses the impact of donor Aid on the development of the private commercial sector.

Recommendations for improvement of the USAID fertilizer program (IFDC 1989) have been the basis under which the current program was formulated.

The review of the documents and the internal interviews assisted the consultants in understanding the structure of the fertilizer sector.

We conducted an extensive field study, interviewing fertilizer traders. In all we interviewed individuals in 14 companies, unions or private concerns importing, distributing or wholesaling fertilizers. The main aim was to evaluate the traders institutional status and the progress made in the sub-sector under the program and particularly after the 1990 fertilizer price decontrol and elimination of import quotas. The list of fertilizer dealers interviewed is listed in Annex III.

We also visited and held discussions with the main government institutions and individuals concerned with fertilizer importations and policies. A total of five people have benefited from formal training under the program. Officers working within the fertilizer unit (MOA) also received informal training. Nearly all those people who benefitted from the training were interviewed under the study. Annex III includes the list of those people, institutions and individuals visited.

We also interviewed officials from the Kenya Commercial Bank, the Standard Chartered, ABN Bank, and Citibank to ascertain their view of the fertilizer trade and profitability of lending to it.

1.4 THE REPORT STRUCTURE

The report is divided into three main parts. Part I addresses the policy changes and the macroeconomic factors. Part II covers the market structure and past changes as a result of the program and recent policy changes. Part III evaluates the program and covers recommendations on the same.

This structure has reordered the individual elements of the TOR to allow a smooth flow of ideas.

PART I ANALYSIS OF POLICY CHANGES AND MACROECONOMIC FACTORS

2 DECONTROL OF PRICES AND LIBERALIZATION OF IMPORTS

2.1 Background

Up to December 1989, fertilizer prices in Kenya were gazetted by the Government. This required an annual review of fertilizer prices by the government and the setting of maximum retail prices at 42 selling points in the country. These points or centres were based on the main trading centres that almost corresponded to the main district headquarters. These centres are normally several kilometres away from the small rural market centres in the farming areas.

One major constraint created by these retail price controls was that these prices only included an allowance for transport costs from the port to the main selling points. Transportation costs to get the commodity to the rural stockists near the farmers had to be borne by the traders or stockists. Stockists in the rural areas were therefore generally reluctant to stock fertilizers at low or non-existent margins.

Most farmers had no alternative but to rely on Co-operative delivery or travel to any of the gazetted points to buy fertilizer. Travelling to urban areas is often inconvenient and risky for farmers, and expensive in terms of time and money. These factors are said to have contributed partly to lower utilization of fertilizer at the farm level. Decontrol of prices was expected to attract fertilizer stockists in the rural area with subsequent increased availability and use of fertilizers by the farmers.

Decontrol of prices was thus a long term objective under both the USAID FPMRP, the World Bank Agricultural Sector Adjustment Operation (ASAO) and of the Government of Kenya. The eventual decontrol of fertilizer prices in January 1990 was however a surprise to all the people interviewed and came at an unexpected time.

2.2 CONTRIBUTION TO PRICE DECONTROL

As said earlier, fertilizer price decontrol was a longterm policy objective of the institutions involved in the fertilizer sector. The indirect contributors to the decontrol of prices and liberalization of imports include:

a **FPMRP**

The IFDC report which preceded the current FPMRP program recommended that the fertilizer prices be decontrolled by the 5th year of the program.

The FPMRP Program Assistance Approval Document (PAAD) included a covenant that "by no later than 28 February 1990 to undertake and complete a study in collaboration with AID to assess the potential for decontrol of fertilizer prices". This date is also contained in the Policy Reform Matrix. An additional representation and covenant also states that "the Government of Kenya hereby reaffirms its commitment to eventual elimination of price controls and quantitative restrictions on fertilizer imports ...". Though the decontrol of fertilizer prices was envisaged under the program the actual date had not been identified under the program. We have no other information indicating that this was ever discussed at any other time or forum. There is no other indication that the program did play any part that resulted to the decontrol of prices at the time it happened.

b **KNFA**

The Kenya National Fertilizer Association (KNFA) is an organisation of fertilizer dealers formed in 1986. The association represents private business interests committed to efficient fertilizer marketing and distribution. Its main purpose is to facilitate dialogue between the Government and fertilizer dealers and to strengthen private dealings in fertilizer trade. For this, the government has agreed that KNFA be the main arm allocating donor fertilizer to its members. At present KNFA is only allocating USAID fertilizer.

We were informed that KNFA had written several letters recommending a phased decontrol of fertilizer prices since its inception. In one of the letters in September 1989, the Association had recommended that fertilizer prices be decontrolled at the retail level. This was in line with the Ministry of Agriculture's thinking at the time.

KNFA was however caught unaware by the December 1989 announcement that fertilizer prices were to be decontrolled by January 1990. The immediate reaction was for the association to congratulate the GoK on the move.

c **MOA**

The Ministry of Agriculture planned for a phased decontrol of fertilizer prices. The Ministry wished for an initial decontrol of prices at the farm level while fixing prices at the railhead. This was the spirit of the 1986 Session Paper Number 1 which had indicated that future control prices will be set for a limited number of distribution centres only and retailers would be permitted to set their own prices. Nothing though was said of Price Control Act at the time.

In its 1987 National Policy for Fertilizer Pricing and Marketing Paper, the Ministry had recommended the liberalization of trade in some types of fertilizer and trace elements that were being used in small quantities in growing flowers and tobacco and as raw materials for formulating liquid fertilizers.

There was no indication in our interviews that any planners or technicians in the government ministries were aware of the impending decontrol decision at the time it happened. It appears that this was a decision restricted to very few individuals within the government. This therefore makes it difficult to say what the actual GOK's objective of decontrolling fertilizer prices and freeing fertilizer import allocations was. Nevertheless it was apparent from (d) below that donors such as the Netherlands were pulling out of fertilizer for what appeared to be lack of serious Government commitment to the sector. The latter part of 1989 was therefore an opportune time for GOK to take a drastic step to assure the donors that it was committed to the sector.

d **OTHER DONORS**

No donor interviewed indicated that they had any role in the final decision to decontrol fertilizer prices. However, it was indicated to us by the Netherlands, a longterm supplier of fertilizer to Kenya, that it withdrew from the fertilizer sector late in 1989 for what it called lack of concrete fertilizer policies by the Kenyan Government. The decontrol of prices came within a few months after this event. It may not be related but it could have triggered the action.

2.3 REMOVAL OF IMPORTATION CONSTRAINT

In moving fertilizer from Schedule II to Schedule I, and in deregulation of import quotas, the government expects that private traders will freely import all the national fertilizer requirements.

The creation of the National Fertilizer Committee is also expected to assist in reducing the import constraints.

The National Fertilizer Committee is made up of representatives from:

- Ministry of Agriculture
- Ministry of Finance
- Ministry of Transport and Communication (Kenya Railways is to be co-opted too)
- Kenya National Fertilizer Association
- Kenya National Farmers Union
- The Central Bank
- Ministry of Commerce

The committee has both a formal and informal working relationship. This relationship allows the Permanent Secretary, Ministry of Agriculture to discuss import constraints directly with Ministry of Commerce or the Central Bank who are members of the committee. The quarterly meetings of the committee are also frequent enough to resolve issues as they arise.

3 POST DECONTROL DECISION

The Government decontrolled fertilizer prices in January 1990. The Kenyan National Fertilizer Association (KNFA) was one of the first institutions to congratulate the Government for making the bold move. The association also assured the Government that it will not be involved in any collusion or in fixing of future fertilizer prices. In congratulating the Government, the KNFA indicated that the move would make it possible for the fertilizer dealers to retail fertilizer close to the consumption points in the rural areas. The association expected that free competition in the fertilizer trade would benefit the fertilizer consumers.

3.1 KGGCU POST DECONTROL RESPONSE

The optimism in the fertilizer trade as a result of freeing market prices was short lived. The Kenya Grain Growers Union (KGGCU), which accounts for between 30% and 45% of the national fertilizer trade, lowered its fertilizer prices by about 18% in February 1990. This resulted into fertilizer prices that were below cost for many of the industry players. This was an unexpected move in the trade and was therefore of major concern to the fertilizer dealers (though a relief to stockists and consumers). Some of the reasons given for this move by KGGCU were:

- KGGCU had a 2 year backlog of fertilizer it wished to dispose off. KGGCU Records indicate that the union had KShs 245 million worth of GOK fertilizer compared to Kshs 61 million worth of commercial imports by March 1990. The inventory was adjusted to Kshs 87 million worth of Government fertilizers and Kshs 139 million worth of commercial imports by March 1991. This would seem to support the argument.

- KGGCU wanted to re-capture its former fertilizer market share which had fallen from 60% to about 30% in the recent past. This would not have been sustainable on loss-making price levels and this was the wrong strategy for the union.

Whatever the reason for KGGCU's action, the reduction of fertilizer prices was viewed as being counterproductive by the other competitors. Some fertilizer dealers (Muranga Union, Machakos Union) subsequently raised their concern with KNFA on the KGGCU action arguing that they should be compensated by GOK for the losses they were bound to make selling fertilizer. KNFA subsequently wrote a letter of complaint to the Ministry of Finance (MOF).

The letter to MOF argued that KGGCU was wrong in fixing the low prices and that GOK had favoured KGGCU with donor fertilizers. (KGGCU had previously channeled government fertilizers on concessional terms.) The KNFA asked for 'a level playing field' for all the industry players. This was a difficult case for KNFA since the association had campaigned for eventual decontrol of fertilizer prices and did not wish to be seen to be going against the new policy. The letter was never answered and those aggrieved by KGGCU decision were requested by KNFA to follow their cases with the Ministry.

The Government does not seem to have interfered with the market behaviour. This indicates that it was either aware of the KGGCU move, it expected the move to have been of a short time duration and effect or it simply wanted to see how the market would sort out its problems out.

Fertilizer prices therefore remained low for most of 1990 calendar year while KGGCU was offloading its stock. Wholesale prices remained about 5% higher in towns with little influence from KGGCU. Retailers however purchased the cheap fertilizers and charged higher margins (Sh20 to 30 compared with Sh 5 to 10) to the farmer. The prices started showing signs of recovery in some places (eg Kericho) in early November as some KGGCU stores reported no stock. By January 1991, even KGGCU prices were 37% higher than 1990 prices. February prices fell by 5% and stabilised at that level for most of the year. Intense price competition has been common in some big fertilizer outlets such as Kitale for most of 1991.

3.2 GOK POST-DECONTROL ACTIONS

The Government did very little to influence the trend of fertilizer prices after the decontrol in January 1990.

However the Government has since:

a **deregulated the fertilizer importation system in November 1990.**

The Government moved fertilizers from Schedule II to Schedule I of the import licencing schedule. This means that prior authority from the MOA is no longer required to import fertilizers. Importers of commercial fertilizers were however left to register with the Ministry of Agriculture (for data collection purposes) when they submit applications to import to the Ministry of Commerce.

Importers are now free to import the type and quantities of fertilizers they think they will be able to sell. They however still need to obtain an allocation of foreign exchange from the Central Bank.

The ministry of agriculture is a bit concerned about the current fertilizer importation trends. There is a general feeling that the sector should not be left unguarded and there should be a constant review of what is being imported by the private sector compared to what should be imported for the season ahead.

There appeared to be no orders or plan for the importation of about 40,000 tonnes of DAP by November 1991 for the 1992 long rains season. This was a concern by the Ministry though not felt by KNFA. The latter felt that there was no need for concern and that it was going to take care of it.

We share the concern with the Ministry but at the same time do not see the need for regulating the sector. This is something that the Ministry should raise with KNFA directly or raise it at the National Fertilizer Committee Meeting.

b **strengthened institutions and mechanisms for handling fertilizer information and data.**

This has been done through a number of ways:

- the Farm Inputs Unit has been strengthened by more than doubling the number of officers working in the unit. The unit has been elevated to a Farm Inputs Branch which is directly answerable to the Director of Agriculture. This gives the unit more status and rank within the Ministry

  This Branch now has sufficient officers - probably more than it requires. The branch has no facilities - offices, logistics, stationery for it to function efficiently.

It is currently looking for offices to move into from the current crowded Kilimo House. This is crucial. Proper job descriptions and responsibilities should be assigned and a training programme initiated.

- Fertilizer Development Committees have been established at the National and District level. These committees are planned to be advisory rather than being regulatory organisations. KNFA is an important member of the National Fertilizer Committee. There is need therefore the association to be involved at the district level

- the donor fertilizer import function is in the process of being unified in the Ministry of Agriculture

  This is commendable in view of the misunderstandings that have occurred on donor-MOF imported fertilizer. The MOA, being a technical Ministry, is better placed to understand fertilizer issues. MOF will still continue with planning and budgeting the counterpart funds.

  The Farm Input Branch, hence MOA's, responsibilities will be to:

  - integrate both donor and commercial inputs
  - develop both donor and commercial inputs
  - promote quality control
  - Assist government in designing fertilizer policies
  - keep the GoK well informed on all developments in the fertilizer sector.

- Subject matter specialists in soil and fertilizer have been designated in the provinces and districts to support the field extension work. Their main role is to promote more efficient and environmentally safe fertilizer use. The subject matter specialists are supported by some capability in soil analysis on the ground.

  Past fertilizer use studies have indicated variable soils East and West of the Rift Valley. Most soils around the mountains in Kenya are of volcanic origin and therefore acidic in nature.

Continued use of DAP on such soils without application of a corrective farming systems increases acidity (as reported in a pamphlet by the Ministry of Agriculture on "the use of DAP fertilizer in areas prone to soil acidity"). It is therefore important that soils are tested before any fertilizer recommendations can be made. The establishment of soil testing capability at the field level is an important environmental move supported by ASAO II. USAID is assisting in carrying out soil tests for the same reason.

- District Action Plans for promoting fertilizer use have been established in all the 26 high potential districts.

  The MOA has since developed guidelines for the preparation of district action plans, in consultation with the private fertilizer dealers. This will assist in fertilizer promotion, soil testing and the training of fertilizer retailers, extension personnel and selected farmers. Areas of training includes identification of specific district fertilizer marketing and use constraints.

3.3 EFFECT OF KGGCU ACTION ON FPMRP OBJECTIVES

The immediate effect of KGGCU action was to have more fertilizer readily available to the farmers during the 1990 long rains. Stockists close to KGGCU stores also made money by buying cheap fertilizer and adding relatively higher margins 20 to 30 shillings per 50 kg bags on sale to the farmers. Previously the mark-ups were between KShs 5 to 10 for the same bag. The increased mark up made it lucrative for the retailer to market fertilizer close to the farmer. As indicated earlier KGGCU was thus able to reduce its inventory of donor fertilizer, though at a loss in its fertilizer operation.

KGGCU action was received with a lot of suspicion by fertilizer dealers some of whom thought that the Government was involved and therefore not committed to liberalised fertilizer marketing. Lack of immediate government action on KGGCU strengthened this belief. Fertilizer traders were therefore forced to reduce their wholesale prices to match KGGCU's prices. This resulted in major losses to the industry with some unions eg Machakos making a loss of KShs 2 million during the 1990 calendar year. This had a net effect of making fertilizer trade unprofitable and unpredictable.

The slump in international coffee prices, falling to KShs 39,000/tonne in 1990 from KShs 60,000/tonne in 1988, was another blow to the fertilizer market. The decline in coffee prices after the suspension of export quotas in July 1989 is mainly responsible for the fall in fertilizer consumption after the peak demand in 1988/89 season. Table 2 indicates the trend in fertilizer imports and consumption in Kenya over the last five years.

Table 2: Fertilizer Imports and Consumption between 1986 and 1990

Year	Commercial Imports		Donor Imports		Total	Estimated Consumption
	Tonnes	%	Tonnes	%	Tonnes	Tonnes
1986/87	148,049	64%	82,000	36%	230,049	227,000
1987/88	82,950	36%	142,315	64%	225,265	238,000
1988/89	148,632	50%	147,387	50%	296,019	272,000
1989/90	74,000	38%	121,686	62%	195,686	237,000
1990/91	113,680	52%	106,912	48%	220,592	228,000
Average	113,500		120,000		233,500	240,000

Source: Farm Management Division (FMD), Ministry of Agriculture (MOA)

Fertilizer demand for application coffee on farms amounted to 30% of all fertilizer imported in the 1980s. Cash crop income is also used to pay for fertilizer required for food crop production at the farm level. Low coffee prices therefore contributed to the delay in return to profitable fertilizer prices, by reducing demand and thus slowing down clearance of KGGCU stocks.

The main effect of the KGGCU action is that it has made many dealers cautious of the fertilizer trade. KGGCU is the largest single fertilizer dealer in Kenya and its unpredictable moves in fertilizer trade makes both short-term and long-term planning by the other participants in the trade difficult. Private dealers see very close union between KGGCU and the government. This is itself is a matter of concern to them.

4 IMPACT OF MACROECONOMIC VARIABLES ON FPMRP PURPOSE

4.1 THE PRESENT MACRO-ECONOMIC FRAMEWORK

Kenya has since 1988 entered a phase of

- accelerated inflation
- increasing budget deficits
- high interest rates
- a rapid rate of devaluation of the currency

The four characteristics listed above are strongly interrelated, and have a considerable impact both on smallholder economics and on the ability of the traders to finance their working capital requirements in fertilizer import and distribution.

4.2 INFLATION

Official inflation rates, ranging between 9% and 12% have until recently been understated. Recent revisions of the official estimates have now acknowledged that inflation is more realistically described at somewhere in excess of 18% per year. Our own estimates have since 1988 indicated a generally rising inflation level from 16% in 1989 to about 23% at present. This trend of accelerating inflation is continuing.

High inflation in the country will have a multiple effect on the FDMRP purpose. It results in more expensive basic consumer goods that draw heavily on the smallholders income. Increased inflation also results in higher fertilizer costs through inflation induced devaluations. Smallholder incomes, however, tend to grow by less than the general inflation rate. The total effect is that farmers will have less capacity to buy fertilizers. Since fertilizer is estimated to have a price elasticity of between 1.6 to 2.1, inflation has a marked effect on total fertilizer used at the farm level.

4.3 BUDGET DEFICIT

Government expenditure has reached nearly 40 percent of gross Domestic Product (GDP). The budget deficit has gone out of control in the sense that the benchmark targets agreed with IMF and IBRD for a reduction in the deficit to 2.5% of GDP have not been met.

The budget deficit excluding grants has exceeded 9.5 percent of GDP. When grants are incorporated into the budget as revenues, the deficit at mid-1991 was estimated at 6.5% of GDP. Our own estimates show that the deficit is still rising.

The financing of rising a government expenditure must be seen against a background of a stagnant or falling real GDP, falling domestic savings and shrinking donor finance. Because of past expenditure increases on development projects, the recurrent consequences (maintenance and operation costs) continue to have an impact on recurrent expenditures.

In particular development expenditures in two sectors, health and education, have expanded very rapidly. The ratios of consequential recurrent costs to development costs are particularly high in those two sectors. The health care reform program assumed the introduction of user fees to help finance services. However, the user fees were largely abolished in 1990.

Also, the parastatal sector is seen as a specific drag on the government finances. Continued mismanagement of parastatal enterprises and slow divestiture of parastatals result in increased government expenditure whether on recurrent or on capital account. Unofficial estimates indicate that the parastatals absorb 16% - 20% of GDP.

Budget deficits, and the subsequent borrowings from within have a crowding out effect on the economy. It results in less money available to the private individuals such as fertilizer traders. Deficits also affect the operations of Ministries reducing the effectiveness of services such as extension services. Farmers receive poor or no services and are therefore not able to apply farm inputs as would be expected. Lack of operating expenses by the Ministry of agriculture in the past has affected the services particularly to the poor farmers.

4.4 GROSS DOMESTIC PRODUCT (GDP)

Total GDP has been stagnant or falling in real terms during 1990 and 1991. Official statistics have shown continued real growth in the range of 4% - 5% per year but our own estimates indicate a falling GDP if measured at constant prices.

The differences are mainly due to unrealistic GDP deflators used in the official statistics. Kenya's commodity terms of trade have been worsening during the whole period from 1988 to 1990, and the impact on the nation's purchasing power has been severely negative.

The reduction in purchasing power no doubt results in lower priority given by the households on the purchase of fertilizers for their use. Direct consumer goods have a higher priority.

4.5 STANDARD OF LIVING

Official Census data for the population indicate a growth of about 3.5%. However, the 1989 Census was a statistical failure and unofficial estimates still suggest that population continues to grow at a rate closer to 4 percent annually. A stagnant GDP coupled with rapid population growth, implies a fall of real purchasing power per capita of nearly 4% per year, or at least 8% over two years.

However, a total GDP which has been falling in real terms, coupled with a worsening in commodity terms of trade vis-a-vis the rest of the world, implies an even more severe reduction in purchasing power per capita. The impact of low purchasing power on fertilizer purchase has been discussed under 4.5 above.

Unofficial estimates are therefore that the purchasing power of the average Kenyan has decreased by at least 15 percent in the last two years. When real household incomes fall, there is an inevitable relative shift in consumption patterns towards lower priced essentials, which has been noted by major producers of consumer goods.

Some corporate clients report reduced unit sales of non-essential consumer products and of durable consumer goods. Households tend to purchase essentials in smaller and cheaper packets and reduce consumption of non-essentials such as carbonated drinks.

4.6 DOMESTIC SAVINGS

The main immediate impact of falling household purchasing power is an expected reduction in savings as a percentage of income. This is indeed what has happened, also according to official statistics, which show a reduction in domestic savings as a percentage of GDP. (The official statistics give no breakdown between corporate and household savings).

4.7 DONOR FINANCE

Total donor finance has fallen in real terms during 1990 and it is assumed that the fall has continued during 1991 and will also continue in 1992.

4.8 DEFICIT FINANCING

In consequence the budget deficit is partly financed by absorbing most of the donor funds, partly by borrowing in the domestic market, and partly by increasing the money supply. Borrowing in the domestic market has made credit for business more scarce and more expensive. Effective redemption yields on government paper now range from 18 percent to 25 percent.

The crowding out effect from government borrowing has therefore made commercial credit expensive. Even when available, the sheer cost of credit is an obstacle to financing working capital requirements for commercial fertilizer importers.

Privileged credit to farmers, when available, is cheaper than market rates. In general, however, smallholders are not able to buy fertilizers on credit except through certain cooperatives. The inefficiency of the cooperatives makes the real cost of such credit to the smallholder high and uncontrollable. Loan and interest repayments are effected through deductions from crop proceeds.

4.9 MONEY SUPPLY AND INFLATION.

Since Government cannot fully finance the deficit through domestic and foreign borrowing, there has been a continuous increase in borrowing from the Central Bank. This has resulted in rapid increases of the money supply, at a rate which recently has reached about 20 percent per year.

4.10 EXCHANGE RATES

Inflation in Kenya at a rate of 20% - 25% means that exports would become prohibitively expensive, and imports exceedingly cheap, unless there were a parallel adjustment of the foreign exchange rates. Inflation in Kenya's major markets is on average below 5 percent. Thus in order to maintain existing ratios between domestic and foreign prices, it has been necessary to devalue the currency at an annual rate of about 15% - 30% But Kenya also needs to remove old anomalies, in the process of liberalizing its foreign trade. The removal of various quantitative import restrictions automatically releases a pent-up demand for imports. Foreign exchange rates have to be adjusted to counter this structural change in demand. The policy of gradual structural adjustment of exchange rates has been in force for some years. In practical terms it means that the Kenya Shilling is devalued a few percent more than the relative domestic inflation rate.

This structural exchange rate adjustment, which is one of the success stories of Kenyan economic policy in recent years, means that imports gradually rise in price faster than do domestic commodities. Abolition of all quantitative restrictions and protective customs duties will on our estimates involve a structural devaluation of the Kenya currency by about 40%. (This is in addition to whatever devaluations are required by inflation).

From this follows some inescapable conclusions with respect to fertilizer prices and demand in Kenya:

a) fertilizers are gradually becoming more expensive, relative to maize and other domestic food crop prices. The assumption is that maize prices will not rise faster than the general domestic inflation rate. If government policies again aim at holding down basic food prices, smallholders will not be able to maintain even present demand for fertilizers.

b) smallholders producing maize and other domestic food crops will experience a gradual reduction in Value-Cost Ratios of at least 3% - 4% per year; a rapid structural adjustment could mean a 40% increase in the relative cost of fertilizers.

c) increased fertilizer use for maize and domestic food crops will have to be especially encouraged in areas where the existing VCRs are sufficiently high to remain attractive, despite falling by about 3% - 4% per year.

d) smallholder demand for fertilizers for export crops will, in principle, be less affected (or not at all affected) by the structural adjustment. The assumption is that export prices will rise pari passu (or nearly so) with the exchange rates. VCRs for export crops will largely remain as at present.

e) importers and distributors of fertilizers will therefore gradually find producers of export crops as more enthusiastic customers than producers of domestic food crops.

PART II - INDUSTRY ANALYSIS

5 INDUSTRY STRUCTURAL ANALYSIS

5.1 DESCRIPTION OF INDUSTRY STRUCTURE

As described earlier, the majority (98%) of the fertilizer used in Kenya is imported and procured on the international fertilizer markets. This procurement is done either directly by commercial private sector firms or by government or trade organizations with donor assistance. A small quantity of Single Super Phosphate (SSP) is produced in Thika, using raw materials imported from Tanzania and the Middle East.

The ultimate consumers of the fertilizer are the farmers who can be categorized into:

- estates
- largeholders (ie those with firms larger than 12.5 hectares)
- tied farmers (outgrowers) who grow crops under contract with agricultural produce processors (eg tobacco growers under contract with BAT)
- smallholders (ie those with farms smaller than 12.5 hectares).

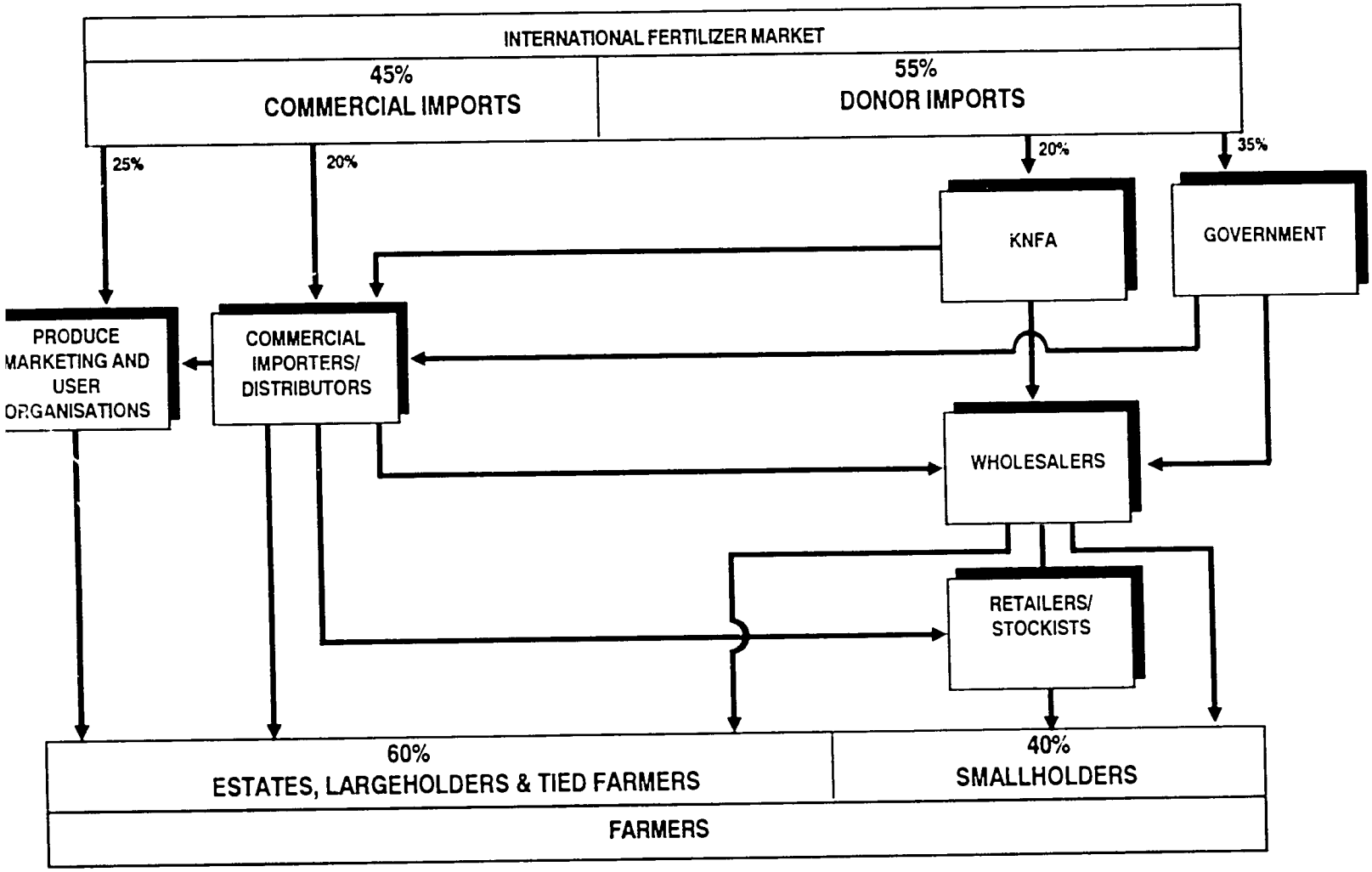
Figure 1, summarizes in diagrammatic form the flow of imported fertilizer from the international suppliers to the farmers and indicates the relative size of the different channels.

The main players in the Kenyan fertilizer industry can be described as follows:

Government : The Government procures fertilizer with the assistance of donor organizations using donor funds. This fertilizer is then allocated to different commercial and cooperative organizations through the Commodity Aid Allocation and Monitoring Committee (CAMC). In some instances allocation may be direct to a distributor specified by the donor. The government also plays a role in commercial imports, in that the Central Bank has to issue a foreign exchange approval for all commercial imports.

Figure 1

KENYA FERTILIZER INDUSTRY STRUCTURE - 1989/91



KEY: → *Title Flow*

NOTE: 1 *Percentages relate to average tonnages in 1989/90 & 1990/91*
2 *Breakdown of consumption is based on mid 1980 estimates*

Prior to mid-1990, the Government also controlled the supply of commercial fertilizer through an import allocation system.

KNFA : With effect from the 1990/91 season, the Kenya National Fertilizer Association (KNFA), as a body, procures fertilizer under the USAID fertilizer program. This fertilizer is then sold to its member organizations.

Commercial Importers/ Distributors These organisations in general handle over 5,000 tonnes of fertilizer per annum each on a commercial basis. They include both private sector organizations (eg MEA Ltd), cooperative societies (eg KGGCU, Muranga Cooperative Union) and parastatals (eg KNTC). In general they have the capability to import commercially, and supply both intermediate channels and end-users directly through their own retail networks. Some cooperatives supply their members on preferential terms (eg with seasonal credit) but also make retail sales to other farmers. At present there are approximately 10 to 12 organizations that fit this description.

Produce Marketing Organisation and Major users These include the large estates (eg Eastern Produce Ltd) who are major users of fertilizer, produce marketing organizations (eg KTDA) and agricultural processors (eg Del Monte, BAT) who supply the fertilizer to their outgrowers.

Wholesalers : These are private sector organizations each handling between 100 to 5,000 tonnes of fertilizer per annum. They source their fertilizer from a number of sources but in general do not have the capability of importing directly. They generally supply a network of retailers / stockists within a given geographical area although they do make sales directly to end users.

Retailers / Stockists These organizations typically handle approximately 100 tonnes of fertilizer per annum each. They source small quantities at a time from the large distributors and wholesalers and supply smallholders within a given market centre.

It can be seen therefore that the industry has a tiered marketing channel structure. However, the tiered structure is not rigid and there are multiple channels through which the fertilizer can reach the end-users.

For example, most importers / distributors and wholesalers operate at least one retail outlet for sales to smallholders and sell directly to the larger fertilizer users. The largest importer / distributor, KGGCU, operates a network of 54 retail branches country-wide, supplies approximately 2,400 independent stockists and also sells to other distributors and wholesalers.

5.2 ANALYSIS OF INDUSTRY STRUCTURAL FORCES

In any given industry, the level of competition and the ultimate potential long term average profitability of the industry players is determined primarily by the nature and intensity of the structural forces acting on that industry. In some global industries (eg steel, tires, paper) these forces are intense and few firms earn spectacular returns. In other industries (eg cosmetics), the forces are less intense and high returns are common.

The basic industry structural forces apply to all the players equally. The firms within the industry may differ in their abilities to plan and implement strategies that can reduce the effect of or amplify the effects to the forces. In a given industry, therefore, some firms may consistently earn above average profits.

One analytical framework to analyze industry structural forces is the Porter "Five Forces" model modified for developing countries. Under this framework, seven main forces that drive industry competition are the:

- bargaining power of suppliers
- bargaining power of customers
- threat of new entrants
- threat of substitute products

- intensity rivalry between existing firms

- government as a 'mega force'

- effect of environmental factors

Under this framework, the greater the intensity of these forces the lower will be the long run potential average profitability of the industry.

The nature of the forces will also determine the competitive strategies that individual firms will develop. Firms will seek to develop competitive strategies that counter or enhance the effect of structural forces.

The importance of these forces on the Kenyan fertilizer industry from the point of view of the importer / distributors can be analyzed using this framework. The analysis was carried out through interviews of traders and review of previous documentation on fertilizer trade. The identity of the key sources and the results of the analysis are summarized in Figures 2 and 3 and are detailed below:

<u>Bargaining power of suppliers</u>

There are two different sets of fertilizer suppliers to the importers/ distributors, one set for commercial imports and the other for donor fertilizer imports.

Commercial imports

Commercial fertilizer is procured from international fertilizer suppliers. The bargaining power of international fertilizer suppliers is relatively low because:

- fertilizers are basically a commodity product with little differentiation between products from different suppliers. Importers can therefore choose their suppliers on the basis of price and delivery terms and can easily switch between different suppliers

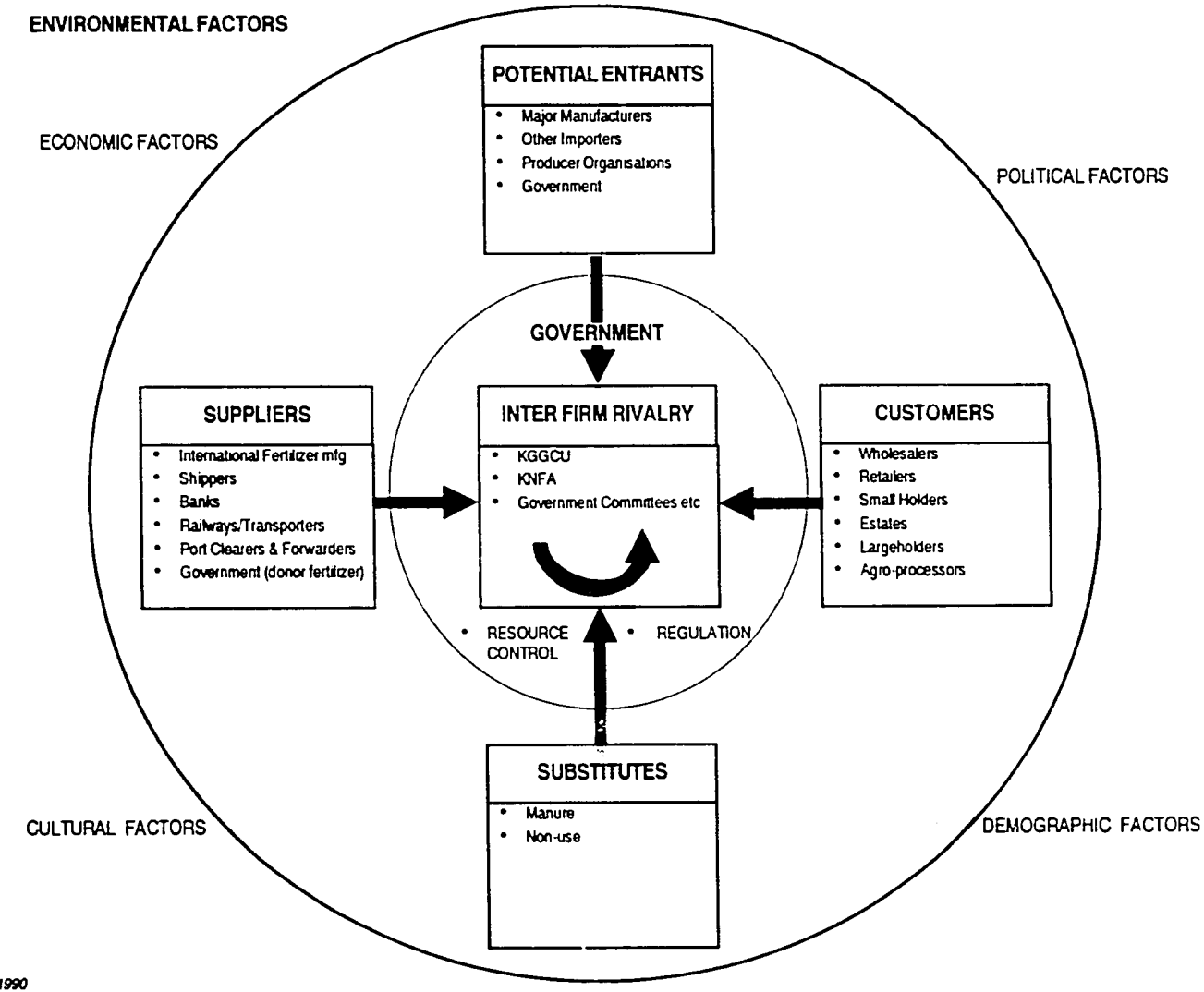
- there is a well developed international market for fertilizers. Average world market prices are widely known. Purchases are generally made through closed international tenders or after obtaining a number of quotations from different suppliers

- purchasers of larger quantities are generally able to demand more favourable terms.

Figure 2

FERTILIZER INDUSTRY - STRUCTURAL FORCES

ANALYSIS OF SOURCES

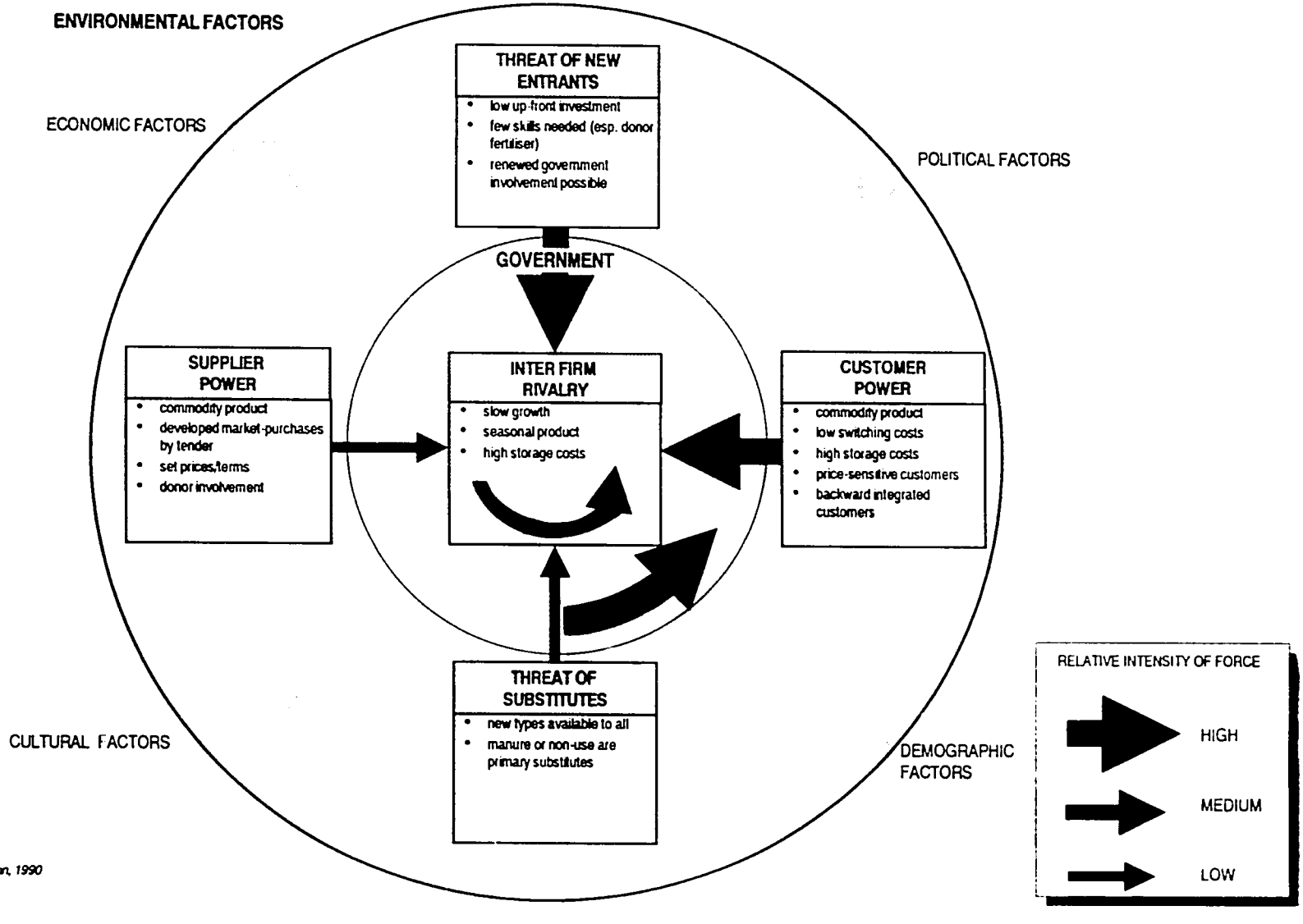


Based on Porter, 1980 and Austin, 1990

Figure 3

FERTILIZER INDUSTRY - STRUCTURAL FORCES

SUMMARY OF ANALYSIS



Based on Porter, 1980 and Austin, 1990

The other main suppliers of essential support services include the ports authority, clearing agents and transporters. Their bargaining power is higher because:

- the Ports Authority is essentially a monopoly supplier. The importers costs can increase not only due to high port charges but also due to delays and losses due to inefficient handling

- although there is a competitive road transport industry, it is generally cheaper to transport a bulk commodity like fertilizer by rail. However, sufficient capacity is not always available at the right time

- clearing agents have less bargaining power because of competition and because fertilizer importers are major customers.

Banks are another supplier for commercial imports. They have relatively high bargaining power because of the credit crunch in the country. As argued in section 4 they are able to demand high quality collateral and higher fees and interest rates for credit.

Donor imports

Here the bargaining power of suppliers is relatively higher because:

- the fertilizer is sold at a fixed price and terms as set by the government (or KNFA for USAID fertilizer)

- the criteria for allocating fertilizer to the importers / distributors is not always transparent, and thus the CAMC holds the power to reduce or increase fertilizer allocations to individual firms.

However, the effect of these factors is reduced to some extent because of the activities of the donors. Prices and terms for the sale of the fertilizer are generally more favourable than for direct commercial imports, and the importers/distributors have some influence over the allocation of USAID donated fertilizer through the KNFA, of which they are members.

Bargaining power of customers

This can be analyzed in two parts: the bargaining power of the end-users of the product and that of the intermediary channels:

End-users

The bargaining power of end users is considered to be high because:

- the product is undifferentiated. The product offered by the different distributors often comes from the same supplier, and there are few inherent product differences. Competition between distributors is therefore basically on price, package size, availability and size of distribution network which determines physical proximity to the end-user

- at present end users display little or no brand loyalty to fertilizer supplied by different firms. Their purchase criteria is based on price, size of package and availability

- fertilizers represent a significant cost and cash outlay to buyers (especially smallholders). Such buyers are therefore price sensitive and will 'shop around' for the most favourable price

- small holders in general lack knowledge of appropriate use of fertilizers. They therefore react to higher prices by reducing consumption per acre

- major users of fertilizer eg major estates and coffee/tea producers can and do import fertilizer themselves (approximately 25% of total imports) or buy in bulk from the government. They pose a credible threat of backward integration ie carry out the functions of the importer / distributor and reduce or eliminate purchases from them. They have already integrated backwards to some extent (20% of total fertilizer imports are made directly). Therefore, these users bargain down prices for those purchases that they do make from the commercial importers.

Intermediary channels

Intermediary channels also hold significant bargaining power over the importers / distributors because:

- demand for fertilizer is seasonal. Distributors therefore need to rely on a wide network of intermediary channels (wholesalers and stockists) to distribute fertilizer stocks in time or incur high storage costs on unsold stocks

- there are few intrinsic barriers (eg investment in specialized training or equipment) to prevent wholesalers or stockists from changing the distributors from whom they purchase

- some wholesalers are able to bypass the importer / distributors and purchase donor fertilizer directly from the government or KNFA. They pose a credible threat of backward integration and thus increase their bargaining power over distributors

- intermediary channels base their buying decisions primarily on the following criteria:

  - price (margins allowed)
  - amount of credit provided
  - fast turnaround of orders
  - ability to order in small quantities
  - provision of transport

Threat of substitute products

The threat of substitute products for the industry as a whole is considered to be of medium intensity because:

- there is little threat from new types of fertilizer products. The importers / distributors are not tied to manufacturers of one type of fertilizer and can quickly switch between them. Any improved fertilizer should be available to all the firms.

- the primary substitutes for fertilizer are non-use or organic manure. In response to price increases, small holders in general tend to do without fertilizer or reduce the amounts applied. They can also use organic manure where available.

Threat of new entrants

This is the threat that organizations not currently involved in the fertilizer industry could enter the market. This threat depends on the barriers to entry for new entrants and the reaction that the new entrant could expect.

Potential new entrants fall into the following main categories:

- Importers of other commodities (eg agrochemical firms etc)

- Representatives of major fertilizer manufacturers

- Agricultural producer organizations (eg cooperatives etc)

- Government bodies (return to government controlled sole importer)

The barriers to new entrants in the fertilizer industry are relatively low and existing competitors have limited means of retaliation. Thus the threat of new entrants is relatively high.

Barriers to entry

For commercial imports, these are relatively low because:

- there is little or no inherent product differentiation. A new importer / distributor can purchase products of equivalent quality to those supplied by existing competitors

- the up-front fixed (sunk investment) capital costs to set up as an importer/distributor are relatively low. Investment is primarily necessary in physical storage and distribution facilities although these can easily be hired as and when needed. This is very different from the type of investment needed to open an agricultural machinery import business for example. In this latter case fixed investment would be necessary in training personnel in sales and servicing, workshops and spares, development of operating manuals, premises etc.

  The new entrant to the fertilizer business does however need to have sufficient capital or collateral to finance the cost of carrying stocks and supplying credit to stockists and end-users

- the primary barriers for commercial imports are the importation skills and knowledge of international fertilizer markets. Existing competitors are probably able to procure and distribute fertilizer at a lower cost than new entrants due to previous experience

- there are some economies of scale in importing fertilizer primarily relating to volume discounts offered by suppliers and lower average freight costs for larger shipments

- a new entrant would also need to gain access to distribution channels, which is a major potential barrier. However, it is not particularly strong because end-users and stockists face few intrinsic barriers to changing distributors. A new importer / distributor could therefore set up marketing channels relatively quickly and easily

- there are few cost advantages that a player can gain through better technology etc. Cost advantages from lower handling costs to be gained through experience and better logistical efficiency but determined new entrants could learn and achieve these relatively quickly

- the retaliatory measures that existing importers / distributors can take against a major new entrant are limited mainly to reducing prices to their existing distributors. This would hurt the existing competitors as much as the new entrant, as margins are already low.

In summary, these barriers are probably sufficient to prevent the small companies (say with less than sh 20 million in capital employed) from importing fertilizer commercially.

However, larger companies with more resources, including the major fertilizer users, producer cooperative societies etc, representatives of major fertilizer suppliers etc can import fertilizer relatively easily.

One other threat is that the government could re-impose controls over importation and appoint a sole fertilizer importer especially if current market liberalization reforms do not appear to work. This could be if:

- there are widespread shortages of fertilizer within the country due to under importation by commercial importers

- commercial firms are seen to be making an "excessive" profit

- importers are detected over-invoicing fertilizer imports (to illegally bypass foreign exchange regulations).

Donor imports

In the case of donor fertilizers (including USAID fertilizer up to 1990/91) the barriers to entry are even lower. The importers / distributors have to obtain an allocation of fertilizer from the government through the CAMC.

In the past the criteria for allocation have not been made transparent and all fertilizer has been sold on the same terms. This means that:

- the nature of the skills and knowledge required to obtain an allocation of donor fertilizer is different from those required to import fertilizer directly. The primary requirement is knowledge of the allocation 'system'. This knowledge is possessed by a variety of firms large and small, including those outside the fertilizer industry

- because all the fertilizer is sold at the same price regardless of the quantity purchased and is delivered at the Mombasa port, there are few economies that can be gained through scale or experience

- the government allows 120 days of free credit between allocation and payment of the fertilizer. This encourages speculators or 'briefcase distributors' to apply for an allocation which can then be sold to a wholesaler or importer / distributor for a quick profit margin

The effects of these low barriers can be seen in the allocation of USAID supplied DAP. In 1988/89 a total of 72 firms received an allocation of USAID DAP, up from 16 in 1984/85. The 72 firms received an average allocation of approximately 700 tonnes each. Previous studies have shown that only 22 of these firms were legitimate businesses and of these only 10 or 12 had the inherent capability for fertilizer marketing [1].

The method of donor aid allocations, in particular USAID fertilizer, has been changed in the last two years. The impact of these changes is discussed in section 5.5.

Inter-firm rivalry

The degree of interfirm rivalry is of medium intensity and mainly takes the form of price competition. This is because:

- the total volume of fertilizer consumption in Kenya has grown only slowly, creating pressure for firms seeking growth to gain market share

[1] IFDC, March 1989. Recommendations for the Improvement of the USAID/Kenya Fertilizer programme

- fertilizer is a bulk commodity and demand is seasonal. Thus importers / distributors face high storage and financing costs for unsold stocks at the end of the planting seasons, creating pressure to ensure that all stocks are sold

- KGGCU is the largest importer / distributor with between 30% to 40% of the market. The Union usually holds the majority of carry over stocks in the country. It therefore has the ability to act as a price leader and could provide some price stability. It sets the same fixed price for all its customers and does not offer discounts etc.

  These prices are currently being used as a 'price ceiling' by the other distributors who normally price at 5 to 10% below. However in the past KGGCU has set uneconomic prices notably in January 1990 following price decontrol which reduced profitability for the industry as a whole. The objectives of KGGCU may differ from those of a commercial firm and thus it may be willing to accept lower (or negative) returns. These factors increase the level of rivalry between the remaining importers/ distributors who face greater uncertainty as to the future polices set by KGGCU.

  There are two other factors that have the potential of limiting the extent of inter-firm rivalry:

- the formation of the KNFA

- the formation of National and District Fertilizer Committees

The potential impact of these is discussed later in the report.

The government

Most governments in developing countries have a major influence over industry structure and dynamics. This is because the government acts as 'gatekeeper' that determines who has access to key resources (such as import licences and foreign exchange) and, through its regulatory and direct market intervention actions, can have a direct effect on the other forces. Government actions can directly create competitive advantage for individual firms (eg in the mid-1980's the government used to channel the majority of donor fertilizer through KGGCU at concessional terms). Perhaps more importantly, firms within the industry can create competitive advantage by the nature of their response to government actions.

In Kenya, the role of the Government in the fertilizer sector is decreasing. The Government no longer sets fertilizer retail prices directly, does not offer any fertilizer subsidies and no longer issues import allocations. However, it still has a major influence because:

- the Government acts as a supplier of foreign exchange for the commercial imports. Importers still need to obtain foreign exchange allocations. Although the Government does not charge differential prices to different importers, it can and does ration foreign exchange mainly due to foreign exchange constraints and other considerations

- through its actions of allocating donor fertilizer (excluding USAID donated fertilizer after 1990/91) and its policies of offering fertilizer at fixed prices in small lots it increases the bargaining power of wholesalers who can bypass larger importers/distributors

- the Government runs a subsidized agricultural extension service that could influence farmers demand and preferences for different types of fertilizer

- through its presence on the National and District level Fertilizer committees, the Government can influence the intensity of inter-firm rivalry. Although the role of these committees is meant to be purely advisory, it is as yet unclear what their final role and influence will be in practice

- the Government is a direct participant in the market. Parastatals such as the Kenya Tea Development Authority (KTDA) and the Kenya National Trading Corporation (KNTC) import and distribute fertilizer. The largest importer / distributor, the KGGCU, is a union of cooperatives. However, the Government appears to retain some influence over its policies and actions, such as the pricing decisions after price decontrol

- the Government, through the annual price reviews and the actions of the National Cereals and Produce Board directly influences the producer prices for staple foodstuffs such as maize. The level of producer prices and the timing of payment to farmers have a major impact on the demand for fertilizer

- the Government, through the KTDA and the Coffee Board of Kenya controls the size and timing of payments to tea and coffee growers. Many smallholders rely on coffee or tea payments to finance their fertilizer requirements for basic food crops, and so government actions can have a major impact on fertilizer demand by smallholders

- the Government provides a source of subsidized credit to farmers through the Agricultural Finance Corporation (AFC). It also regulates the minimum level of credit that is directed towards the agricultural sector by the commercial banks. Availability of credit is a major factor in the demand for fertilizer by farmers (especially smallholders)

- government polices influence the economic forces acting on the fertilizer industry (eg inflation and interest rates, exchange rate policies etc).

- the development of rural roads determines the accessibility of the farms and ease of movement of inputs and outputs.

<u>Environmental factors</u>

Environmental factors can be divided into four main types:

- Economic factors

- Political factors

- Cultural factors

- Demographic factors

Each of these factors can have a major influence over the structure of the industry and its profitability. For the fertilizer industry, environmental factors can be summarized as below:

Economic factors

Macro-economic factors that impinge on the fertilizer industry have been discussed in detail in section 4 of this report. In summary the major macro-economic factors that the fertilizer industry has to cope with are:

- foreign exchange constraints

- inflation rates

- devaluation of the Kenya Shilling under the "flexible exchange rate" policy adopted by the government

- lack of credit due to a low savings rate and financing of large public deficits

Other economic factors that have a direct bearing on the industry structure are:

- the level of unemployment

- off-farm incomes are often ploughed back into the rural areas to support production and social activities

- lack of suitable raw material sources and a total demand for fertilizer too low to sustain a domestic fertilizer plant of minimum efficient size

- lack of adequate information gathering and dissemination structures which could lead to market inefficiencies.

Therefore personal communication networks become more important sources of competitive advantage.

In summary, economic factors have a major influence over the industry structure.

Political factors

Political factors include variables such as institutions, ideology and international links. These have a major impact on the fertilizer industry because:

- many government institutions are generally weak or excessively bureaucratic and decision making is neither timely or always transparent. Thus it is important for firms to understand and develop links with key government decision makers as a source of competitive advantage

- the Government ideology is in general that of commitment to free market economics. This commitment has been reinforced and demonstrated in the past few years with the deregulation of the fertilizer market, the capital markets and the ongoing process of deregulating the foreign exchange markets

- continuing international links with developed countries are essential to maintain the flow of international aid to the country. Relations with donor organizations and international financial institution such as the World Bank and the IMF are changing.

  Donors increasingly attach economic and political conditions to their aid (including the need for "good governance") and the nature and terms of aid is changing. This is important for the fertilizer industry as over half of total fertilizer imports are donor funded

Cultural factors

Cultural factors in general have a small effect on the fertilizer industry. The key cultural factors that have an influence are:

- extended-family social structures amongst the rural population (although these are breaking down to some extent)

- farmers often organize themselves into cooperatives and self help groups

- gender roles - females play a major agricultural role yet most decision making is retained by male members of the family

- mixed farming facilitates the availability of manure as a substitute for inorganic fertilizer.

All these factors have implications for the marketing structures that fertilizer firms have to develop.

Demographic factors

These have medium influence on the fertilizer industry. Key demographic factors include:

- large and growing rural farm population which leads to pressures to farm low potential agricultural land. This should increase the demand for fertilizers

- increasing pressure on land also results in continuous cropping on the same piece of land which exhausts the soil. This again should result in additional demand for fertilizers

- smallholders account for over 85% of total acreage under cultivation but account for only approximately 40% of total fertilizer use. Growth in future fertilizer use is therefore likely to come mainly from smallholders.

Summary of structural factors

In summary therefore the relative intensity of the structural factors on the fertilizer industry can be summarized as:

. bargaining power of supplies	low
. bargaining power of customers	high
. threat of substitute products	low
. threat of new entrants	high
. rivalry amongst existing competitors	medium
. government actions	high
. environmental factors	high

The general conclusions that can be drawn from this analysis are that the average long term level of profitability of firms is likely to be low except for those firms that are able to develop and implement strategies that cope successfully with these forces. Fertilizer firms can therefore be expected to modify their operations and strategies to cope with the current structural forces. As these forces change, firms will also need to adapt.

The key questions therefore are:

- how the structural forces are changing especially given the aims of the Fertilizer Marketing and Reform Program, and

- how well equipped are the firms in the fertilizer industry to cope with these changes.

These questions are considered in the following sections of the report.

5.3 SOURCES OF COMPETITIVE ADVANTAGE FOR FERTILIZER IMPORTERS / DISTRIBUTORS

Individual firms need to create 'competitive advantage' to earn consistently higher than average profits from a given industry. This could for example be a low-cost advantage or differentiation of its product and service package from that of its competitors in a way that enables it to earn higher margins.

Competitive advantage stems from the many discrete activities that a firm performs in designing, producing, marketing, delivering and supporting its products. For example a company may have lower costs than its competitors because it has a low-cost physical distribution system or because it has access to lower cost raw materials or because it makes better use of its sales force.

One method of analyzing the various potential sources of competitive advantage is to use the concept of a firm value chain. This value chain disaggregates the firm into its strategically relevant activities. A firm gains competitive advantage by performing these strategically relevant activities more cheaply or better than its competitors.

Figure 4, outlines a generic value chain. It summarizes the key strategically relevant activities that a firm will need to undertake. These activities are of two main types, primary activities and support activities. Primary activities are those which involve the physical creation of the product and its sale and transfer to the buyer as well as after-sales service. Support activities complement the primary activities and each other and are generally firm wide. The relative size of each box can be related to the value (ie amount that a customer is willing to pay) the activity creates.

It is possible to develop a typical value chain for a fertilizer importer / distributor. Figure 5, shows this in diagrammatic form, with examples of activities creating competitive advantage.

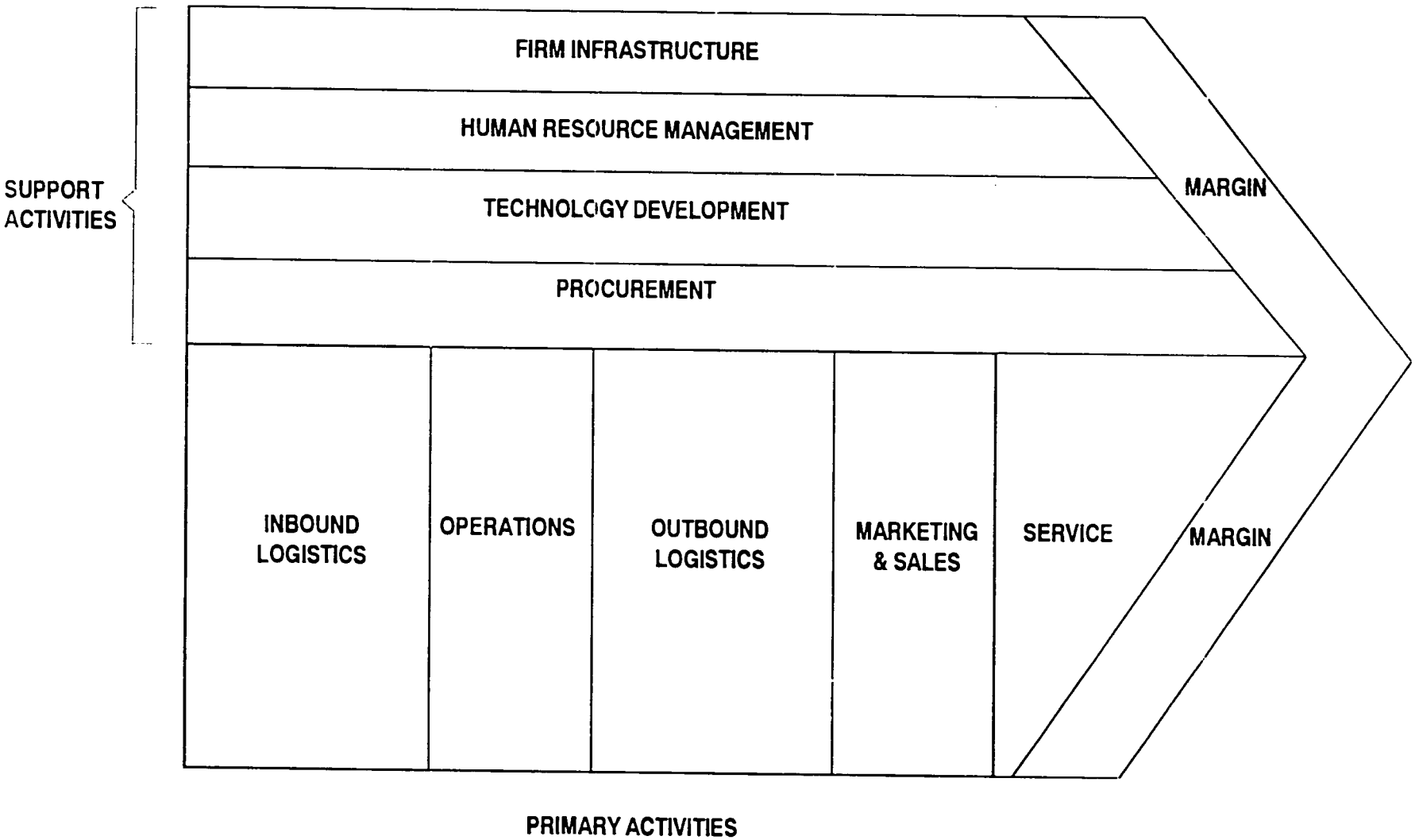
The key points to note are:

- **Inbound and outbound logistics** - activities associated with receiving, storing and physically distributing the fertilizer to the customers create the most value for customers and offer the greatest scope for creating competitive advantage

- **Procurement** - the function of purchasing inputs is another potential source of competitive advantage because of the use of tender procedures and the wide choice of suppliers and terms available. In this area however, the key source of competitive advantage may be relationships with government decision making bodies due to the role the government plays in restricting access to foreign exchange resources

Figure 4

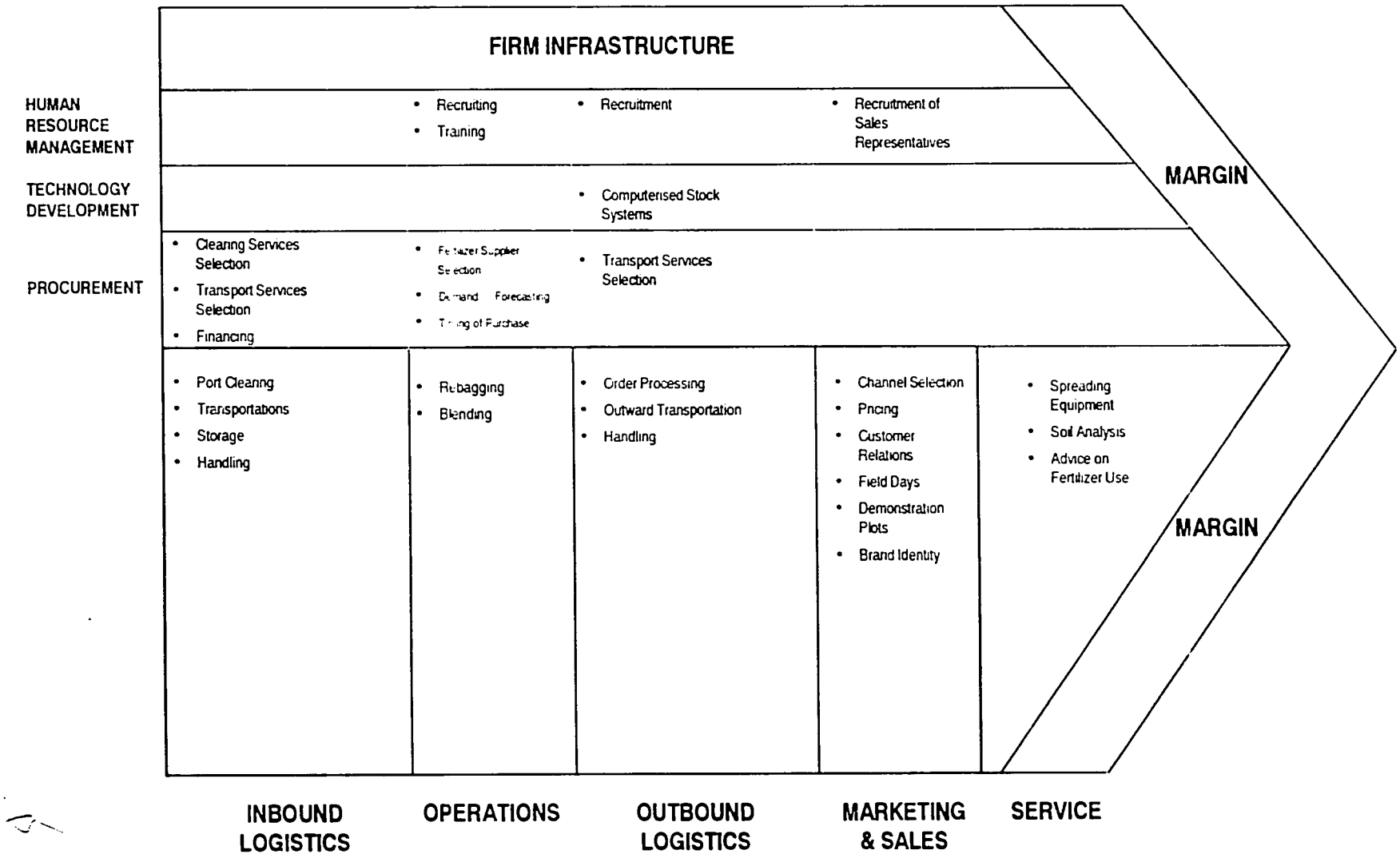
GENERIC VALUE CHAIN



Based on Porter, 1985

Figure 5

FERTILIZER IMPORTERS - TYPICAL VALUE CHAIN ACTIVITIES



Based on Porter, 1985

- **Operations** these are activities to transform input to the final physical product form. At present few such activities are carried out and are limited to rebagging in smaller packs. In future this could include the blending of fertilizers

- **Service** - these are activities that enhance or maintain the value of the product. Such activities could include spreading of fertilizers, training in fertilizer use, soil analysis, and even improved services on the counter.

The value chains of individual firms will differ from the above reflecting their histories, strategies and success at implementation. Different firms could be expected to concentrate their energies on one or more of the key strategic activities eg importers would concentrate on building up a competitive advantage in procurement and inbound logistics. Wholesalers could build a competitive advantage in marketing and sales and in service activities.

The following sections of the report examine the actual responses of the fertilizer firms and the types of competitive advantage they have developed to cope with the existing structural forces.

5.4 IMPACT OF STRUCTURAL FORCES ON KEY FIRM LEVEL STRATEGIC DECISIONS

Each year the fertilizer importers / distributors need to make a number of major strategic decisions. Key amongst these are:

- **Capacity decisions** (ie amount and type of fertilizer to sell in the following seasons)

- **Sourcing decisions** (ie choosing the most cost effective source of supply which could be either commercial importation or donor fertilizer from the government / KNFA)

- **Pricing decisions** (ie prices to set for the various types of fertilizers and customers)

These key decisions will then drive the level of investment that the importers and distributors will make in physical distribution capacity and in implementing marketing and service programmes.

Industry structural forces have a direct impact on relative difficulty of making these decisions and the range of potential outcomes of these decisions.

For example:

Capacity decisions

Capacity planning in the fertilizer industry is especially difficult because:

- each player can easily expand or contract its throughput capacity (amounts imported or purchased from the government) both in overall terms and in terms of specific products. For example KGGCU reduced their total fertilizer imports from 112,000 tonnes in 1988/89 to 53,000 tonnes in 1989/90

- all importers have the ability to import all types of fertilizer. Thus in a given year two rival importers may both decide to import Kenya's yearly requirements of one type of fertilizer leading to oversupply in the market. The uncertainty of the types and quantities of fertilizer that will be supplied through donor programmes adds a further layer of uncertainty (for example in 1989/90 donors supplied 11,000 tonnes of NPK 20:20:0 out of total imports of 16,000 tonnes. In 1990/91, 8,000 tonnes of the same fertilizer was commercially imported and no donor fertilizer was received)

- the number of fertilizer dealers receiving an allocation of donor fertilizer can change from year to year. For example in 1988/89, 72 firms were awarded an allocation of government donor fertilizer compared with 16 four years earlier

- overestimating potential demand or underestimating other supply sources could have a major negative impact on firm profitability because of the seasonal nature of demand for the product and the high storage costs for a bulk commodity.

This is in direct contrast to the situation in some other industries, for example the paper industry. In that industry capacity can only be added in large chunks over a period of years as competitors install more paper making machines. The quantities produced from year to year by the major competitors are relatively stable, and major changes are predictable given the long lead time necessary to install additional capacity.

One consequence of these factors is that a key competitive advantage for firms is having a superior 'information gathering' system (which is for the most part gathered through informal personal contacts).

Sourcing decisions

The selection of the best source of supply is vital to the profitability of fertilizer firms. This is because it has a major impact on the cost structures of the different competing firms. Firms in general purchase their total yearly requirements in one or two lots from a single supplier (commercial imports or government donor fertilizer) which correspond with the two cropping seasons in the year. Thus relative cost structures of different firms may change from year to year: an importer with the lowest cost imports in one year may have the highest costs in the following year due to bad sourcing decisions. This is because:

- at any given time different sources of fertilizer supply may have very different costs. For example, traders indicated that sourcing fertilizer from Japan could be up to 50% more expensive than similar fertilizer from South Korea or Eastern Europe

- world market prices of fertilizer are volatile (for example world market prices of DAP in late 1989 was $145 per metric tonne while the mid-July 1990 price was $175 per metric tonne[2]). Thus, the timing of fertilizer importation can have a major impact on the total cost of the imported fertilizer

- exchange rate movements have a major impact on total cost of fertilizer imports. The Kenya shilling has devalued by approximately 30% against the US Dollar in the year to October 1991 (from sh 22 per US$ to sh 28.5 per US$). Many importers have no alternative but to take the exchange rate risk. Forward hedging facilities are available through the banks, but few traders are aware of these. Those traders who are aware, consider the 5% - 8% premium 'too expensive' and elect to take the risk.

One importer placed an order for fertilizer assuming an exchange rate of sh 23 to the dollar and paid the supplier at sh 28 per dollar.

- a major element of cost for fertilizer is the transport cost from Mombasa to the up-country consumers. Transport by rail is the most cost effective method, but the availability of Kenya Railways wagons at the correct time is uncertain. Thus total costs may vary depending on whether or not rail transport is available.

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[2] IFDC, 1990.

These factors will mean that firms can obtain some competitive advantage through having a better capacity for fertilizer sourcing decisions. However, such a competitive advantage is not stable because firms cannot link themselves to low cost sources of supply over a long period of time.

This is in contrast to other import based industries in Kenya eg agricultural implements. In agricultural implements industry, importers are usually tied to one supplier and import in small quantities, relative to annual demand, throughout the year. Thus, an importer could sustain a low cost advantage for a number of years.

Government allocations of aid fertilizer represent a much lower risk source when compared to commercial imports. This is because government aid fertilizer:

- is not subject to the risk of exchange rate fluctuations
- 120 days free credit is available to all allotees
- all allotees pay the same price for the fertilizer regardless of quantity allotted.

This means that fertilizer importers are likely to prefer purchasing donor fertilizer to commercial imports even though the latter may be possible at a lower total cost. This is because the higher risks and administrative burdens involved in commercial importation, outweigh the potential lower costs.

<u>Pricing decisions</u>

Following price decontrol, fertilizer traders are free to set their own prices. In practice however, the ability of traders to set arbitrary prices is limited by a number of factors.

These include:

- the prices that farmers are able and willing to pay for fertilizer especially given that farmers are relatively price sensitive
- KGGCU effectively acts as a ceiling price setter, because of its dominant market position, wide product range and wide distribution network and practice of using fixed prices to all customers. Other traders generally set their prices such that the final retail price is 5 to 10% below KGGCU.

Because of uneconomic price setting by KGGCU in the past, this means past uncertainty surrounding official pricing policies by the government when prices were controlled has been replaced by uncertainty about KGGCU pricing policies.

5.5 IMPACT OF FPMRP AND PRICE DECONTROL ON INDUSTRY STRUCTURAL FORCES

The above is a static analysis of the structural forces on the fertilizer market. It is important to understand that these structural forces have changed substantially in the past three years and will continue to change in the future. Therefore, the industry structure and potential profitability can also be expected to change.

The last two years have witnessed two far reaching and important changes:

- decontrol of fertilizer prices and removal of import allocation system for fertilizer imports

- implementation of other policy changes by the government and fertilizer industry in line with donor conditionality requirements including the FPMRP. These changes include:

  - strengthening and expansion of the activities of the Kenya National Fertilizer (KNFA)

  - creation of the National and District Fertilizer Development Committees

  - strengthening of the Inputs Unit at the Ministry of Agriculture

  - transfer of responsibility of procurement, handling, pricing and distribution activities for the USAID funded DAP to the KNFA from government control.

These changes have had a major impact on the industry structural factors. Their impact can be summarized as follows:

<u>Price decontrol and import liberalization</u>

Both of these changes reduce the impact of government actions on the industry.

- firms are now free to make their own pricing decisions according to market forces

- firms are also free to import whatever types and quantities of fertilizers they believe necessary. This freedom is however constrained by the need to obtain a foreign exchange allocation to pay for fertilizer imports

- importation of fertilizer will have been made easier because administrative delays in announcement of official prices and allocation of import licenses have been removed

These changes have reduced and changed the nature of the barriers to potential entrants to the market. One major barrier and competitive advantage that the incumbent firms had built up in the past was their knowledge of and relationships with government decision makers.

Price decontrol has also had other effects on the structural forces:

- because prices (and margins) are no longer fixed, the distribution channels have been able to increase their bargaining power and win a larger share of the total margins

- firms have the ability to charge differential prices to their customers and therefore have an incentive to supply fertilizer to potentially high margin customers.

<u>Strengthening and expansion of the role of the KNFA</u>

As an organization of the major commercial importers/ distributors and wholesalers formed to act as a forum for dialogue with the government, the KNFA has had the following impact on the industry structural forces within the past two years:

- reduced the impact of government actions on the industry as a whole through influencing of policy and allocation decisions. As an example, the KNFA wrote to the government to protest against KGGCU's pricing policies following decontrol of fertilizer prices

- acts as a source of information to its members. This role could be expanded in the future with the setting up of an independent secretariat

- acted as a stabilizing force over inter-firm rivalry. This role has been suppressed to some extent because the KNFA is publicly committed to not acting in ways that would suggest collusion between its members. However, the KNFA has received complaints from individual members that other members are pricing "unfairly" and undercutting them.

Creation of the National and District Fertilizer Development Committees

These committees, comprising of representatives of the Ministry of agriculture and finance, private traders, research organizations and farmers were set up in 1991 as part of the World Bank Agricultural Sector Adjustment Operation II (ASAO II) Program. These committees are seen purely as a forum for the exchange of information between the participants and are not expected to have any decision making or regulatory roles.

The National Fertilizer Development Committee has met three times in 1991. There has not been operating for a sufficient time to accurately gauge their impact or future role. However, these committees, if they function as intended could have a similar impact on industry structural factors as the KNFA ie as:

- a shaper of government actions
- a disseminator of information
- a potential stabilizer of inter-firm competition. This could occur because competitors have better information of potential areas for expansion of fertilizer trade leading to less direct competition in existing areas.

Strengthening of the Inputs Unit of the Ministry of Agriculture

This unit is currently undergoing major restructuring and expansion, again driven by the World Bank ASAO II Program. When the full management information system is in place and working effectively, this unit will:

- act as an information disseminator and therefore reduce the competitive advantage that can be gained through superior informal information gathering networks of individual firms
- reduce the opportunity for traders making monopoly profits through exploiting market inefficiencies.

Transfer of procurement, handling, pricing and allocation functions of USAID fertilizer to the KNFA

For the 1991/92 shipment of the USAID DAP fertilizer, the KNFA, in consultation with the government and USAID, was given the responsibility of:

- inviting its members to indicate their requirements of DAP for the coming season (based on an estimated price), with a minimum order requirement of 2,000 tonnes

- inviting tenders for the supply, shipping and insurance of the fertilizer from qualified suppliers in accordance with USAID sourcing regulations and selecting the suppliers

- contracting for the supply of the fertilizer

- selecting local clearing and forwarding agents and storage of the fertilizer

- calculating a 'market-based' price at which the fertilizer would be sold to its members (based on the actual purchase cost of the fertilizer and cost if purchased from alternative suppliers)

- allocating the total fertilizer purchases amongst its members (based on their original requirements) and collection of the sales proceeds which will be forwarded to the Treasury.

This procedure has a number of differences from the previous system where these activities were carried out by government agencies. These have had the following impact on the industry structural forces:

- the requirement for fertilizer traders to purchase a minimum of 2,000 tonnes (valued at approximately sh 17 million) and that they must obtain a letter of commitment from their bank to guarantee the purchase has significantly increased the barriers to entry for the small firms

- the fertilizer will be sold only to existing KNFA members, thereby providing another barrier to entry. KNFA membership will not be open to 'briefcase' distributors or speculators who have not invested in physical distribution capacity

- the fertilizer importers / distributors have much more influence over the pricing of the fertilizer sold to them thereby reducing the bargaining power of the government in relation to donor fertilizer allocations.

Fertilizer importers / distributors, wholesalers etc have adapted their competitive responses to these changing structural factors and are in continuous process of doing so. These changing responses are discussed in section 6 of the report.

6 TRADER RESPONSES TO INDUSTRY STRUCTURAL FACTORS

6.1 LINK BETWEEN TRADER INTERNAL FACTORS AND ACHIEVEMENT OF FPMRP PURPOSE

Section 5 outlined the current industry structural forces, their impact on the industry structure and the generic types of competitive advantage fertilizer traders could develop in response to these structural forces.

The primary aim of the FPMRP is to increase smallholder fertilizer use through the establishment of a competitive fertilizer marketing system where importers and distributors are not constrained by inappropriate government regulations. This approach is based on the belief that, given adequate fertilizer supplies, this market structure holds the greatest potential for increasing smallholder fertilizer use in Kenya.

In a well developed market system, free from inappropriate government regulations, one would expect to find firms that had developed competitive advantage in one or more aspects of the generic value chain. For example:

- some firms would concentrate on developing competitive advantage in procurement and inbound logistics and therefore act mainly as importers of fertilizer

- other firms could have developed competitive advantage in outbound logistics and channel selection and would therefore act as distributors

- some firms would develop competitive advantage in marketing and sales and in service provision and therefore take up the role of a wholesaler.

Under this scenario one would also expect firms and wholesalers to build up a competitive advantage through focusing on specific geographic areas and sales to specific types of customer. Firms would also be expected to expand their areas of operation into those areas which are not currently being well served to earn higher margins, although such advantages should be short-lived as other competitors move in.

It can therefore be seen that any factors internal to a fertilizer business that result in the business gaining a competitive advantage are central to the achievement of the FPMRP's purpose.

This is because as traders specialise and develop competitive advantage:

- the average total fertilizer marketing costs would reduce and the savings passed on to the farmers

- traders would develop specific marketing programs with the objective of increasing smallholder use of fertilizer to gain market share and expand the market.

6.2 TYPES OF COMPETITIVE RESPONSE NOTED

Fertilizer traders have been adapting their competitive response to cope with the changing fertilizer industry structural forces. These changes can be examined in terms of the types of activities that the traders focus on to gain competitive advantage at various periods of time. This analysis is based on interpretation of trader responses during the interviews contained in Annex IV, section 5.

<u>After implementation of FPMRP and other donor programs but before price decontrol</u>

The key features of the structural forces shaping the industry (as compared to the current situation) were:

- the lower barriers to entry for firms wishing to purchase donor fertilizer, and better terms that could be obtained as compared to direct commercial imports (57% of traders felt that aid fertilizer was between 3 to 10% cheaper than direct commercial imports - Annex IV, question 3.8)

- lower inter-firm rivalry because of price controls

- low bargaining power of distribution channels because of government fixed margins

These structural forces meant that fertilizer traders sought to gain competitive advantage mainly through activities focused on:

- procurement of government aid fertilizer through better knowledge and information on the allocation 'system'. The level of commercial imports therefore dropped and the number of firms obtaining an allocation of aid fertilizer increased

- reducing the cost of inbound logistics. Most fertilizer was procured from donor fertilizer imports which are delivered in Mombasa to all firms at the same price. Therefore, firms could only gain competitive advantage through lowering the cost of transport from Mombasa to upcountry and minimizing the handling and storage costs

- reducing the cost of outbound logistics (through organizing low cost and efficient transport to wholesalers and retailers and faster processing of customer orders)

- marketing and sales - which mainly involved retention of large customers through building personal relationships, extending credit and ensuring availability of supply.

At this stage, little attention was paid to:

- pricing strategies and channel selection

- development of a brand identity

- service activities. Although 79% of fertilizer traders said that they provide service to their customers, 91% of them said that this took the form of advice on fertilizer use and field visits. 64% said that they participated in MOA demonstration plots. Only 18% said that they offered low cost or free soil analysis (Annex IV, 5.3).

This was mainly because the fixed price structure did not give the traders any leeway to charge larger margins as a result of developing competitive advantage in these areas.

In the words of one trader - "Life was much easier then. All you had to do was to get allocated some aid fertilizer and bring it up to your warehouse. The distributors and customers came to you".

After price decontrol

The primary change that price decontrol has made on industry structural forces has been to:

- increase the bargaining power of distribution channels (especially as wholesalers could obtain allocations of donor fertilizer)

- allow fertilizer dealers the scope to develop new sources of competitive advantage and charge a premium price for them.

In response to these changes, and especially because of the KGGCU pricing decision, fertilizer traders initially responded through price competition.

Traders currently rank the following as the top three methods of attracting and retaining distributors / retailers (Annex IV, question IV).

1) Pricing (offering high margins, discount structure)

2) Stocking (ensuring availability and service efficiency)

3) Organising transport (outbound logistics)

Trader interviews showed that:

- most traders had implemented quantity and / or cash discounts (Annex IV, question 4.6)

- 21% of traders had started free deliveries or a better delivery service after price decontrol (another form of discounting)

These actions led to higher margins for wholesalers and retailers.

- traders started to pay more attention to the service and operations activities which included recruitment and training of sales forces, setting up of marketing departments and rebagging of fertilizer into smaller bag sizes

After this initial response, traders are now beginning to explore and build sources of competitive advantage which will allow them to:

- build in switching costs for their customers

- build in customer loyalty

Examples of this include:

- two (14%) traders plan to start promotion campaigns eg through the distribution of free T-shirts for each purchase

- four (29%) traders plan to start repacking fertilizer into own brand bags

- One (7%) trader said it would produce more blends of fertilizer tailored to the specific needs of different farmers

Regarding branding of fertilizer, at present 3 of the 14 traders interviewed stated that they 'branded' their fertilizer in that their name appears on the bags. One trader repacks fertilizer into smaller 2 kg 'branded' bags, one blends fertilizer before repacking into its 'branded' bags and also packs bulk imports, while the third packs direct bulk imports of fertilizer (Annex IV, question 5.5)

It is unclear whether or not these activities promote a level of brand awareness and preference in consumers to the point where they are willing to pay a premium price for the branded product and/or choose it in preference to rival products (which should be the aim of branding).

Of the 11 traders interviewed that are not currently involved in 'branding', 55% percent felt that smallholders identified with the 'USAID' brand to judge quality while the more sophisticated customers relied on analysis certificates. 45% felt that farmers knew that DAP from different sources was essentially the same product, and so branding would be ineffective.

Traders have also initiated changes to reduce the cost of landed fertilizer through focusing on procurement and inbound logistics. For example:

- one trader intended to import bagged fertilizer in containers. This would reduce delays and losses at the port and the fertilizer could be railed directly to stations nearest the customer

- four traders intended to start direct importations and are looking for sources in the Republic of South Africa to reduce inbound logistic costs.

The trader responses outlined above essentially contribute positively to the achievement of the FPMRP purpose. A stronger and more robust marketing system is in the process of development, and traders are developing better capabilities in each of the main strategic activities.

Implications of donor programs on future market development

One potential problem comes about because of the existence of the FPMRP and other donor fertilizer programs. Because of the lower barriers (to entry) for new entrants and the easier terms that are offered, it is less important for firms to develop a competitive advantage in commercial procurement of fertilizer.

If donor programs were to end, only a handful of firms would have the capability to import commercially and would be unlikely to be very efficient.

Continuation of the donor programs in this form implies that the fertilizer marketing structure will continue to be skewed in favour of wholesalers.

The FPMRP program has been altered to limit the access to USAID fertilizer to firms that have the financial capability to purchase more than 2,000 tonnes and who are KNFA members. The fertilizer is now prices at 'commercial' rates. However, it is still cheaper than direct imports because the allotees get:

- 180 days interest free credit
- a fixed exchange rate without having to pay for the purchase of forward exchange rate cover

Because of this, the smaller wholesalers who could previously get fertilizer on the same terms are calling for the scrapping of the 2,000 tonne limit.

In a market with no such distortions, a few firms would be able to develop a competitive advantage in procurement and inbound logistics through better knowledge of international fertilizer markets, ability to exploit economies of scale, better ability to select suppliers of inbound logistic services etc. These firms would concentrate on importing, while others would purchase from them and build a competitive advantage in other areas.

To promote the development of the fertilizer market in this direction it would be necessary to design procedures for the allocation of donor fertilizer in such a way that results in total costs approximately the same as those for commercial imports.

7 CHANGES IN POST-DECONTROL FERTILIZER MARKETING STRUCTURE

This section examines the changes in the fertilizer marketing structure that have occurred as a result of the FPMRP and the decontrol of fertilizer prices. It also analyzes the potential impact of these changes on the achievement of the FPMRP purpose.

7.1 IMPORTER / DISTRIBUTOR LEVEL

The main changes at this level have been:

Changes as a result of the FPMRP (and other donor fertilizer programmes

Increase in number of distributors and wholesalers

The total number of distributors given an allocation of USAID fertilizer increased from 16 in 1984/85 to 72 in 1988/89.

However, reports on end-user checks showed that many of the firms allocated fertilizer were small 'briefcase' distributors or speculators who did not have an established distribution network. Of the 72 firms allocated fertilizer in 1988/89, only 66 could be contacted and only 22 were legitimate firms. Of the 22 legitimate firms, only 10 or 12 had an established distribution infrastructure[3]. The briefcase distributors sold their allotments to other fertilizer distributors who had the distribution infrastructure.

This situation arose because there were few entry barriers for small firms. The allocation criteria specified by USAID (legitimate fertilizer dealer, storage capacity, established retail network, promotions etc.) were largely ignored by the government allocation committee. The general attitude was that the larger number of distributors would lead to greater competition. The key competitive advantage necessary to obtain USAID fertilizer was knowledge of the allocation 'system' and informal relationships with the key decision makers.

This situation has been rectified to a large extent. After USAID pressure and direct involvement, allocation of fertilizer for 1989/90 and 1990/91 was restricted to approximately 20 firms in each of these years. However, end-user checks for the same years still showed some fertilizer had been allotted to firms which did not meet the allocation criteria[4].

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[3] Price Waterhouse, 1989

[4] IFDC, August 1990 and Peat Marwick, June 1991

For the 1991/92 season, responsibility for the allocation of USAID fertilizer has been transferred to the KNFA. As explained in section 5.5, a number of barriers have been built into the allocation process to eliminate the possibility of allocations to 'briefcase' distributors.

However the programme has also helped to increase the number and volumes handled by genuine traders in the fertilizer market. Most of these new traders fall into the 'wholesaler' category. They have been able to expand and grow partly because they could bypass existing large importers / distributors and obtain fertilizer at similar terms.

Reduction in direct commercial importation

Of the 14 traders interviewed, only two had commercially imported fertilizer in the past three years (Annex IV, Question 3.1). All obtained allocations of donor fertilizer direct from the government, and in the case of wholesalers, purchased fertilizer from other local distributors.

The percentage of commercial imports out of total imports and the absolute tonnage of commercial imports have been declining over the years as shown in table 3:

Table 3: Commercial Imports

	Commercial Imports, tonnes per annum	**% of total imports**
Average for 1983/84 and 1985/86	160,000 pa	76%
Average for 1985/86 and 1986/87	175,000 pa	60%
Average for 1987/88 and 1988/89	115,000 pa	44%
Average for 1989/90 and 1990/91	93,000 pa	45%

Source: IFDC, 1990 and MOA

Perhaps more pertinent is the fact that a large proportion (approximately 50%) of commercial imports are by produce marketing organizations, agricultural processors or large estates for their own use rather than for general sale to smallholders. For example, the analysis of the actual commercial imports in 1989/90 and 1990/91 shows that:

Table 4: Composition of Commercial Imports

	1989/90 Tonnes	%	1990/91 Tonnes	%
KGGCU	20,000	27%	49,000	43%
Commercial imports by other KNFA members	8,000	11%	12,500	11%
Commercial imports by others (KTDA, Brook Bond Del Monte etc)	46,000	62%	52,180	46%
Total commercial imports	74,000	100%	113,680	100%

Source: MOA

Although the level of import allocations for the two years were constant at approximately 185,000 tonnes in both years[5], importers have not followed through. The reasons mentioned by traders (Annex IV, Question 3.2) to explain this were:

- aid fertilizer is cheaper and easier to get (50%)
- requirement too small or no import know how (42%)
- importation is too risky as demand is uncertain at the new higher prices (17%)

The 1990 IFDC report on "The impact and expected consequences of fertilizer price decontrol in Kenya", identified the uncertainty caused by KGGCU's pricing moves as a major factor in the low level of imports in 1989/90.

Introduction of smaller (25 and 10 kg) fertilizer packages

Part of the USAID DAP fertilizer is packaged in the smaller pack sizes. These packages have proved popular with both the smallholder farmers and the fertilizer traders.

[5] IFDC, August 1990.

Changes as a result of price decontrol

KGGCU price lists used as a benchmark

Of the traders interviewed, 57% stated that they used KGGCU price lists as a guide to setting their prices in the various locations they sold their fertilizer - usually in conjunction with the actual cost plus transport and expected margin calculations (Annex IV, question 4.1). Of the 13 traders (excluding KGGCU), 5 (38%) said it was their current strategy to price 6% to 10% below KGGCU while another 7 (54%) said it was the strategy to price at par or up to 5% below KGGCU prices (Annex IV, question 5.4). The fertilizer price information gathered by Rocco in 1991 confirms that these pricing policies have been applied by the fertilizer traders.

Traders indicated that if their total costs (including margins) exceed KGGCU list prices, for a given fertilizer type, they would be unwilling to stock that particular type of fertilizer. It is therefore clear that KGGCU prices have partly taken the place of government 'ceiling' prices.

There are, however, major differences between the KGGCU 'ceiling' prices and government price controls. These differences include:

- traders are free to charge higher prices than KGGCU if they can provide a better service than KGGCU. A few traders already do charge higher prices

- in setting their prices, traders have to respond to the competitive moves of other competitors eg KNTC.

Distributors have started to offer larger margins and / or free delivery services

Importers / distributors interviewed indicated that following price decontrol they had to offer wholesalers and retailers larger margins to attract and retain them. 42% of the traders interviewed (which includes wholesalers) said that they had to adjust their prices to meet competition or had instituted free deliveries or better delivery service since price decontrol (Annex IV, question 5.8).

Four (28%) of the traders also said that their margins had reduced since price decontrol (Annex IV, question 4.3). Further analysis of the respondents shows that these responses were mainly from the importers / distributors interviewed rather than those categorized as wholesalers.

Increasing percentage of sales now through third party distributors and diversification into related lines

79% of the traders interviewed felt that a larger percentage of sales by importers / distributors are now made through third parties instead of through their own branches (Annex IV, question 6.1). 57% of traders also felt that fertilizer businesses were adding new product lines to their main fertilizer business so as to offer a more complete package, while 36% saw no such change (Annex IV, question 6.1).

These changes are corroborated by the finding that the number of retailers / stockists has increased.

7.2 WHOLESALER LEVEL

The main changes that have taken place include:

<u>Changes due to FPMRP (and other donor fertilizer programmes)</u>

Wholesalers able to bypass importer / distributors and thereby increase their bargaining power and margins

Under the FPMRP, many traders classified as wholesalers because they handle less than 5,000 tonnes per annum and who do not have the know how to import were able to source their DAP requirements directly from the government. Of the 8 wholesalers interviewed, most obtained their DAP requirements directly under the program. They also purchased other types of donor fertilizer from the government. On average over the three fertilizer years to 1990/91 they purchased approximately 60% of their total fertilizer requirements from the government donor fertilizer allocations.

This wider choice of suppliers has meant that wholesalers have increased their bargaining power over importers / distributors and have been able to drive up the margins they earned over the years. With the introduction of the 2,000 tonne minimum purchase quantity, some of the smaller wholesalers have abandoned direct purchases of USAID fertilizer and have reverted to purchasing from the larger importers / distributors.

<u>Changes as a result of price decontrol</u>

Increase in retail networks

64% of the trader interviewed said that distribution network structures had changed to include more retailers / stockists (Annex IV, question 6.1).

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77% of the traders (mainly wholesalers) said that they had added more retailers / stockists to their networks since price decontrol (Annex IV, question 6.2). Of the 7 traders planning future changes to their distribution networks, 86% said that they planned to add more stockists (Annex IV, question 6.3).

It is clear therefore that traders in general and wholesalers in particular are widening their retail networks.

Widespread use of price discounting and direct price competition

Of the traders interviewed, 86% said that they allowed quantity or cash discounts (Annex IV, question 4.6). This included nearly all the wholesalers. Of those that allow discounts, 67% allow cash discounts while 33% allow some form of quantity discount. 33% (mainly distributors) stated that they negotiate a price for each customer (Annex IV, question 4.6). Rocco's fertilizer price monitoring reports also confirm the existence of discounting and price competition.

Greater demand for smaller bag sizes

86% of the traders interviewed reported that there was greater demand for smaller bag sizes following the decontrol of prices (mainly on the rapid increase of prices in the 1990/91 season) (Annex IV, question 6.1).

7.3 RETAILER LEVEL

The major changes at this level are:

<u>Changes due to FPMRP</u>

Wider availability of DAP in existing retail outlets

Previous program evaluation reports[6] and other studies[7], have shown that the availability of DAP in particular and that of other fertilizers in general in existing retail outlets has improved substantially since the start of the FPMRP.

USAID DAP recognized as a 'quality' brand

The same reports have also shown that most farmers consider USAID DAP to be a "good strong fertilizer" and are confident that they are purchasing fertilizer of an adequate quality.

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[6] Agriconsult, 1988

[7] Rocco, 1991. Fertilizer, Maize and Beans price monitoring reports

Retailers have reported some difficulties in selling DAP that was commercially imported from Eastern Europe.

Changes as a result of price decontrol

Higher margins for retailers and stockists

Prior to fertilizer price decontrol, retailers were generally offered margins of 1 to 2%, which was well below the 5% margin built in to the government pricing formula.

79% of traders reported that, after price decontrol, retailer margins had become slightly higher (21% said they remained the same - Annex IV, question 4.3). These higher margins were one factor that attracted new stockists.

Increase in the number of competing retailers and stockists

As outlined above, more retailers and stockist outlets have opened since price decontrol. Interviews with traders supported this view, with some traders stating that many new retailers had opened up in areas not previously served and more retailers had started to stock fertilizers in the established market centres.

7.4 IMPACT ON FPMRP PURPOSE

Increased potential for smallholder fertilizer use

In general these changes to the fertilizer marketing structure have a positive impact on the main FPMRP purpose. For example:

- the wider retail network coverage in the country has improved the accessability of fertilizer to smallholders and therefore increased the potential for increased fertilizer use by smallholders

- availability of fertilizer in smaller bag sizes has also increased the potential for increased fertilizer use by smallholders.

However, it should be noted that actual fertilizer use by smallholders is affected by a number of variables which are covered in more detail in section 14 of this report. Fertilizer availability is only one factor.

Stronger wholesale and retail network in place

A stronger and more competitive wholesale and retail network is now in place in the country. This is evidenced by the increase in number of retail outlets handling fertilizer and the growth in both the number and volumes of fertilizer handled by wholesalers.

8 IMPACT OF DECONTROL ON INFORMATION NEEDS

This section examines the impact of price decontrol and import liberalization on the information needs of fertilizer traders and policy makers. It also analyses current sources of information and evaluates potential alternatives.

8.1 INFORMATION NEEDED FOR KEY STRATEGIC TRADER DECISIONS

Trader information needs can be divided into two main types:

- short-term (or tactical) information needs to make decisions which have a direct impact on profits over a limited period of time such as a year
- long-term (or strategic) information needs to make long-term investment decisions

Short-term information needs

In section 5.5, the key trader strategic decisions were outlined, namely:

- capacity decisions
- sourcing decisions
- pricing decisions

For each of these, traders require different sets of information as outlined below:

Capacity decisions

To properly plan their capacity (quantity and types of fertilizer) to be sold in the following seasons, distributors need information on:

- anticipated level of fertilizer prices in the following year
- estimated potential demand in their area of operations, which could be obtained from:
  - previous years sales plus forecast changes due to expansion / contraction of this customer base and changes due to anticipated fertilizer price changes
  - demand estimates from existing customer base (ie the quantities they expect to buy in the following year)

- government statistics on actual and potential demand in a given area

. up-to-date estimates of stock positions and fertilizer import plans of competing importers / distributors

. quantities and types of donor fertilizer that will be received in the following year

Wholesalers will require the following information when making their capacity decisions:

. anticipated level of fertilizer prices in the following year

. potential areas for expansion of retail networks

. estimated potential demand in their area of operations, which could be obtained from:

  - demand estimated from previous years sales adjusted to reflect forecast change due to expansion / contraction of the base and effect of anticipated price changes

  - obtaining estimates of potential demand from existing large customers

Discussions with traders showed that 93% estimated potential demand on the bases on previous years sales adjusted for forecast changes. 57% also said that they obtained demand estimates from their existing customer base as a supplement. Only 2 traders (14%) said that they made use of government statistics on stocks and potential fertilizer demand (Annex IV, question 8.1).

Fertilizer decontrol has not changed these information needs as such. The type of information needed is essentially the same as when prices were controlled and import allocations restricted.

Sourcing decisions

In deciding from where they should source their fertilizer requirements, Fertilizer importers / distributors need information on:

. the availability and terms of supply of government aid fertilizer

. international fertilizer prices

- estimates of other cost elements in importation
- the availability and terms of credit from banks
- anticipated future exchange rate movements

Importers / distributors need this information to decide on the most cost effective source of fertilizer. In our trader interviews, 85% of the importers / distributors said that they considered the availability of government fertilizer in deciding whether or not to import their requirements. A much smaller percentage of these went further to explore the costs of importation of the same fertilizer (Annex IV, question 8.2). This reflects the general trader views that government aid fertilizer is cheaper and easier to obtain than direct importation.

Wholesalers who source their fertilizer requirements locally, require information on:

- the availability and terms of supply of government aid fertilizer
- potential partners for joint purchase of aid fertilizer or direct importation
- the availability of fertilizer from other local distributors
- the relative margins that could be earned from these two sources

Fertilizer decontrol has had a major impact on trader information needs in this area. This is because:

- wholesalers now have a wider choice of fertilizer prices and terms offered by the importers / distributors. They thus need to search around more to obtain the best price
- with import liberalization and the changes in the terms for purchase of donor fertilizer from the government (eg 2,000 tonne minimum purchase for USAID DAP), many of the wholesalers are now considering the possibility of importing directly or forming 'pools' to meet the minimum order quantities.

This has completely changed the nature of their information needs, and they now need the same information as importers / distributors. For example, two wholesalers visited had recently installed fax machines to enable them to obtain price quotations from international fertilizer suppliers.

Pricing decisions

The key information need in making pricing decisions now are:

- actual cost of fertilizer including transport to storage location
- alternative transport methods and relative costs for transport to customers premises
- competitors prices (including KGGCU)

When interviewed, 71% of respondents said that they used cost of purchase plus mark-up as a basis for price setting. However, 57% also said that they used KGGCU price lists as a guide when setting prices (Annex IV, question 4.1). This is backed up by the fact that 71% also said that they adjusted their prices every season or on receipt of new consignments (Annex IV, question 4.7). Most traders (86%) allow quantity or cash discounts from their 'standard' prices (Annex IV, question 4.6).

Price decontrol has changed trader information needs in that they now need to monitor their actual costs and competitors prices more carefully. Under price control, most traders followed the set prices and had little need to monitor these two aspects.

<u>Long-term information needs</u>

In order to make their long term investment decisions eg whether to expand their area of operations, invest in additional physical distribution capacity (warehouses and lorries), whether to invest in other operating facilities (bulk blending, rebagging etc) and marketing and promotion campaigns, traders need to estimate the potential long term profitability of the decision.

It is difficult to provide a comprehensive list of the long-term information needs of the traders. This is because the type of information will depend on the type of decision being contemplated and the evaluation criteria that each trader applies to the decision.

However, in general terms the traders will seek information that enables them to evaluate:

- the potential demand in their target areas and the potential average long-term margins they can earn having undertaken the investment
- likely competitor actions in the longer term
- the impact of government policy and economic factors.
- Traders also need access to research information on the effectiveness of different fertilizer types, which they can pass on to the farmers and use to plan the types of fertilizer that they stock.

Under price control and previous allocation procedures for government fertilizer, it was difficult for importers / distributors to evaluate long term decisions because of the uncertainty of government actions in these areas. Traders were not sure of the quantities that would be allocated to them each year (donor fertilizer or import allocations) or of the margins they could earn given the prices set by the government (which were often announced late). Margins on donor fertilizer were more certain due to the use of pricing formulas by the government that allowed for fixed margins to each element of the distribution chain. This meant that importers / distributors ceased to invest in physical capacity and instead distributed aid fertilizer[8].

With price decontrol, part of the uncertainty introduced by government set prices has been removed. Traders now need to take into account possible pricing moves by their competitors, especially those of KGGCU. The unexpected price cuts by KGGCU early in 1990, created a level of uncertainty perhaps greater than that under government set prices leading to low commercial imports in 1990/91. In the 1990/91 season, margins appear to have stabilized somewhat. Thus decontrol should have a positive impact on long-term trader information needs.

In summary, fertilizer decontrol has increased the traders need for information. 71% of traders felt that they needed more information since price decontrol while the remainder felt that they needed the same amount of information as before (Annex IV, question 8.8).

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[8] See also IFDC, 1990.

8.2 CURRENT SOURCES OF TRADER INFORMATION

Annex IV, question 8.3 summarizes the current sources of information that traders use. The key points are:

- 71% of the traders interviewed mentioned that they obtained information from the government. 36% (mainly importers / distributors) stated they obtained information on forex availability etc from the treasury. 35% (mainly the smaller wholesalers) said they obtained information on fertilizer types and use from the Ministry of Agriculture field days

- 92% said they obtained information from discussions with others in the trade. This information included current stock situation, fertilizer import plans, prices etc.

- 64% said they obtained information from the KNFA. This related mainly to information on the availability and terms of supply of USAID fertilizer

- 64% also said that they obtained information from donor agencies. Most mentioned that they obtained information from USAID and NORAD. This information consisted mainly of donor intentions on the future supply of fertilizer under their programmes

- other traders mentioned international fertilizer suppliers as a source of information on international fertilizer prices and the Kenya Agricultural Research Institute (KARI) as a source of information on crop research

- none of the traders who are part of the National and District Fertilizer Committees mentioned these committees as a source of information

The Government of Kenya (through the MOA and MOF) supplies the following main types of information:

- research data and advice on use of different fertilizer types through its field days and ad-hoc consultations. The smaller wholesalers find this particularly useful

- data on recommended fertilizer use and potential fertilizer demand by area

- information on the availability and terms of supply of donor fertilizer allocated through the CACM

- The MOA does collect data on current stock levels in the country and anticipated future supply from anticipated commercial imports and donor aid supply. The capability of the MOA to gather such information has improved over the past few years. However this information is not generally available to fertilizer traders in time or with sufficient accuracy to have an impact on their short-term capacity decisions

This role appears to be broadly adequate. However, the timeliness and accuracy of the information needs to be improved if the data is to be relevant to the needs of the traders. 43% of the traders felt that the MOA should provide more research data. Another 35% felt that it should continue to provide the same information as it currently does but on a more timely basis (Annex IV, question 8.7). 36% of traders also felt that the MOA should supply them with up to date stock and potential future supply data to help them make their short term capacity and sourcing decisions (Annex IV, question 8.5).

The KNFA at present does not supply information to its members through formal channels (eg a newsletter). Its role is primarily the supply of:

- information on the availability and terms of issue of USAID DAP fertilizer

- information on matters of common concern to fertilizer traders which have been raised by individual members or by the government

This is an appropriate role for an association such as the KNFA. Many of the traders have called for the KNFA to expand this role. These calls are evaluated in the following section of the report.

Donor agencies mainly supply information on their future plans to supply aid fertilizer to Kenya. Traders often find that they cannot obtain this information easily from the Ministry of Agriculture and therefore approach the donors directly.

This role should reduce as and when the Farm Inputs Branch at the MOA starts to function more effectively.

It is clear that most of the traders rely on informal discussions with others in the trade for the majority of their information needs (especially short term information needs). Traders also mentioned that they get part of their information through their informal contacts within the Ministries of Agriculture and Finance.

Some traders referred to these informal sources as their 'market intelligence system'. The quality of a traders informal 'market intelligence system' is a major competitive advantage.

Overall, 79% of the traders interviewed felt that their current sources of information were adequate to allow them to estimate the profitability of short-term decisions in fertilizer importation and marketing. 57% felt that current sources were sufficient to allow them to estimate the profitability of long-term investment in fertilizer marketing.

This probably reflects the underlying uncertainties about future government actions that directly impinge on their profitability.

8.3 EVALUATION OF ALTERNATIVE SOURCES

71% of traders interviewed felt that the KNFA should provide them with information on world-wide fertilizer sources and prices. Many suggested that this could be in the form of a monthly newsletter to all the members (Annex IV, 8.5). 86% of traders also felt that the KNFA could supply them with up to date information on fertilizer stock levels and expected future supply through commercial import orders placed by its members and aid donations on a more timely basis than the MOA (Annex IV, question 8.6).

At the present time the KNFA does not have the capacity to undertake these tasks. It is in the process of setting up a independent secretariat which could undertake these tasks. It is envisaged that the secretariat will maintain a database centre capable of answering ad hoc queries from members and from government officials.

However there are a number of factors that need to be considered in setting up the secretariat:

- the independence of the secretariat from the individual members in order to prevent some of the traders from benefiting from 'insider information' gathered by the unit. Only if the members have confidence that the information will not be misused will they submit data on a timely basis

- the need for coordination with the Inputs Unit of the MOA to prevent duplication of effort

It is likely that the information that could be disseminated by the KNFA would be a supplement to the existing informal 'market intelligence' networks and would not replace them. This is because market opportunities remain opportunities only as long as information on them is not widely disseminated.

8.4 IMPACT ON POLICY MAKER INFORMATION NEEDS

The policy maker in Kenya requires broadly two sets of information on fertilizer. This relates to the international and domestic market situations. It is important for the policy maker to follow the international fertilizer price trends, freight rates and the conditionalities set by the various donors on their fertilizer. The international market is the source of the entire national requirement and up-to-date information on its behaviour should be monitored.

Domestic market data information is required on the local fertilizer scene. Such information includes fertilizer demand estimations by seasons, geographical locations, commodities and possibly by farm types. This demand is further broken into fertilizer types. Other domestic information required include availability and capability of transportation from the port, local prices at the various points of sale, stock levels and both official and unofficial prices of the main farm outputs utilizing fertilizer.

The impact of decontrol and deregulation on policy information needs is that the policy maker is now required to have more accurate, timely and better information than in the past. The changes in information requirement is covered under 8.5. In the past the setting of fertilizer price was done almost once every year and international price trends mattered less after that. This will not be the case in future. Fertilizer imports will be made on regular basis and the importers will certainly expect guidance from the Ministry of Agriculture. Importers may even want to countercheck their own information, or that from KNFA with what the Ministry may have in future.

In the past, policy makers have faced little pressure to produce accurate and reliable information. This may change in the future with the creation of the Fertilizer Committees. If these work as planned, policy makers will be increasingly called upon to provide accurate, timely and relevant information on the fertilizer sector.

8.5 CURRENT SOURCES AND CHANGES

Various sources of information are currently available in the country:

- International Fertilizer Prices: In the past the donors and fertilizer dealers were the main sources of this information. Policy makers have had no reliable and regular contact with the outside fertilizer world and the fertilizer journals were never consulted on regular basis for information. This has since changed and the current policy makers have subscribed to some fertilizer journals and are consulting them regularly. The Farm Input Branch should now be in a position to inform, advise and challenge dealers when the branch suspects cases of over-invoicing for fertilizers ordered by the private sector. Recent fertilizer policy changes have made this possible

- Ocean Freight Charges: The policy maker uses the same source of information as above. USAID has often given data on price of its fertilizer and freight charges as per USA carrier and other carriers. This information should continue to be available to KNFA and the policy makers

- Arrival Dates: The information on the ship, when it left the port of loading, date of entry, its cargo contents has been regularly supplied by the Custom and Excise Department of the Ministry of Finance. Commodity Aid and Monitoring Committee (CAMC) has been keeping track of shipments leaving Mombasa for the consumers upcountry. Fertilizer dealers and particularly KNFA will be the main source of shipment data as they will be responsible for their own shipments. This information can be counterchecked with the Customs Department if necessary

- Local Shipments: Fertilizer is a bulky commodity which has relied on rail transport from Mombasa to upcountry. Railways Department has been the main source of information on the availability of wagons to transport the fertilizer. The National Fertilizer Committee will be the main source of this information since the Railways Department is now a member of the committee

- Fertilizer Demand: In the past this has been computed based on the projected area under various agricultural commodities and their respective fertilizer requirements. This has basically been an academic exercise by the Ministry of Agriculture.

The establishment of the district fertilizer committees should bring a more practical approach to the generation of this data with the help of the district subject matter specialists.

The committees have as yet to undertake this role. None of the traders we interviewed ever indicated that they ever got any useful information from any of those committees.

- **Local Fertilizer Prices:** This has been taken for granted before the decontrol of prices since prices were set for each of the 42 main consuming centres. The future will require more and regular tracking of both wholesale and retail prices in the country. This would be useful in indicating the trend in fertilizer prices, possible bottlenecks in distribution, the general demand and consumption within any geographical area. This is one area where the policy maker is required to be much more active than in the past

- **Stock Levels:** The Ministry has in the past monitored this by calls to selected importers. The Ministry also required that importers submit monthly stock levels. This was however not complied with hence the need for the calls. One would expect that KNFA would be in a position to help in this in future. However KNFA is composed of competitors who would see no sense in divulging trade information to competitors.

8.6 EVALUATION OF ALTERNATIVE SOURCES OF INFORMATION

The sources of information by the policy makers are many and varied. This includes fertilizer journals, donors, foreign trade commissions, KNFA, fertilizer committees, subject matter specialists. Field surveys would also be good sources of primary data. It will be impossible to rely on any one source of information since many pieces of information are required before formulating useful policies.

The current policy is to increase fertilizer use at the farm level by fostering fertilizer trade under private hands. KNFA is composed of competing individuals and companies and is dominated by less than 10 of its members. Other traders may therefore not view it as a representative organisation. This view is supported by Government. The association would be an important source of information if it had the support of the majority of the traders.

We recommend the move by the association to establish an independent secretariat to handle fertilizer matters. The secretariat, with proper training, orientation, remuneration and incentive packages would be an important source of fertilizer information by the policy makers.

The Farm Input Branch of the Ministry of Agriculture should also set up a market intelligent unit to gather and analyse both international and domestic fertilizer information. It is simply not practical for the policy maker to rely on only one source of information. The Branch should be trained and equipped so as to be the main source of fertilizer information for those who need the information and for its use in fertilizer policy formulation.

9 IMPACT OF POST DECONTROL PRICING POLICIES ON FPMRP PURPOSE

9.1 RESPONSIVENESS OF FERTILIZER PRICES TO SUPPLY AND DEMAND IMBALANCES

In an industry free from price controls one would expect movements in prices to act as signals for both producers and consumers. Prices would be expected to increase in areas where demand exceeded supply and fall where supply exceeds demand. As a result of this, prices would convey meaningful information to suppliers and consumers to change their production and consumption patterns.

One way of assessing whether fertilizer prices after decontrol display this property is to ascertain whether fertilizer prices do respond to temporary supply and demand imbalances. It is clear that they do because:

- reviews of fertilizer price monitoring reports prepared by Rocco (1990 to 1991) show numerous instances where fertilizer prices have fluctuated with the availability of supply within a given area. In particular traders have been able to raise their prices when KGGCU local branches have run out of particular types of fertilizer

- 71% of traders interviewed said that they had noticed traders charging higher prices in areas where there is little competition (ie limited supply). 90% of these had noticed traders increasing prices when competitors had run out of stocks (Annex IV, question 4.11). It is perhaps surprising that only 29% of the traders admitted that they followed this practice themselves.

- 86% of traders said that they offered larger discounts to end-users to clear excessive stocks (Annex IV, question 4.12).

9.2 RESPONSE OF FERTILIZER TRADERS TO PRICE SIGNALS

Price signals could have an effect on fertilizer traders in two main ways:

- altering their capacity and sourcing decisions

- altering their marketing decisions

Capacity and sourcing decisions

As outlined in section 8.1 above, traders need information on anticipated fertilizer price level in the following season in making their short-term capacity and sourcing decisions. This is because:

- the relationship between fertilizer prices and the produce prices that the farmer will get for his crops (Value-Cost Ratio), is a major determinant of the level of demand for fertilizer. Thus total demand for fertilizers can be expected to fall if fertilizer prices increase by more than the expected increase in produce prices. Importers will therefore only import (or purchase from the government) the quantities of fertilizer that they believe that they will be demanded at the anticipated future fertilizer price

- the absolute level of fertilizer prices may also impinge on demand because higher fertilizer prices strain the cash flows of farmers even though the VCR is stable or even rising

- traders will source their anticipated requirements from the source that offers the greatest margins. The anticipated price is therefore critical in calculating these margins.

Estimates of future fertilizer prices are normally based on current fertilizer prices adjusted for expected changes eg movement on international fertilizer prices, devaluations of the Kenya shilling etc.

Six fertilizer traders interviewed discussed the major barriers that would prevent them from importing commercially or expanding the level of commercial imports. 83% of these traders mentioned that demand would be low because of either too high fertilizer prices or too low producer prices ie farmer VCR's had decreased substantially (Annex IV, question 3.7).

It is therefore clear that fertilizer prices have a major impact on trader decisions on:

- the quantities and types of fertilizer to import

- whether to import their requirements or to source them locally

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Marketing decisions

In the longer term, fertilizer traders would be expected to shift their marketing emphasis towards those markets (geographic areas or certain types of farmers) that offer them the highest margins. They would also be expected to develop new marketing techniques to enhance their margins.

There is some evidence that this process is taking place in the marketplace:

- wholesalers are increasing the number of retailers / stockists that they supply. Wholesalers stated that some of these new outlets have been opened in areas which were not previously served, and that both they and the retailers could earn higher margins

- some traders indicated that they were focusing on increasing sales to horticultural producers because such farmers were in general less price sensitive than staple food producers. The traders intended to recruit and train a sales force specifically to increase sales to horticultural farmers within the geographical areas they served

- Rocco's reports on fertilizer prices indicated that some retailers were selling fertilizer in smaller quantities of between 2 to 10 kg and earning higher margins. 29% of traders interviewed (equivalent to 50% of wholesalers interviewed) stated that they repacked fertilizer into different (smaller) bag sizes

It should be recognized that this is an ongoing process. Fertilizer prices are constantly readjusting to supply and demand imbalances. However, it takes time for suppliers and consumers to readjust their supply and consumption patterns.

9.3 POTENTIAL IMPACT ON SMALLHOLDER FERTILIZER USE

64% of traders interviewed felt that the long term effect of fertilizer price decontrol (and import deregulation) would be to increase smallholder fertilizer use (Annex IV, question 7.1).

This is because the information conveyed by fertilizer prices mean that fertilizer traders would direct greater attention to increasing sales to this sector. This could come about because:

- traders now have an incentive to exploit new market opportunities (eg rural market centres not presently served) to earn higher margins

- traders can now charge smallholders higher prices to cover the extra costs of marketing to them, eg cost of transport to rural stockists and extra transaction costs of dealing with small orders.

Both these factors may, in the short term, mean that some traders earn higher margins from sales to smallholders. However, these higher margins will attract other traders to set up in competition until they are competed away. In the long run, smallholders may still pay higher retail prices than largeholders but these should only reflect the minimum extra costs of marketing them. Smallholders would however have the benefit of:

- wider availability (and so a reduction in the costs and time they spent on purchasing fertilizer from a major district market centre)

- better advice on fertilizer use from fertilizer traders, low cost soil analysis etc as part of the traders' efforts to improve competitive advantage in service.

These factors will increase the potential for increased smallholder use of fertilizer.

This is in direct contrast to the situation under price controls. In this case, traders had no incentive to sell to new areas or to supply fertilizer in small quantities as the extra costs incurred could not be recovered.

10 IMPACT OF CURRENT ECONOMIC AND POLICY VARIABLES ON INVESTMENT IN FERTILIZER IMPORTATION AND DISTRIBUTION

10.1 SUMMARY OF ECONOMIC AND POLICY VARIABLES

The majority of fertilizer traders (over 86% in each case) classified the following economic and policy environmental factors as having a major impact on the profitability and growth of their business (Annex IV, question 7.2)

- producer prices for staple foodstuffs
- timeliness of payments to farmers for crop deliveries
- international export prices for tea and coffee
- international fertilizer prices
- availability of credit to farmers for the purchase of inputs
- the quality and effectiveness of agricultural extension services
- availability of credit to finance imports
- the speed and efficiency of import licence and forex allocation procedures
- uncertain exchange rate fluctuations.

Some traders also identified government interference, the direct participation of end-users in the import process, lack of Kenya Railways transport, delays in farmer loan approvals and late announcement of producer prices as further factors having a major impact.

When asked to rank the top three most important environmental factors affecting the profitability of their business, the results were (Annex IV, Question 7.3):

1) producer prices for staple foodstuffs relative to input prices

2) availability of credit to farmers

3) timeliness of payments to farmers

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Over the past three years each of these three main factors have deteriorated from the viewpoint of the farmer and therefore had a negative impact on the profitability and growth of fertilizer businesses. Efforts are currently under way to reform and improve the efficiency of the government bodies involved in each of these areas eg the National Cereals and Produce Board (NCPB) and the Agricultural Finance Corporation (AFC). It remains to be seen how effective these efforts will be especially given that we expect:

- continued devaluation of the Kenya shilling in real terms (ie over and above devaluations due to inflation differentials) vis-a-vis major international currencies in order to contain import demand when all quantitative restriction on imports are abolished

- structural adjustment policies to continue. This will mean gradually reduced VCR's for smallholders producing maize and other domestic food crops. However we foresee that export crops will maintain their VCR's.

10.2 IMPACT OF AVAILABILITY OF BANK CREDIT

Our discussions with fertilizer traders and banks showed that financing arrangements for importers / distributors are generally as follows:

- importers obtain credit for 120 to 180 days from the date of shipment from the supplier (or in the case of donor imports from the government at no cost)

- local banks open a letter of credit in favour of the supplier (or government) and pay on the due date

- the local banks then advance short-term overdraft credit to finance the stocks still unsold and which need to be carried over to the short rain planting season.

The Government budget deficit will in all probability increase during 1992 and 1993, because of expected reductions in donor support. We therefore expect that commercial importers will in the foreseeable future find it more and more difficult and expensive to finance their stocks and other working capital with commercial bank credit.

Discussions with bankers indicated that, in general, they found lending to fertilizer importers less risky (and therefore more profitable as standard fees and commissions are charged) than lending to other importers. Some banks however pointed out that this was dependant on the importers involved.

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The banks however felt that lending to fertilizer importers has become more risky (and therefore less profitable) since fertilizer prices were decontrolled.

Following interest rate deregulation, the banks now charge their customers different interest rates for their overdraft facilities. This is primarily driven by the creditworthiness of the customers as evidenced by the quality of the collateral that they are able to provide and their previous track record.

The banks interviewed, however, expressed mixed views as to whether they expected to increase their total lending to the fertilizer sector in the future. Two banks felt that exchange rate devaluations and high interest costs would be an extra burden on fertilizer importers that would prevent them from expanding their operations. Two others felt that fertilizer importers would be able to surmount these obstacles as fertilizers were an essential commodity.

10.3 TRADER VIEWS ON FERTILIZER INDUSTRY PROFITABILITY AND CRITICAL SUCCESS FACTORS

Amongst the traders themselves, 50% of those interviewed felt that price decontrol would result in a minor increase in the profitability of fertilizer marketing. 29% felt that the impact was a minor decrease (Annex IV, question 7.4). Traders also felt that price decontrol and import liberalization would (Annex IV, question 7.1):

- increase fertilizer use by smallholders (64%)
- increase competition in the marketplace (100%)
- decrease profits for importer / distributors (57%) although 29% (mainly wholesalers) felt they would improve and 14% felt there would be no change in the long term
- increase the amount of fertilizer imported directly (57%) although 35% said it would stay the same or decrease
- increase their ability to plan imports from year to year (86%)
- improve the timeliness of fertilizer supply to farmers (86%)

57% of the traders interviewed stated that they expected the fertilizer marketing industry as a whole to remain profitable in the long-term. A further, 14% stated that profitability would improve further in there was no government interference in the market (Annex IV, question 8.9).

In any industry, critical success factors are those key areas where things must go right for the individual firms in the industry to achieve long-term profitability. Critical success factors can include both internal factors over which the firms have a high degree of control (eg getting the right product mix, logistical efficiency etc) and external factors over which they have less control (eg government policies on producer prices, continuation of aid fertilizer, lower international fertilizer prices etc).

When asked to identify the critical success factors in their industry, the traders identified the following three as most important (Annex IV, question 8.10):

Internal factors

1) Getting the right mix of products (ie demand forecasting and capacity planning)

2) Having a strong distribution network (ie marketing and sales activities focused on channel selection and retention)

3) Logistical efficiency (ie developing low cost and effective inbound and outbound logistics)

External factors

1) Higher producer prices and the improvements to the timeliness of payment to farmers was mentioned by most traders as the most important external critical success factor

2) lowering of the 2,000 tonne limit for USAID fertilizer was mentioned mainly by wholesalers

3) Stability of international fertilizer prices and exchange rates.

10.4 IMPACT ON TRADER INVESTMENT DECISIONS

The uncertainty about future improvements in the key economic and policy environmental factors affecting the fertilizer business and the likelihood of tighter credit markets are both likely to have an adverse impact on investment by fertilizer traders. Thus traders are expected to:

- reduce their purchases to the quantities that they know they can resell easily to reduce the amount of stocks carried over. There will be fewer stocks held for 'speculative' purposes to meet unexpected demand

- attempt to obtain more of their fertilizer stocks on concessional terms (donor fertilizer from the government) instead of importing commercially

- invest very little to increase their own distribution capacity (warehouses and lorries) and instead rely more on hiring in these facilities as and when needed to reduce the level of fixed costs

- invest less in expansion of company owned distribution branch networks but instead rely more on third party distribution networks (again to avoid increasing fixed costs)

These expectations were confirmed by the traders during the interviews. 64% of the traders said that they had not changed their distribution capacity since price decontrol. Those who had increased their capacity purchased additional lorries. 75% of the traders said that they were not planning any changes to their distribution capacity in the future (Annex IV, questions 6.4 and 6.5).

77% of the traders said that they had changed their distribution network since price decontrol. 90% of these had added more third party stockists. 50% of the traders intend to expand their distribution networks in the future. Of these, 86% intend to add more third party stockists. The 50% who do not intend to increase their networks, cited the uncertainty of future fertilizer demand, the expense of expansion and the better economic sense of using third parties to reduce risks as reasons (Annex IV, questions 6.2 and 6.3).

PART III - PROGRAM EVALUATION AND RECOMMENDATIONS

11 IMPACT OF OTHER DONOR PROGRAM AND ANALYSIS OF POTENTIAL FUTURE IMPACT

11.1 BACKGROUND

All the fertilizer used in Kenya is imported since the country has very little capacity to produce fertilizer. The imports consist of either commercial imports or donated fertilizer. An average of 36% of all fertilizer imported into the country in the 1980's was donated by donors. This ranged from a 12% donation in 1983/84 season to a 63% contribution by donors during the 1987/88 season. This Aid comes either through fertilizer import support, balance of payments support or commodity import support.

A total of ten donors have actively supported the country with fertilizer Aid. Donors that have participated in giving fertilizer at one time or another between 1980 and 1990 includes; Norway, Denmark, Sweden, Finland, Netherlands, Japan, Italy, West Germany, FAO and USA. Donors have not been consistent either in the amount of fertilizer supplied or in continuous supply during the period. The number of the donors remained high (5-6 donors) in the years following the 1984/85 drought years but the number has declined to between two or three in the 1990's. USA however, continues to be an important and dominant fertilizer donor.

11.2 CURRENT DONOR THINKING

This section contains information gathered through interviews of past and present fertilizer donor agencies in Kenya. These included the World Bank and the Japanese, Swedish, the Netherlands and German embassies. Efforts to contact the Italian Embassy (Trade Commission) were fruitless and we understood that fertilizer trade was entirely between GOK and Italian trading companies.

Summary of donor programs

The World Bank, Germany, Japan and Italy, in addition to the USA, are still involved either directly or indirectly in fertilizer in Kenya. Sweden and the Netherlands are no longer involved in the fertilizer sector.

Sweden

Up to 1987 any money not fully spent or committed for future payments on projects funded in Kenya by Sweden was used for import support. Such support was available for imports of any goods needed in the country. There was no emphasis on importing fertilizer and the imports were decided through discussions between MOF and the Embassy.

Project implementation is said to have informed in recent years resulting in no financial carryovers and therefore no money to go to budgetary support. Some of the projects funded under SIDA do generate counterpart fund to be spent by the Kenyan Treasury. This is however left for the government to decide on how it is spent. SIDA does not audit such money.

The Netherlands

The Netherlands has been an important partner in supplying fertilizer to Kenya through balance of payment support. The country stopped supplying fertilizer to Kenya in 1989 after what the Embassy says were long futile years to get the country draw up a fertilizer policy. The Embassy had indicated its deadline for a liberalised fertilizer sector which was not met by the tabling of the policy paper in June 1989. The policy paper was seen as a half-hearted effort by the Government to address the fertilizer issues.

In the meantime there has been a change in the Hague and the interest now is in funding specific projects involving women and small-scale farmers.

The Netherlands has no interest in future financing of fertilizer and the closest involvement it wants is the co-financing of agricultural sector adjustment operation with the World Bank. The Netherlands has however planned to increase its aid to specific projects by 50% in the next two years.

Both Sweden and the Netherlands Embassy have not kept track of the recent changes in the fertilizer sector in Kenya. They are not interested in getting into the business again and in any case GOK has not requested them to participate in fertilizer aid.

The World Bank

The World Bank has been involved in the fertilizer sector under the Agriculture Sector Adjustment programme - ASAO I and II. ASAO I started in 1986 with the following objectives:

a) promote intensification of production,
b) improve producer incentives, and
c) expand the flow of public and private resources for agricultural investment.

These objectives would be achieved through:

i) increasing agricultural input supply and boosting the use of such inputs as fertilizers improved seeds etc particularly among the smallholders.

ii) maintaining adequate and flexibility of producer prices

iii) restructuring and rationalisation of public investments

iv) improving access to credit

v) parastatal reforms

The first Agricultural Sector Adjustment Operation had allocated a total US$ 18 million, 30% of the total project funds to cover fertilizer imports. In conjunction with the FPMRD the project resulted in:

. adoption of an improved pricing formula

. increased privatization of the fertilizer sector

. promotion of use of smaller fertilizer bags

. development of the initial fertilizer policy paper.

World Bank is now funding the ASAO II as a follow up of ASAO I

The goal of the fertilizer component of ASAO II is to promote an increased and more efficient use of fertilizers particularly by smallholders in a liberalized and competitive market environment through a program of institutional strengthening and policy reform. The World Bank is therefore very supportive of the current "Liberalized" environment since this has been part of its policy reform. Its objectives is therefore basically the same as those adopted by FPMRP.

The World Bank supports the formation and current activities of KNFA. The Bank sees the organisation as a forum for importers to meet, exchange ideas and pool their resources for efficient importation of fertilizer. KNFA role at the district level is less certain. World Bank is supporting the formation of the District fertilizer Committees whose main responsibility will be to monitor fertilizer use and supply at field level. There is all likelihood that some fertilizer dealers affiliated to the District Fertilizer committee may not be members of KNFA.

Japan

Japan has been one of the most consistent suppliers of fertilizer assistance to Kenya. The embassy has expressed its wish to continue with the assistance as long as Japan's external aid resources allow. Looking at the trend of the past Japan's growth in assistance to Kenya, the country should expect continued fertilizer assistance from Japan for sometime to come. Japan has provided an average of JY900 million for fertilizer purchase in the last 3 years.

It is apparent that:

- Japan does not have a clear policy on what type of farmer should benefit from the assistance
- the origin of fertilizer is not tied so long as tendering is restricted to Japanese firms
- at least two thirds of the fertilizer sale proceeds must be deposited in a special account to be used specifically for agricultural projects..
- pricing and distribution is left to the Kenyan Government.

The embassy sees the current decontrol of fertilizer prices and liberalisation in line with the ASAO II program which Japan are co-financing and are committed to. These are healthy developments which will help shape Japan's fertilizer program in the Country. KNFA is viewed as a useful organisation within the fertilizer sub-sector. One of the conditionalities for future program is that it should involve private dealers in the marketing and distribution of fertilizer.

This has not been the case in the past and though the program has increased the amount of fertilizer available in the country it has not emphasised the need for private participation in the trade.

Germany

Germany was involved directly in fertilizer commodity aid in 1986/87 and 1987/88 seasons. The country has reverted to either import assistance loans or Agricultural grants.

At present Kenya has a standing import loan for a total of DM 30 million to cover imports. The imports excludes military hardware, polluting agents, luxury goods and chemicals that could be used for producing drugs. Thus agricultural goods can be imported under the programme.

Two agreements, under Agricultural Grants, have been signed since 1988. The current program, worth DM 29 million was signed in July 1991. This provides foreign exchange for importing essential imports for the agricultural sector. Part of the current imports from West German includes compound fertilizers. West German does not wish to give fertilizer as a commodity aid and would continue with foreign exchange support, leaving Kenya to decide on its own agricultural import priorities.

The embassy has never followed, nor does it intend to follow on how commodities (fertilizer) funded under the programs are distributed and who the beneficiaries are. It therefore, has no direct contact with public or private institutions handling fertilizer.

<u>Commodity import support versus Balance of Payments Support</u>

From the Kenya Treasury's point of view, a fungible balance-of-payments support is more useful and valuable than a donor financed commodity-limited importation program of the same financial magnitude.

But balance of payments support programs can provide greater scope for corrupt or irregular procurement practices than do commodity import programs. The Dutch do not at present verify the procurement methods applied to commodity imports financed from balance of payments support. We have also been told that the Swedish balance of payments support program does not extend to verification or monitoring of procurement procedures.

The USAID financed fertilizer imports from the United States do not (to our knowledge) give any scope for collusion between Kenyan officials and US suppliers. The dollar payments for the fertilizers are made by the USAID to the winning US tenderer. The counterpart proceeds arising in Kenya when the fertilizers are sold, are paid into a special account for counterpart funds.

We are informed by the USAID that the appropriate payments are all accounted for. The World Bank program for fertilizer supply to Kenya applies strict World Bank criteria for tendering.

Impact of Other Donor Programs

In general all other donor programs have been useful in increasing the amount of fertilizer in the country. All the other donors, except the World Bank and USAID, have not followed their programs in terms of ensuring that the program:

a facilitated and encouraged smallholder fertilizer use

b promoted private sector participation

c developed fertilizer planning capacity in the country, etc.

The impact of their direct program has therefore been in increasing the availability of fertilizer in the country. However the objective of the World Bank program (funded by several donors) is similar to that of FPMRP. As such the two programs have been complimentary.

Future involvement

Japan continues to be a major bilateral donor in the country. It was one of the donors interviewed that showed that it will continue financing fertilizer to an indefinite future "depending on availability of funds". The country sees the need to include some conditionalities in its future program. We therefore recommend that FPMRP should work closely with Japanese Embassy for them to compliment the activities of FPMRP and gain from the current experiences and successes. FPMRP should establish a forum from where past experiences in the sector can be gained.

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12 ASSESSMENT OF POLICY CHANGES PURSUED BY FPMRP

12.1 POLICY CHANGES PURSUED BY FPMRP AND CURRENT ACHIEVEMENT

The program components as set out in the Program Assistance and Approval Document (PAAD) include:

1) policy reform; (Pricing and Marketing reforms)

2) fertilizer imports;

3) technical assistance, policy studies, program evaluation and monitoring, seminars and in-service training; and

4) local currency generated by the sales of fertilizer imports.

Policy Reform

The policy reform program was summarized in a Policy Reform Matrix in Annex A to the PAAD. This was largely based on progress made under the 1986 - 1988 A.I.D. Structural Adjustment Assistance Program (SAAP, 615 - 0240) with some modifications. The program proposed to support reforms in three areas:

. fertilizer pricing

. liberalization of fertilizer imports and the government allocation system, and

. promotion of fertilizer use.

These three areas were seen as providing major constraints to increased fertilizer use by smallholder farmers.

Fertilizer Pricing

The program proposed to support reforms in fertilizer pricing to permit a more realistic determination and setting of official fertilizer prices as well as to move towards price liberalization. In particular the program aimed at:

- more realistic estimates of the "benchmark international prices" formula which takes into account transport, handling, storage, finance, exchange rate risk, and profits;

- more timely announcements of official prices to reduce some of the risk and uncertainty to importers and to allow them to plan their procurement in a more efficient manner;

- strengthening the Fertilizer Inputs Unit of Ministry of Agriculture with short-term technical assistance, particularly in the methodology and statistical requirements for determining official fertilizer prices;

- undertaking and in-depth study to assess the potential for decontrolling fertilizer prices; and

- developing an action plan for implementing certain recommendations from the above study.

The policy reform program turned out to be eminently successful in the sense that the Government decided to decontrol fertilizer prices almost at the very moment when the program became operative. We have not been able to ascertain what exactly triggered the decontrol of prices, nor who was the person or persons who made the decision. The fact remains that prices of fertilizers are now determined by supply and demand conditions in the Kenya market.

Thus, no study has been produced to provide more realistic estimates of the **benchmark international prices formula** referred to above, because the need therefore disappeared. In our view, however, there is a need for baseline data for future reference.

There is, in our view a need to watch against a future cartelization of fertilizer imports and distribution in Kenya. Baseline data will at some stage become a valuable instrument for analyzing market developments. The need for a study of this kind therefore remains.

The question of **more timely announcement of official prices** has by and large disappeared, since prices are no longer controlled. Instead, we perceive a related need, which has developed from the new market situation; consumers, cooperatives, distributors and importers do need better information as to planned or forecast importations and corresponding estimates of needs for fertilizers.

There is also need for wholesalers and retailers to clearly display their fertilizer prices so that consumers can easily decide on their purchases when price is clearly the determining factor.

Measures to strengthen to Fertilizer Inputs Unit of the Ministry of Agriculture have been undertaken. Further work remains to be done in this direction, now with increased emphasis on providing an improved service to the private sector. The inputs unit (Farm Input Branch) has yet to be properly housed and made operative.

The need for an indepth study to assess the potential for decontrolling fertilizer prices has disappeared.

Import Quotas and Government Allocation

The program proposed to support the Government in liberalizing commercial imports of fertilizer and in enforcing the government allocation criteria in rationing its donor-financed fertilizer.

Here again, the Government largely pre-empted the gradual reform program envisaged in the PAAD. We have elsewhere in this study described the reforms which have taken place in removing formal quantitative restrictions in the form of import licences. However, we still have an impression that formal allocations of foreign exchange are subject to restrictive discrimination, and that some importers have more easy access to foreign exchange than others.

This problem was also highlighted in PAAD (page 28) when it stated that:

"USAID considered a cash transfer mechanism as an alternative to the CIP, but decided against it at this time for the following reasons. The present foreign exchange allocation system is not adequately liberalized and transparent. Needed foreign exchange for fertilizer imports is not always made available on a timely basis...."

These conditions described above still apply to private sector commercial imports.

The foreign exchange costs of Kenya's total imports of goods and services are nearly 2.5 times the country's export earnings. With the likely prospect of continuing reductions in foreign aid, the shortage of foreign exchange is likely to hit commercial fertilizer imports.

The problem of discriminatory foreign exchange allocations could therefore become more severe in the near future, because of the acute foreign exchange crisis in which the country finds itself.

We have elsewhere in this study suggested that the increasing foreign exchange shortage (and the need for structural adjustment of the Kenyan economy) will make imports progressively more expensive than domestic commodities. In particular we expect fertilizers to become more expensive relative to maize.

Also, the increasing shortage of domestic credit will result in higher interest rates, increasing the cost of holding fertilizer stocks.

We therefore expect that full application of the market price mechanism will reduce the VCRs of the smallholders in maize and other food crops for local consumption.

Elsewhere in this study we refer to the differences in costs of some donor fertilizers compared to commercial supplies. This cost difference, which could be eliminated by an open auction system, means that an element of price distortion still exists.

In theory it should make no difference to an importer, a distributor or to a smallholder, whether he is using donor fertilizer or commercial fertilizer. In practice, there are cost and risk advantages to users of donor fertilizers. Allocations of donor fertilizers are to some degree restricted to traders who are capable of handling large quantities (minimum: 2000 tons) in each deal.

<u>Summary of effects of the policy changes.</u>

There is little doubt that several years of discussions between Government and fertilizer donors such as USAID, IBRD, the Netherlands, helped to prepare for a psychological moment when Government decided that the time was ripe for dismantling the administrative system surrounding fertilizer marketing and pricing. The general result has been a competitive situation with greater fertilizer availability to smallholder farmers. While total consumption of fertilizers may be no higher now than two years ago, this fact should not be regarded as indicative of a failure of the program.

Rather, the international commodity terms of trade in general have been going against the Kenyan producers, whether large or small, whether rural or urban. Full application of the price mechanism has also implied a rationing by price.

12.2 SUMMARY OF EFFECTS OF OTHER POLICY CHANGES MADE AS A RESULT OF THE PROGRAM

There have been three other major policy changes that have come about as a result of the FPMRP in relation to the procurement and sale of fertilizer under the program:

- transfer of responsibility for procurement of the fertilizer, port handling and storage services to the KNFA

- USAID fertilizer sales are now limited to KNFA members who must purchase a minimum quantity of 2,000 tonnes. The price to the fertilizer traders is based on that for 'equivalent commercial' imports and is set after discussions between the KNFA, USAID and the Government

- with effect from the 1991/92 shipment, the KNFA is responsible for inviting bids for the purchase of the USAID fertilizer from its members, obtaining firm purchase orders (with bank guarantees) and opening a letter of credit (backed by individual purchasers bank guarantees) for the value of the fertilizers imported.

As outlined in section 5.5 of this report, the above changes have increased the barriers to small traders and/or new entrants to the fertilizer trade obtaining allocations of USAID supplied fertilizer. This is evidenced by the reduction in the number of fertilizer traders who have been granted allocations from 72 in 1987/88 to approximately 20 in 1990/91 and 1991/92.

Most of the traders interviewed believe that these changes have had a positive impact. They believe that the KNFA has been more efficient and cost effective in the procurement process which has reduced the cost of fertilizer to them.

Many of the smaller wholesalers, however, complained about the 'unfair' minimum purchase limit. This is because they perceive that purchasing aid fertilizer is much easier and cheaper than importing directly, especially for wholesalers who do not have the required skills and experience to import directly.

This would be true even if they had the skills because traders who are able to purchase fertilizer under the present system:

- get interest free credit for 180 days

- get the benefit of a fixed exchange rate without having to purchase forward exchange cover

- those traders buying smaller quantities (say 2,000 tonnes) pay the same price as those buying larger quantities. This would be unlikely if they were to import directly.

Therefore, the smaller wholesalers who need to purchase less than 2,000 tonnes feel that the above benefits will flow only to the larger importer / distributors while they themselves will be forced to purchase their requirements from the larger importer / distributors and have to pay cash or at most get one months credit.

In principle the above policy changes were necessary and desirable in order to further the development of a competitive fertilizer marketing system. The process is now more open and mimics commercial practices to some extent. However, unless the price and terms at which the fertilizer is sold are equivalent to commercial import costs (including interest and forward cover costs) few fertilizer traders will develop a competitive advantage in direct commercial fertilizer importation.

13 IMPACT OF TRAINING UNDER FPMRP

Training under the program falls under the Technical Assistance Component. Technical assistance has been an important component in the previous AID policy-based programs. The current program proposes to limit technical assistance support to activities related to fertilizer pricing and marketing reforms and their monitoring and evaluation. Training is therefore intended to cover the aspects of fertilizer pricing and marketing. Both formal and informal training has been undertaken under the program. A total of five officers have been trained from both the private and public sector. The farm inputs unit has also benefitted from in-house training within the ministry headquarters. The project document does not specify any training target for this component.

13.1 STUDY TOURS

Kenya has a lot to learn on fertilizer management and its development by visiting developed and developing countries which have efficient institutions and systems for fertilizer supply and marketing. South Asian countries have demonstrated how improved extension systems to traditional farmers can steer the promotion of fertilizer use and subsequent increases in food production within a short time. Visits to such countries offer good examples of how policies and institutional reforms have succeeded elsewhere under social, economic and political conditions that are very close to Kenya's.

Two officers from the Ministry of Finance, who are working on fertilizer issues have benefited from field tours to India, Singapore and Indonesia under the program. The main objective of the tour was for the officers to familiarise themselves with fertilizer manufacturing, handling, distribution and marketing in those countries.

The tour was reported as being useful and appropriate by two MOF officers on it. They now better understand and appreciate the necessary handling and marketing systems. It has also made the officers, who are non-technical, appreciate the role of fertilizer in crop production, stock taking and routine tracking of fertilizer movements and distribution.

This training may have less long-term application since all fertilizer activities are being concentrated within the Ministry of Agriculture. Allocation of donor fertilizer is also being concentrated on KNFA away from MOF.

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MOF will have very little fertilizer role, except the planning and budgeting of the counterpart funds, in future. This was something that was not envisaged at the project planning stage.

13.2 FORMAL TRAINING

The formal training has involved 3 officers, two from KGGCU and one from MOA headquarters. The training involved a 5 week training course on fertilizer, marketing and management with IFDC, Muscle Shoals, Alabama. The objectives of the course were to:

- improve marketing techniques and management skills
- enhance participants knowledge of and role of fertilizer in food crop production
- improve participants job efficiency and communication techniques.

The actual program and course-work was broad and involved extensive field trips. It is obvious from our discussions with the participants, that the training program was useful and has a long-term impact on their operations. Those working within KGGCU indicate that they learnt a lot from the training and are anxious to implement what they learnt. However rigidity within the union has meant that most of what was learnt under the training cannot be put into practice. The managers who attended the course have little input on fertilizer pricing decisions, there is little fertilizer promotion done by KGGCU and no direct farmer services are provided by the union.

The above analysis highlights the need to either:

- select course participants for the training that fits what they are currently doing or;
- mobilise trainees to areas where they can apply their training after the training.

Training is useful when what is learnt is tested on the ground. One senses some form of frustration in the KGGCU officers who have attended the course.

13.3 IN-HOUSE TRAINING

Effective fertilizer policy formulation, pricing and marketing reforms have been constrained by MOA's capacity and capability in the sub-sector in the past.

This is evident by the length of time it took the Ministry (Dec 1987 to June 1989) to prepare a draft policy paper on fertilizer.

The split in fertilizer responsibilities between the Ministry of Finance and Agriculture on one hand and between the Development Planning and the Technical wings within the MOA has not been conducive to better understanding and planning for the sector. The in-house training under the program was intended to give assistance to the Fertilizer Inputs Unit on the fertilizer pricing and market reform. Specifically the assistance would:

a assist in strengthening the unit by:

- developing detailed activity schedules, duty assignments, data collection and analysis techniques and report preparation guidelines
- assisting in the development of equipment requirements including specifications
- helping staff organise office management systems and procedures
- assisting in the development of computer software to facilitate on-going data base management
- assisting in the generation of reports such as price setting, fertilizer price survey, fertilizer demand forecast, monitoring of markets, etc
- assisting in specific problem solving as the need arises.

b assist in implementing the monitoring and evaluation system by:

- designing data collection and recording formats and advise on setting up efficient data management system
- assisting in design of specific baseline studies
- contributing to on-going and special evaluation efforts related to program goals and objectives

- assisting in monitoring at both firm and field level

This in-house training would be performed on an-as-needs basis and was to last for one year.

Findings

The consultancy, though apparently ideal for the needs of the unit, had only limited success. The main reasons for this were:

- officers allocated to the unit were answerable to two officers within the Ministry and therefore were not fully committed to fertilizer as a sub-sector. They often could not be reached by the consultant as and when needed

- the Unit, initially under the Development Planning Division was later moved to the technical wing of the Ministry of Agriculture

- the decontrol of fertilizer prices meant changes in data requirements and emphasis on policies. Priority was therefore given to the preparation of issue papers rather than training.

- only four of the original officers are currently working on fertilizer at present. Others have either left the Ministry or are working on other tasks outside the Farm Input Branch.

A number of tasks as identified by the consultancy were initiated but it appears that they were never concluded in view of the above listed constraints. The uncertainty as to whether the Unit would remain under Development Planning Division (DPD) or move to the Farm Management Division reduced personal commitment to meet fertilizer out-sector. No meaningful work could be done until the decision was made. Some of the officers left behind in the Planning Division, however, thought the initial training was useful but their scheme of service did not permit them to move outside DPD. The environment and timing was simply not conducive to training. There were some disputes on the data collection formats developed by the consultant, even though these were important, for what appears to have been apparent fear of change and lack of commitment mentioned earlier.

Recommendations

The unit has now been strengthened physically to consist of nine (9) officers. The unit has an appropriate structure and seems committed to fertilizer sub-sector, though working under difficult conditions. There is need to conduct an orientation followed by an in-house training in the areas suggested for the former consultancy. This training should aim at having two or three officers trained at "trainer level" for the project. It is however important that the working and support facilities also be improved.

This would include:

- sufficient office accommodation
- communication means (direct telephone, fax etc)
- appropriate and working equipment (computers, photocopier, typewriters)
- logistic support etc

14 ADDITIONAL POLICY CHANGES NECESSARY TO ASSURE INCREASED SMALLHOLDER FERTILIZER USE

14.1 DEMAND SIDED POLICIES

Relative high fertilizer prices compared to output prices and lack of money or credit terms are the two main constraints cited as reasons for non-use or sub optional use of fertilizer by the smallscale farmers. The reasons for either use or non-use of fertilizer by farmers is represented in Figure 6. These constraints must be addressed to if any appreciable increase in smallholder use of fertilizer.

Value-Cost Ratios

With respect to apparent Value-Cost-Ratios (VCR's) for fertilizers, we are doubtful whether smallholder maize producers are adequately informed of the net financial benefits they would derive from using DAP at planting.

It may not be worthwhile for a maize farmer to apply DAP at planting, unless he/she also has access to CAN or similar fertilizer for topsoil dressing when the maize is about knee high. Thus, VCR ratios have to be expressed explicitly so as to make clear whether they apply to the impact of DAP alone, or to DAP followed by a specific amount of CAN some time later.

VCR estimates should be made much more specific with respect to the costs of combinations of inputs. They should also take into account, quite explicitly, what additional costs the farmer will incur in weeding and general husbandry, when using fertilizers. The results have to be presented in a meaningful way to farmers so that they apply to different districts and soil conditions.

These issues, have been neglected in the context of demand for fertilizers. Thus, demand for fertilizers should be estimated by more rapid action in liberalizing marketing, distribution, payments, in the whole agricultural sector. Farmers should be able to sell freely in any market. A successful fertilizer programme depends on liberalization of produce marketing.

In actual practice, smallholders will not be able to use fertilizers economically, unless:

- farmers are convinced that the use of fertilizers is financially profitable to them, bearing in mind the risks that they spend fertilizers on a bad crop, hit by drought or excessive rain or pests or other calamities.

Thus, a small margin of profitability in fertilizer use will not convince the smallholder that it is profitable to incur the additional expense. The margin of profit from fertilizer usage has to be convincingly large.
The information given to smallholders has to be honest when indicating the marginal crop benefit from fertilizer use alone. It also should state what additional expense in the form of weeding or crop preservation that the farmer has to incur to get the full benefit of fertilizer application.

- smallholders have cash or credit available when they need the fertilizers. In the past, even when crops have been priced so as to make fertilizer use economic, the actual payments have been slow in reaching the farmers. Deductions from crop proceeds have often been excessive.

Thus, the use of fertilizers may well be economic from the national point of view, but it may not be financially rewarding to the small-scale farmer, unless the farmgate prices reaching him/her are adequately remunerative and the payments are timely.

Other factors that have discouraged smallholder use of fertilizer include:

- smallholders have encountered shortage of storage space. During a good crop year and have seen their harvested crops deteriorate in value due to bad storage (outdoors) or by being forced to sell the produce at any price rather than see it deteriorate. Estimates of post harvest crop losses in maize range between 16% and 30%. This has reduced the general inclination to produce in excess of subsistence requirements. Hence, many who could have used fertilizers economically have not bothered

- transport and movement restrictions on certain crops, accompanied by extortionist demands for payments for the issuance of movement permits, have likewise discouraged production for off-farm use

- arbitrary imposition of local authority cesses and fees have discouraged smallholder production for the market

- the bad state of many rural access roads has increased the cost of bringing inputs to the smallholders and produce to the market. Thus, the bad state of rural access roads has inevitably reduced the value cost ratios for fertilizers at the farmgate in outlying areas

- any restrictions on the entry of competition in the importation and distribution of fertilizers, is to the disadvantage of smallholders. All importers should have equal access to foreign exchange allocations. This is not now the case

Present agricultural policy has in practice failed in respect of all the points listed above.

a) farmgate prices have been to the general disadvantage of smallholders. The marketing boards should be buyers or sellers of last resort, but not determine operations or prices in between floor and ceiling prices. Prices should be determined by floor or ceiling purchases or sales of last resort, and not by administrative decisions.

b) payments to smallholders are not timely and credit availability is inadequate.

c) on-farm and off-farm storage space is inadequate.

d) trading in maize has been liberalized, then restricted, and again liberalized during the course of 1991. The temporary withdrawal of licences for private buyers of farm produce was not publicly discussed. Unless smallholders are able to sell to any middlemen they choose, they will be confined to marketing boards, parastatals or cooperatives, against which their bargaining power is minimal.

e) there has to be a consistent national policy on local authority cesses and impositions.

f) rural access roads (market to market) have to receive priority in resource allocation.

g) there is a risk that the present organizational set-up favours a few large importers and distributors, to the detriment of full competition in fertilizers.

Active implementation of generally agreed agricultural reforms would, by and large, favour the smallholders and encourage their use of fertilizers.

14.2 SUPPLY SIDE POLICIES

One of the key objectives of fertilizer sector reform is the development of a fertilizer marketing structure that is able and willing to supply the nations fertilizer demands through efficient and cost-effective commercial importation.

In the past five years however, commercial fertilizer imports as a percentage of total imports have reduced dramatically. Only a few commercial importer / distributor firms (ie excluding produce marketing and end-user organizations) have developed and utilized skills in commercial fertilizer importation.

The industry analysis above shows that Government actions in the form of:

- import licensing and foreign exchange allocation procedures

- procedures for procuring and allocating and pricing donor fertilizer imports to commercial traders can have a major adverse impact on the achievement of the above objectives and have contributed to the low level of commercial importation. Other research papers have also argued that the methods used to price and allocate fertilizer aid-in-kind donations have had a particularly adverse impact[9].

In past few years much has been done to reduce the adverse impact of the above factors. Import licensing procedures have been removed, and the previous practice of supplying aid fertilizer on concessional terms to one or two distributors has been discontinued. Allocations of USAID donated fertilizer are now done by the KNFA and the procedures are a lot more commercially oriented (see also section 12.2). Many of the aid donors have stopped supplying fertilizer directly as aid-in-kind and have instead moved to balance of payments support. However, a few distortions still remain.

It would be impossible to design a perfect 'system' or set of polices and procedures in this area. This is because the system has to satisfy many different and conflicting objectives. At best the policies and procedures would be a compromise and attempt to satisfy the objectives considered most important. Examples of the objectives that need to be satisfied are:

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[9] GOK 1990, The Supply of AID Funded Fertilizer to Kenya - A Review of the Sector

Objectives	Potential policy implications
Government objectives	
Maximize inward flow of foreign exchange	maximize donor involvement
Gain forex resources that can be utilized for more than one purpose	ask donors to supply BOP support or Commodity Import Support programs
Ensure that fertilizer receipts are planned and match the country's requirements	request donors to make long term commitments and supply specified types of fertilizer to strict timetables
Increase agricultural production through increased fertilizer consumption	subsidize fertilizer prices to farmers (smallholders in particular)
Avoid waste of forex through over importation or over-invoicing of purchases	control imports through import licence and forex allocation procedures
Reduce costs of fertilizer to the economy through economies scale	encourage 'group' purchases or sole importers
Maximize the generation of counterpart funds from sale of donor fertilizer	sell donor fertilizer at highest prices possible
Ensure there is no collusion between fertilizer traders	discourage or weaken trader organizations
Allow free market competition in the fertilizer industry	reduce regulatory barriers that favour incumbents and ensure that existing traders do not build up artificial barriers
Donor objectives	
Fast disbursement of funds as and when they are available	ad hoc disbursement of funds without long term commitments

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Objectives	Potential policy implications
Donor objectives (continued)	
Allow recipient country to decide on best use of funds given its circumstances	direct BOP support programs or commodity import programs tied to a number of commodities
Support donor country fertilizer and/or shipping industries	Sourcing restrictions on fertilizer even though this may increase costs of importation
Increase agricultural production through increased smallholder use of fertilizer	Supply fertilizers directly and insist that they are distributed directly to target groups at below cost
Trader objectives	
Build up institutions capable of importing commercially	distribute donor imports in way that mimics the costs and procedures necessaryto import commmercially
Allow existing firms to consolidate their position and increase margins	build in barries that make it difficult for new entrants and small wholesalers from getting aid fertilizer on the same terms

Thus it can be seen that there can be no one universal solution. We however suggest that a model along the following lines may be an acceptable compromise. Government, other Donor agencies and Traders should be consulted and persuaded to take steps to alter their current policies and procedures as necessary:

- Donors move to Commodity Import Programs tied to the importation of fertilizer. Donors should make long term (3 year) pledges as to the amount of funds and agree a timetable for disbursement which would ensure that the fertilizer is received in time

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- KNFA members and other interested parties should submit their estimated requirements for the different types of fertilizer. To prevent over estimation, fertilizer traders should submit a bank letter confirming the bank's willingness to finance the company for the estimated cost of the fertilizer. Minimum quantities should be set for each type of fertilizer, based on estimated consumption rates

- the Government in consultation with the KNFA, and National Fertilizer Development Committee should agree the 'shopping list' to be presented to the fertilizer donors. The list of fertilizers and estimated quantities to be supplied should be publicized as soon as possible and traders who require fertilizer that does not form part of the list should be informed to allow them to make alternative arrangements

- the KNFA in consultation with the donors should handle the tendering and procurement procedures. Donors could pay the fertilizer importers directly or make the funds available to the Treasury

- the KNFA should calculate the local selling price of the fertilizer based on the cost of an 'equivalent' direct commercial importation. This price must be cleared by the Government. The price should explicitly include the costs of:

  - cost of forward exchange cover

  - interest charges that a foreign supplier would charge a commercial customer

  The government should accept the shortfall in counterpart funds if this price is below the actual foreign cost of importation

- the fertilizer should be sold to the traders who requested the fertilizer upon production of bank guarantees. The Government should undertake the credit risk and 'operational' risk that all the fertilizer is not sold. These risks should be small given the use of bank guarantees and tailoring of donor imports to match trader requirements

- fertilizer imports should be moved to the essential commodity schedule for foreign exchange allocations to allow fertilizer traders the option of importing fertilizer commercially at any stage.

15 CONCLUSIONS AND RECOMMENDATIONS ON FPMRP

The overall purpose of the FPMRP is to increase fertilizer use by smallholder farmers in rural areas. This is to be accomplished by the strengthening and promoting a fertilizer market network at prices that reflect costs including adequate profits to importers and distributors. The project also included a number of conditions relating to policy actions that the Government of Kenya was required to undertake prior to disbursement of funds under the program.

Having completed our analysis we conclude that the FPMRP purpose of strengthening and promoting a fertilizer market network at prices that reflect costs including adequate profits to importers and distributors has been accomplished. This is because:

- importers and distributors now use pricing policies which reflect the cost of fertilizer to them including a profit margin which is driven primarily by competitive forces

- there is a wider retail distribution network in place in the country. Retailers are earning higher margins which has provided the incentive for them to set up in new areas and in competition with existing retailers

- fertilizer traders are beginning to develop new sources of competitive advantage in strategic activities such as marketing and sales and service activities

However there are still a few areas of concern relating to the development of the fertilizer marketing network. These include:

- continued and increasing reliance on donor imports in preference to direct commercial imports

- general lack of investment in physical distribution capacity by importers and distributors

We further believe that this stronger market network has increased the potential for increased smallholder fertilizer use. The terms of reference for this evaluation study did not require direct estimation of the actual changes in smallholder fertilizer use.

However, over the duration of the program, total fertilizer consumption in Kenya has fallen from 272,000 tonnes in 1988/89 to 228,000 tonnes in 1990/91, a decline of 16%. It is likely that fertilizer use by smallholders over the period will have declined by more than 16%.

We believe that this decline in use can be explained mainly by factors other than lack of fertilizer availability. These factors include:

- low official producer prices for scheduled crops
- low international prices for tea and coffee exports
- general lack of seasonal credit to smallholders.

We also believe that the major covenants specified in the PAAD have been complied with in all material respects. USAID appears to have complied in most respects with the implementation procedures as set out in the PAAD. However, some of the tasks and activities outlined in the monitoring and evaluation plan have not yet been fully accomplished.

We recommend that:

- the FPMRP should be continued for the foreseeable future, albeit with modifications to reflect new policy reform objectives. A more vigorous liberalization of agricultural marketing and pricing should be attached as a conditionality
- the Farm Inputs Branch should be strengthened through further training and in provision of support services (office and logistic support). The project should work closely with the World Bank's program on this
- more extensive and intensive promotion of smallholder fertilizer use through the distribution of appropriate literature increased supply of aid fertilizer in smaller packages be undertaken
- KNFA be assisted in setting an independent secretariat which will represent the wishes and aspirations of most of the importers/distributors
- The project should assist in implementing an on-going program to monitor and evaluate the impact of fertilizer policy changes on fertilizer imports, use and total effect on agriculture in Kenya.

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FERTILIZER PRICING AND MARKETING REFORM PROGRAM (615-0243)
MID-TERM EVALUATION
VOLUME II - MAIN REPORT

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I TERMS OF REFERENCE

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ANNEX I

EVALUATION OF THE FERTILIZER PRICING AND MARKETING REFORM PROGRAM

TERMS OF REFERENCE

SCOPE OF WORK

OBJECTIVE: This scope of work's objective is to evaluate the Fertilizer Pricing and Marketing Reform Program's performance in establishing market structures that will enable increased smallholder fertilizer use. (For ease of exposition, the Fertilizer Pricing and Marketing Reform Program will refer to both the Commodity Import Program and the Project.) As a policy reform program, FPMRP does not directly influence smallholder farmer decisions to employ fertilizer. Instead, it seeks to establish market structures that would contribute to greater smallholder fertilizer use. The scope of work focuses on evaluating market structure changes brought about by FPMRP that might influence smallholder fertilizer use decisions. As a result of Scope of Work implementation, USAID/Kenya will have a better understanding of how FPMRP supported market structure changes, and how these changes can affect small farmer use of fertilizer.

SCOPE OF WORK: The contractor will:

1 Review documentation on USAID/Kenya's past and present fertilizer sector activities including past evaluations, monitoring reports, and USAID and GOK planning documents.

2 Determine how the GOK's decision to decontrol fertilizer prices came about. What contribution did FPMRP make to this decision? the Kenya National Fertilizer Association? Determine how the GOK's decision to reduce constraints to fertilizer importation came about. What was the GOK's objective in decontrolling fertilizer prices and freeing fertilizer importation?

3 Identify GOK decisions subsequent to price decontrol that contributed to or detracted from:

- the objective of the GOK's decision to decontrol prices; and
- the objectives of the FPMRP.

Describe how these post-price decontrol decisions came about and what role FPMRP or the KNFA had in the decision-making process.

4 Identify changes in fertilizer marketing resulting from the decontrol of fertilizer prices. Identify changes in fertilizer marketing that have come about as a result of FPMRP. Assess the short and long-term impact of these changes in terms of FPMRP objectives. Determine whether these changes have increased smallholder use of fertilizer, or have increased the potential for greater smallholder use of fertilizer. Focus on changes at the distributor, wholesale and retail level.

5 Identify how price decontrol has influenced trader and policy maker market information needs. Do traders and policy makers require more or less information under price decontrol? How is this information obtained? What role does the GOK (ie the MOA and MOF) play in providing this information? Is this role appropriate or adequate? What role does the Kenya National Fertilizer Association play in providing this information? Is this role appropriate or adequate? What role do the donors play in providing this information? Is this role appropriate? Do traders feel sufficient information is available to enable them to accurately assess the profitability of short and long-term investments in fertilizer importation and distribution? Do policy makers feel adequate information is available for them to assess the impact of price decontrol and import liberalisation?

6 Based on interviews with fertilizer traders and bankers, determine how the current economic and policy environment affects short and long-term investment in fertilizer importation and distribution. For example, what are the banks' perceptions of the profitability of lending to fertilizer importers? Do they feel it was more profitable when prices were controlled? Do traders feel fertilizer marketing is more or less profitable now that prices are decontrolled? Interview at least eight fertilizer traders and four commercial banks with experience lending to fertilizer traders.

7 Assess whether the policy changes pursued under FPMRP are necessary and sufficient to attain the program's purpose. Assess how other recent fertilizer sector changes (import licensing, procurement of port handling and storage services, etc) contribute to achievement of the program's purpose.

8 Determine how factors internal to a fertilizer business (strategic planning capacity, ability to obtain credit, information systems, competitiveness, use of technology) contribute to achievement of the program's purpose.

Have these factors improved or deteriorated as a result of price decontrol? Has any business established, or sought to establish, a "competitive advantage" in fertilizer marketing?. (Here "competitive advantage" is defined as the provision of some product or service that is not currently imitated by competitors. It can include credit facilities, soil testing, bagging, using demonstration, transport). Does this contribute to achievement of the program's purpose? Was it a result of FPMRP or previous AID fertilizer programs? A result of price decontrol? Provide examples of any marketing techniques employed by firms in response to price competition (discounts, promotion or advertising, sales margin reductions, response to consumer preference articulation, product differentiation, packaging, location).

9 Describe how macroeconomic variables (foreign exchange and inflation rates, credit availability) affect achievement of FPMRP's purpose.

10 If it is deemed that changes pursued by FPMRP are not sufficient to achieve the program's purpose, what additional changes are necessary to assure increased smallholder fertilizer use?. (here it would be useful if the contractor developed a "decision tree" identifying variables a private trader reacts to in deciding to market fertilizer and smallholders react to in deciding to use fertilizer). This information can be gleaned from existing documentation and complemented during interviews.

11 Determine what information fertilizer prices convey. Do prices coordinate supply and demand? What impact do prices have on trader decisions to import? To market in certain geographic areas or to certain commodity producers? To bring in certain types? To bring in certain quantities? to employ different marketing techniques? Does the information decontrolled prices conveyed contribute to the potential for greater smallholder fertilizer use? (ie compared to the supply/demand information conveyed by controlled prices, do decontrolled prices coordinate supply and demand in such a way as to promote increased smallholder fertilizer use? Why or why not?)

12 Assess the impact of formal and informal training provided under FPMRP. Interview former trainees in the Ministries of Agriculture and Finance and the private sector. Has training contributed to achievement of the program's purpose? Why or why not?

13 Based on the findings required in tasks 1 - 12, make a statement as to whether the Fertilizer Pricing and Marketing Reform Program has achieved its purpose. Explain why or why not.

REQUIREMENTS: The contract team will meet with the FPMRP Program Manager upon initiation of the contract. This first meeting will be to develop a work plan, identify contracts, and provide documentation. After one week, a second meeting between the FPMRP Program Manager and at least one member of the contract team will take place in order to answer any questions and to finalise the work plan. After one month of contract implementation the contract team will provide a verbal briefing of findings to date. After seven weeks of contract implementation, the contract team will submit for FPMRP Program Manager and AGR review four copies of a draft FPMRP evaluation.

During the eight week of contract implementation, the FPMRP Program Manager and other USAID officials will provide feedback regarding evaluation content. At the end of the eight contract week the evaluation team will brief Mission staff on evaluation findings and submit 25 copies of the final evaluation report.

CONTRACT PERSONNEL TECHNICAL REQUIREMENTS:

AGRICULTURAL ECONOMIST: This technician must have knowledge of and experience with developing and evaluating fertilizer or input marketing systems in Kenya or Africa. Must have knowledge of private sector fertilizer importers'/distributors' needs, motivations, and constraints. Knowledge of Kenyan fertilizer markets and Government policies would be helpful.

STRATEGIC MANAGEMENT/BUSINESS SPECIALIST: This technician must have knowledge or experience in developing businesses that market imported or manufactured products in Kenya or Africa. Must have knowledge of credit facilities, tools for assessing the business environment and firm competitiveness, strategic planning, market information needs and uses, etc. Experience in providing business consulting services to business operating in a recently liberalised economic sector would also be helpful.

POLICY ANALYST: This technician must have experience with agricultural policy making and analysis either in Kenya or Africa. Knowledge of how policies are made, and how government agencies and donors interact in making policies is also required. Experience with fertilizer sector policy would also be helpful.

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Annex III

LIST OF OFFICERS DONORS & TRADERS INTERVIEWED

MINISTRY OF AGRICULTURE

J K Karanja	-	H/Development Planning Division
P M Amukoa	-	H/Farm Inputs Branch
M N Ngigi (Miss)	-	H/Project Analysis Branch
J C Boit	-	Development Planning Division
S Karuga	-	Advisor - Development Planning Division
P T Karuri	-	Farm Inputs Branch
C Obando	-	Farm Inputs Branch

MINISTRY OF FINANCE

Kioko wa Luka	-	US Desk Officer
J R Wachira	-	Monitoring Section
Dr A Tench	-	Advisor - Treasury

KENYA GRAIN GROWERS COOPERATIVE UNION

P K Kosgey	-	Branch Manager/Kitale
J S Shihemi	-	Nakuru

OTHERS

B Tisminesky	-	Chemical Engineering Consultant
H Ogolla	-	KNFA

DONOR AGENCIES

A S Sodhi	-	World Bank
J Arima	-	Japan Embassy
H C Nieman	-	The Netherlands
B Svensson	-	Swedish Embassy
K Schrage	-	W Germany Embassy
D Soroko	-	USAID

FERTILIZER TRADERS

Company	Town	Person	Position
Agrico	Nakuru	Nathwani	Managing Director
Benchem	Kitale	Gatheca	Managing Director
Eldoret Packers	Eldoret	Kachewa	Director
FAGS	Nakuru	Kamau	Managing Director
Gadher Enterprises	Kitale	Gadner	Managing Director
KGGCU	Nakuru	Sogomo	Head Fert Unit
Kapngentuny Wholesalers	Eldoret	Kimwarey	Owner
Limuru Posho Mills	Limuru	Audi	Manager
MEA	Nakuru	Ngunia	Finance Director
Muranga Union	Muranga	Muchiri	General Manager
Orbit Chemicals	Nairobi	Chandaria	Managing Director
Safina	Nairobi	Muya	Managing Director
Saboti Stores	Kitale	Jiwa	Managing Director
Super expo	Eldoret	Shah	Owner

COMMERCIAL BANKS

Bank	Person	Position
Kenya Commercial Bank	Ndungu	Corporate Manager
ABN Bank	Njoroge	Manager
Citibank	Ndegwa	Manager
Standard Bank	Githinji	Manager - Foreign Bills

ANNEX IV

SUMMARY OF TRADERS' RESPONSES

USAID FPMRP STUDY
QUESTIONNAIRE FOR IMPORTERS / DISTRIBUTORS'
SUMMARY OF RESPONSES

Question
Number

2 IMPORTER / DISTRIBUTOR DETAILS

2.1 Do you operate any distribution network?

	Number	%
Yes	14	100%
No	0	0%
Total respondents	14	100%

2.3 Do you focus on any particular geographic markets or any particular type of customers eg coffee or tea estates?

	Number	%
Yes	11	79%
No	3	21%
Total respondents	14	100%

- if yes, please give details and explain why

	Number	%
geographic	11	100%
products	7	64%
Total number who focus	11	

(note : does not add due to multiple answers)

- if no, please explain why

Supply a range of customers	3

2.4 For how many months in a year do you stock fertilizer?

	Number	%
- for the two planting seasons only	3	21%
- all year round, with emphasis on the planting seasons	11	79%
- all year round equally	0	0%
- for the long rains only	0	0%
Total respondents	14	100%

Question
Number

2.5 What other commodities (or businesses) do you trade in apart from fertilizers? What is the approximate proportion these make up of your total yearly turnover?

	Average percentage
- fertilizers	49%
- agrochemicals	22%
- agricultural implements	3%
- agricultural machinery	1%
- seeds	10%
- animal feeds	4%
- industrial chemicals	5%
- other - misc	6%
	100%

USAID FPMRP STUDY
QUESTIONNAIRE FOR IMPORTERS / DISTRIBUTORS'
SUMMARY OF RESPONSES

Question
Number

3 FERTILIZER SUPPLIES

3.1 What have been the sources of your fertilizer in the last three fertilizer years?

Number of importers who have sourced from

	Number	%
Commercial imports	2	14%
Government aid fertilizer	13	93%
Purchased from other importers	11	79%
Total respondents	14	

(note : does not add due to multiple answers)

For commercial imports only:

3.2 In general, did you receive import licenses and foreign ex hange allocation for the full amount you applied for in each of these years?

	Number	%
Yes, did receive substantially all	2	100%
No, recieved only part	0	0%
Total number who applied for import allocatio	2	
Did not apply	12	
Total respondents	14	

reasons for not importing

	Number	%
Govt fertiliser cheaper and easier to get	6	50%
Too risky - demand uncertain at higher price	2	17%
Requirements too small to import directly	2	17%
Don't have the know how to import	3	25%
Distribute all KGGCU and govt stocks to ensure a level playing field for future	1	8%
Total number of responses to this question	12	

(note : does not add due to multiple answers)

Question
Number

3.3 How would you characterize the process of obtaining the licenses and allocations before liberalisation as compared to the current practice:

	Better Now		Worse Now		Don't Know		Not Applicable	
– timeliness	1	8%	1	8%	0	0%	11	85%
– effort required to obtain app	2	15%	0	0%	0	0%	11	85%

3.4 For your imports, did you obtain credit from the suppliers?

	Number	%
Yes	1	50%
No	1	50%
Total number who imported	2	100%
Not applicable, did not import	12	
Total respondents	14	

3.5 For your imports, did you obtain credit from your bank?

	Number	%
Yes	1	50%
No	1	50%
	2	100%
Not applicable, did not import	12	
Total respondents	14	

Question
Number

3.6 Did you consider purchasing forward exchange cover to reduce the risk of foreign exchange losses? Why or why not?

	Number	%
Yes	0	0%
No	2	100%
	2	100%
Not applicable	12	
Total respondents	14	

Reasons for not using forward purchases

	Number	%
Too expensive	1	50%
Believed shs:S would remain stable	1	50%
	2	100%

3.7 Do you intend to expand the level of commercial imports in the future? What do you see as the major barriers to doing so?

	Number	%
Yes	9	64%
No	5	36%
Total respondents	14	100%

Major barriers

	Number	%
Fertilizer too expensive for farmers	3	50%
Producer prices too low - lack of demand	2	33%
lack of information / know how	2	33%
bank guarantee a problem	1	17%
Total number who replied	6	

(note : does not add due to multiple answers)

	Number	%
No answer	8	57%
	14	

Question
Number

For aid fertilizer allocations only

3.8 Did you receive an allocation of the full amount that you applied for in each of the years?

	Number	%
Yes, in general	7	50%
No, only part	7	50%
	14	100%

3.9 What is your experience of the costs of purchasing aid fertilizer as compared to importing similar quality fertilizer directly?

Aid (donor) fertilizer is:

	Number	%
Previous years		
Significantly cheaper (>-10%) than direct imports	1	7%
Slightly cheaper (between -3 to -10%)	8	57%
About the same cost (+-2%)	2	14%
Slightly more expensive (between +3 to +10%)	2	14%
Significantly more expensive (>+10%)	0	0%
Don't know - have not bought aid fertilizer	1	7%
	14	100%
Current year		
Significantly cheaper (>-10%) than direct imports	0	0%
Slightly cheaper (between -3 to -10%)	6	43%
About the same cost (+-2%)	4	29%
Slightly more expensive (between +3 to +10%)	2	14%
Significantly more expensive (>+10%)	1	7%
Don't know - have not bought aid fertilizer	1	7%
	14	100%

USAID FPMRP STUDY
QUESTIONNAIRE FOR IMPORTERS / DISTRIBUTORS'
SUMMARY OF RESPONSES

Question
Number

3.10 What effect do you think that the following changes in the method of allocating and selling aid fertilizers will have on your business?

i) KNFA clearing, and allocating the fertilizer
ii) KNFA utilizing donor funds to procure and allocate fertilizer
iii) Individual importers utilizing donor funds to procure and clear fertilizer

Possible effects:		I		II		III	
- fewer but more genuine importers	Yes	11	79%	13	93%	7	50%
	No	1	7%	0	0%	4	29%
	No chg	2	14%	1	7%	3	21%
- better mixture of fertilizers imported	Yes	10	71%	13	93%	7	50%
	No	0	0%	0	0%	4	29%
	No chg	4	29%	1	7%	3	21%
- possible oversupply of certain fertilizers and shortages of others	Yes	1	7%	1	7%	6	43%
	No	9	64%	12	86%	6	43%
	No chg	4	29%	1	7%	2	14%
- severe logistical problems clearing fertilizer at Mombasa	Yes	1	7%	1	7%	2	14%
	No	9	64%	10	71%	8	57%
	No chg	4	29%	3	21%	4	29%
- higher possibility of cartels setting up	Yes	5	36%	3	21%	2	14%
	No	7	50%	8	57%	7	50%
	No chg	2	14%	3	21%	5	36%
- higher possibility of KGGCU dominating the market	Yes	1	7%	1	7%	2	14%
	No	11	79%	10	71%	8	57%
	No chg	2	14%	3	21%	4	29%
- increase in the cost of donor fertilizers to importers / distributors	Yes	4	29%	0	0%	2	14%
	No	7	50%	10	71%	8	57%
	No chg	3	21%	4	29%	4	29%
- decrease in the cost of donor fertilizers to importers / distributors	Yes	8	57%	11	79%	9	64%
	No	3	21%	0	0%	2	14%
	No chg	3	21%	3	21%	3	21%

Question
Number

Other comments

Version III would not work due to political interference

Version III may see Briefcase operators reappear

Conflicts of interest in versions II and III

USAID FPMRP STUDY
QUESTIONNAIRE FOR IMPORTERS / DISTRIBUTORS'
SUMMARY OF RESPONSES

Question
Number

4 FERTILIZER PRICING

4.1 How do you set your fertilizer prices in the various locations that your operate in?

	Number	%
- follow KGGCU price lists	8	57%
- cost of purchase and transport + mark-up	10	71%
Total respondents	14	

(note : does not add due to multiple respones)

4.2 Please indicate thr average margins (discounts from the retail price) that you allow to:

Sales through retailers etc

Own mark – up	50 kg bags Number	%
0 – 5%	6	43%
5 – 10%	6	43%
10 – 15%	2	14%
15% and over	0	0%
Total respondents	14	100%

Mark –up for retailers / stockists

	Number	%
0 – 5%	11	79%
5 – 10%	3	21%
10 – 15%	0	0%
15% and over	0	0%
Total respondents	14	100%

Question
Number

4.3 How have these margins changed since price decontrol?

	Own Margins on DAP	%	Retailers Margins on DAP	%	Own margins on other	%
significantly higher	0	0%	0	0%	0	0%
slightly higher	5	36%	11	79%	5	36%
stayed the same	5	36%	3	21%	7	50%
slightly lower	1	7%	0	0%	0	0%
significantly lower	3	21%	0	0%	2	14%
	14	100%	14	100%	14	100%

4.4 Do you set maximum retail selling prices for your product or are your retailers / stockists free to set their own selling prices?

	Number	%
Yes	1	7%
No	13	93%
Total respondents	14	100%

4.5 If you set maximum retail prices, why do you do so and how is this enforced?

Set prices for member societies (factories)

Question
Number

4.6 Do you allow quantity and / or cash discounts?

	Number	%
Yes	12	86%
No	2	14%
Total respondents	14	100%

if yes, provide details

negotiate price for each customer	3	25%
cash discounts 0 - 5%	8	67%
discount for orders above minimum size	3	25%
free transport > 15 t	1	8%
support given to co-op socities	1	8%
Total respondents replying YES	12	

(note : does not add due to multiple answers)

if no, why not?

	Number	%
most stockists take similar quantities	1	50%
deal only on cash basis	1	50%
Sales to member societies only (mainly credit)		
Total respondents replying NO	2	100%

4.7 How often do you adjust your prices during the fertilizer year?

	Number	%
monthly	0	0%
quarterly	1	7%
every season	5	36%
on receipt of new consignments	5	36%
negotiate for each sale	1	7%
market forces	2	14%
Total respondents	14	100%

USAID FPMRP STUDY
QUESTIONNAIRE FOR IMPORTERS / DISTRIBUTORS'
SUMMARY OF RESPONSES

Question
Number

4.8 What mechanisms do you use to inform the distributors / retailers / farmers of your prices (so that they can compare them with the competition)

	Number	%
Published price lists	3	21%
Mail shots to distributors	0	0%
Radio announcements	0	0%
Informal / verbal	9	64%
Field reps	5	36%
billboard outside shop	1	7%
Total respondents	14	

(note : does not add due to multiple respones)

4.9 Do you adjust your prices to reflect local conditions eg where there is a shortage of fertilizer in a given area? give examples.

	Number	%
Yes	4	29%
No	10	71%
Total respondents	14	100%

4.10 How do you obtain information on your competitors prices?

	Number	%
obtain and review price lists	3	21%
from customers / retailers	11	79%
from field reps	2	14%
prices stay fairly constant in district	1	7%
very little monitoring is done	1	7%
Total respondents	14	

(note : does not add due to multiple answers)

USAID FPMRP STUDY
QUESTIONNAIRE FOR IMPORTERS / DISTRIBUTORS'
SUMMARY OF RESPONSES

Question
Number

4.11 Have you noticed any traders charging higher prices in areas where there is little competition? eg

	Number	%
in geographic areas where competitors have run out of product	9	90%
in sales to specific types of farmers	2	20%
in areas where there is only one stockist	1	10%
Total number replying positively (note : does not add due to multiple answers)	10	
Have not noticed	4	
Total respondents	14	

4.12 Do distributors / retailers offer discounts to end-users (farmers) to increase sales volumes or clear end of season stocks? Please give examples.

	Number	%
Yes	12	86%
No	2	14%
Total respondents	14	100%

details

valued customers	4
farmers who forward buy	2
at the end of the planting season	5

4.13 In your assessment, do such tactics work? if so, do other competitors respond

	Number	%
Do work	12	86%
Do not work	2	14%
Total respondents	14	100%
Competitors respond	11	85%
N/A - tactics do not work	2	15%
	13	100%

USAID FPMRP STUDY
QUESTIONNAIRE FOR IMPORTERS / DISTRIBUTORS'
SUMMARY OF RESPONSES

Question
Number

5 CREATING COMPETITIVE ADVANTAGE

5.1 How do you attract and retain distributors / retailers in your network?

	Number	%
offer them larger margins	8	57%
extend credit	7	50%
free delivery	5	36%
organise low cost delivery to a pool of distributors or retailers	5	36%
take back unsold stocks	1	7%
fast processing of orders	11	79%
publicity and promotion of fertilizer use in the area	5	36%
reduced price / free soil analysis	1	7%
regular phamplets to distributors / retailers giving information on forthcoming products e	5	36%
bonuses to distributors or retailers for meeting sales targets	1	7%
repack in different bag sizes	4	29%
reliabilty of supply	2	14%
build personal relationships	1	7%
offer full range of products	2	14%
Wide distribution network in area	1	7%
Total respondents	14	

(note : does not add due to multiple answers)

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QUESTIONNAIRE FOR IMPORTERS / DISTRIBUTORS'
SUMMARY OF RESPONSES

Question
Number

5.2 Please rank the three most important means that you use to attract and retain distributors / retailers

	Overall ranking	Points
i)	pricing (high margins, discount structure)	25
ii)	Stocking (availability and service)	17
iii)	organise transport	8

Summary of answers received	Total Points (first=3, second=2, third=1)
pricing (high margins, discount structure)	25
Stocking (availability and service)	17
relationships	7
range of products	5
integrity	1
organise transport	8
free delivery	1
credit facilities for farmers	7
Product knowledge	2
Storage	2
Credit to farmer	3
Wide distribution network (no trpt cost to far	2

Question
Number

5.3 Do you provide any advisory services to farmers?

	Number	%
Yes	11	79%
No	3	21%
Total respondents	14	100%

if yes, what kind of services?

	Number	%
Advice on fertilizer use	10	91%
Soil analysis	2	18%
Demonstration plots	7	64%
Field visits	10	91%
Blend fertilizer	1	9%
Field days and shows	1	9%
Total respondents replying YES	11	

(note : does not add due to multiple answers)

if no, why not

	Number	%
Too expensive	0	0%
Competitors don't	0	0%
Expect distributors to do so	0	0%
Should be a government service	2	67%
Would not make a big difference	2	67%
Total respondents replying NO	3	

(note : does not add due to multiple answers)

USAID FPMRP STUDY
QUESTIONNAIRE FOR IMPORTERS / DISTRIBUTORS'
SUMMARY OF RESPONSES

Question
Number

5.4 Do you charge a price premium over KGGCU prices?

	Number	%
Yes	0	0%
No	13	100%
Total non-KGGCU responses	13	100%

if yes, how is this justified
N/A - all charge less than KGGCU

if no, why not

	Number	%
competition from other traders	1	8%
strategy to set prices at 6 - 10 % less than K	5	38%
strategy to keep prices at par or 0-5% less	7	54%
Total respondents replying NO	13	100%

5.5 Do you brand your products or seek to differentiate them in any way from your competitors products?

	Number	%
Yes	3	21%
No	11	79%
Total respondents	14	100%

if yes, how do you promote your brand and how effective is it?

	Number	%
Repack into 2 kg bags	1	33%
Blend & rebag	1	33%
Rebag direct importation	2	67%
Total respondents replying YES	3	

(note : does not add due to multiple answers)

if not, why not?

	Number	%
Small holder farmers recognise USAID brand and large farmers rely on analysis certs	6	55%
No difference in DAP from different suppliers	5	45%
Total respondents replying NO	11	100%

Question
Number

5.6 How do you seek to attract and retain major customers eg estates?

	Number	%
extend credit terms	7	50%
import to firm orders	0	0%
offer storage and deliver fertilizer	2	14%
as and when needed	2	14%
personal relationships	9	64%
offer a complete package (agrochem + fert)	1	7%
free delivery and discounts	6	43%
price	3	21%
Not applicable - do not sell to estates	1	7%
Total respondents	14	

(note : does not add due to multiple answers)

5.7 What methods do you use to ensure that your commercial fertilizer imports are at the most cost-effective price

	Number	%
choose the right suppliers	4	80%
choice of clearing agents	4	80%
use of Kenya Railways/own transport	4	80%
pooling of allocations with other importers	0	0%
timing orders to reduce storage costs	2	40%
Total number replying to questions	5	
N/A - have no experience of imports	9	

Which of the above are the three most important in reducing the overall cost of fertilizers landed at your stores?

		Points
i)	. Transport costs (use KR)	33
ii)	.. Choice of supplier	11
iii)	.. Storage	4

Summary of answers

	Points (first=3, second=2, third=1)
Choice of supplier	11
Exchange rate fluctuations	2
Transport costs (use KR)	33
Storage	4
Clearing & forwarding	3

Question
Number

5.8 Which of the above measures:

- have you implemented over the past five years (before price decontrol)?

	Number
None of the above	1
Most were in place	4

- have you implemented since price decontrol?

	Number	%
reliability of supply	1	7%
increased retailer margins	1	7%
adjusting prices to meet competition	3	21%
free deliveries/better delivery service	3	21%
more & better range of stocks	1	7%
No changes	7	50%
more chances taken as long as people pay c	1	7%
Total respondents	14	

(note : does not add due to multiple answers)

- do you intend to implement in the future?

	Number	%
extend free delivery services	2	14%
promotions (T-shirts etc)	2	14%
repack in own brand bags	4	29%
Import own fertilizer in containers	1	7%
None	4	29%
Import directly	4	29%
Move into agriochemicals/wider service	1	7%
Produce more blends	1	7%
enter the price war/larger discounts	1	7%
Total respondents	14	

(note : does not add due to multiple answers)

USAID FPMRP STUDY
QUESTIONNAIRE FOR IMPORTERS / DISTRIBUTORS'
SUMMARY OF RESPONSES

Question
Number

6 CHANGES IN FERTILIZER MARKETING STRUCTURE SINCE DEREGULATION

6.1 What changes have you noticed in fertilizer marketing (both in your own company and in your competitors) since the decontrol of prices in December 1989, and what do you attribute the changes to? Please consider changes in terms of the following:

- the number or size of distributors / retailers
(eg new distributors, changes in market share)

	Number	%
more retailers	11	79%
more briefcase distributors	2	14%
fewer briefcase distributors	2	14%
more retailers with fertilizer as side business	1	7%
Total respondents	14	

(note : does not add due to multiple answers)

- the sources of fertilizer supply
(eg more/less importation, reliance on aid fertilizer etc)

	Number	%
less aid fertilizer / more imports	1	7%
less commercial imports / more aid fertilizer	11	79%
no change	1	7%
fertilizer imports of lower quality	1	7%
Total respondents	14	

- changes to the structure of distribution networks (eg opening of more branches, expanding networks)

	Number	%
more stockists	9	64%
no change	4	29%
fewer stockists	1	7%
Total respondents	14	

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QUESTIONNAIRE FOR IMPORTERS / DISTRIBUTORS'
SUMMARY OF RESPONSES

Question
Number

- the percentage of sales that go through third party retailers as compared to own branches

	Number	%
more through retailers / less through branche	11	79%
no change	3	21%
Total respondents	14	

- the mix of products / bag sizes that are being sold

	Number	%
more demand for smaller sizes	12	86%
no change	1	7%
DAP substitued by 20:20 as cheaper	1	7%
Total respondents	14	

- businesses adding new product lines to main fertilizer business

	Number	%
yes, try to offer a complete package	8	57%
no change	5	36%
reducing unprofitable product lines	1	7%
Total respondents	14	

- any other changes

	Number replying
more competition	1
reduced consumption due to high prices	2
margins higher for upcountry sales	1
offer stronger service	1
new stronger marketing dept	1

Question
Number

6.2 Has your distribution network structure changed since prices were liberalised in December 1989?

	Number	%
Yes	10	77%
No	3	23%
Total respondents	13	100%

– if yes, please give details of the changes, and the reasons for the change

	Number	%
added stockists, more volume	9	90%
fewer stockists	1	10%
Total respondents replying YES	10	

(note : does not add due to multiple answers)

– if no, what has prevented you from doing so?

	Number	%
uncertainity as to future demand	2	67%
too expensive to expand networks	1	33%
no response	1	33%
Total respondents replying NO	3	

(note : does not add due to multiple answers)

6.3 Are you planning any future changes to your distribution network? If yes, please provide details.

	Number	%
Yes	7	50%
No	7	50%
Total respondents	14	100%

– if yes, please provide details

	Number	%
train a sales force and field officers	1	14%
expand number of stockists	6	86%
building a new warehouse	1	14%
Total respondents replying YES	7	

(note : does not add due to multiple answers)

Question
Number

- if no, why not?

	Number	%
uncertainity of demand	2	29%
more economic to hire when needed	1	14%
too expensive	1	14%
happy with current set up	1	14%
No response	2	29%
Total respondents replying NO	7	

(note : does not add due to multiple answers)

6.4 Has your total distribution capacity changed since the deregulation of fertilizer prices?

	Number	%
Yes	5	36%
No	9	64%
Total respondents	14	100%

- if yes, please give the reasons for the changes

	Number	%
additional lorries	5	100%
new warehouses	1	20%
Total respondents replying YES	5	

(note : does not add due to multiple answers)

- if no, what has prevented you from doing so?

	Number	%
too risky to invest - margins too low	3	33%
happy with current set up	3	33%
lower consumption forecast	1	11%
no response	2	22%
Total respondents replying NO	9	

(note : does not add due to multiple answers)

Question
Number

6.5 Are you planning any future changes to your distribution capacity?

	Number	%
Yes	2	25%
No	6	75%
Total respondents	8	100%

- if yes, please provide the reasons

	Number
more lorries / pick-ups	2

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QUESTIONNAIRE FOR IMPORTERS / DISTRIBUTORS'
SUMMARY OF RESPONSES

Question
Number

7 EFFECT OF GOVERNMENT DEREGULATION OF THE MARKET

7.1 What do you perceive the long term effect of decontrol of fertilizer prices and liberalization of imports will be on:

	Increase		Decrease		No effect		Don't know	
	No.	%	No.	%	No.	%	No.	%
- Fertilizer use by small holders	9	64%	1	7%	2	14%	2	14%
- Competition in the market	14	100%	0	0%	0	0%	0	0%
- Profits for importers / distributor	3	21%	7	50%	2	14%	2	14%
- Amount of fertilizer imported directly	8	57%	1	7%	2	14%	3	21%
- Ability to plan amount of imports from year to year	11	79%	1	7%	0	0%	2	14%
- Timeliness of fertilizer supply to	11	79%	1	7%	1	7%	1	7%

Question Number

7.2 What effect do you believe economic and policy environmental factors have on the profitability and growth of your business?

	Major Impact		Little impact		No impact		Don't Know	
	No.	%	No.	%	No.	%	No.	%
Producer prices for foodstuffs	14	100%	0	0%	0	0%	0	0%
Timeliness of payment to farmers for crop deliveries	13	93%	0	0%	1	7%	0	0%
International prices for tea and coffee	12	86%	1	7%	1	7%	0	0%
International fertilizer prices	13	93%	1	7%	0	0%	0	0%
Availability of credit to farmers for purchase of inputs	12	86%	0	0%	0	0%	2	14%
Quality and effectiveness of agricultural extension services	12	86%	1	7%	1	7%	0	0%
Availability of credit to importers	13	93%	1	7%	0	0%	0	0%
Import licence procedures	13	93%	1	7%	0	0%	0	0%
Uncertain exchange rate fluctuations	14	100%	0	0%	0	0%	0	0%

Other (specify)
Traders mentioned the following as major factors

Government interference
Direct participation by end-users in importation
Transport-KR cannot cope
Loans to farmers should be approved proir to planting
Announce producer prices before planting
Revolving fund to help direct importers against Shs devaluation

Question
Number

7.3 Which of the above do you believe are the three most important?

		Points
i)	Producer prices	29
ii)	Availability of credit to farmers	14
iii)	Timeliness of payments to farmers	11

Summary of answers received	Points (first=3, second=2, third=1)
International fertilizer prices	10
Producer prices	29
import licencing procedures	1
Government interference	6
Direct imports by end-users	1
Timeliness of payments to farmers	11
Availability of credit to farmers	14
credit to importers	2
international prices for tea & coffee	7

7.4 What impact do you believe that price decontrol has had on the profitability of fertilizer marketing?

	Major increase	Minor increase	No effect	Minor decrease	Major Decrease
Number	1	7	1	4	1
%	7%	50%	7%	29%	7%

Please explain

	Number
higher turnover, lower margins	2
lower margins and likely lower demand	2
can recharge transport costs to upcountry cu	3
higher margins + higher volumes	2
higher margins from suppliers	1
increased competition	3

Question
Number

7.5 What factors do you believe are most important to banks when deciding whether or not to advance credit to fertilizer importers?

	Number	%
- track record	12	86%
- availability of collateral	12	86%
- projected profitability	3	21%
- distribution capacity	1	7%
- Other (please specify)	0	0%
Total respondents	14	

(note : does not add due to multiple answers)

7.6 What effect did KGGCU's reduction of prices in January 1990 have on your business?

	Number	%
Little impact - had little in stock	3	21%
Had to lower prices to match KGGCU	7	50%
prices reduced/sold at loss	2	14%
prices reduced/sold at cost	1	7%
Total respondents	14	

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QUESTIONNAIRE FOR IMPORTERS / DISTRIBUTORS'
SUMMARY OF RESPONSES

Question
Number

8 TRADER INFORMATION NEEDS

8.1 What sources of information do you use when assessing the amount and quantity of fertilizer that you need to purchase in each year?

	Number	%
previous years sales + expected change (gro	13	93%
estimated from existing distributors / custom	8	57%
governments statistics on stocks and deman	2	14%
information on competitors proposed purcha	0	0%
other (specify)	1	7%
Total respondents	14	

(note : does not add due to multiple answers)

8.2 What information do you use to decide whether or not to import your requirements? Where do you obtain it from?

information	Number	%
availability of govt fertilizer	6	86%
price information from suppliers	4	57%
past experience of other cost elements	2	29%
expected future movement of exchange rate	3	43%
availability of credit from banks	2	29%
other (specify)		
what will the market be willing to pay	2	29%
Number replying	7	
(note : does not add due to multiple answers)		
Not applicable - not economical	7	
Total respondents	14	

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QUESTIONNAIRE FOR IMPORTERS / DISTRIBUTORS'
SUMMARY OF RESPONSES

Question
Number

8.3 Do you make use of the following sources of information? If yes, what information do you obtain?

	Number	%
- government agencies (specify which)	10	71%
Treasury	5	36%
MOA field demonstrations	5	36%
- discussions with others in the trade	13	93%
- the Kenya National Fertilizer Association	9	64%
- donor agencies (specify which)	9	64%
NORAD	3	21%
USAID	7	50%
DUTCH	2	14%
DANISH	1	7%
- other (specify)	2	14%
International fertilizer suppliers	1	7%
KARI	1	7%
KNFU	1	7%
Total respondents	14	

(note : does not add due to multiple answers)

8.4 Are these sources adequate to help you estimate the potential profitability?

	Yes		No		Total
- in the short-term	11	79%	3	21%	14
- in the long-term	8	57%	6	43%	14

Question
Number

8.5 If not, what other type of information would you need? who could supply it?

information	supplier	Number	%
world-wide fert sources and prices	KNFA	10	71%
details of sales, purchases, stocks in Kenya	MOA	5	36%
supply of aid fertilizer	MOA	1	7%
mechanism of importation	KNFA	1	7%
fertilizer meetings with the MOA	-	1	7%
Total respondents		14	

(note : does not add due to multiple answers)

8.6 What role could the KNFA play in providing the required information

- set up an independent secretariat and act as a conduit of information on the overall projected demand, current stock levels and purchase orders placed by each of the members

	Number	%
Yes	12	86%
No	2	14%
Total respondents	14	100%

- act as regulatory body through which all members channel their import requirements for comparison with fertilizer requirements and final approval

	Number	%
Yes	3	23%
No	10	77%
Total respondents	13	100%

- other (please specify)

Must be independent & cover both areas.
If a regulatory body then should receive all requests at the same time
The govt must have the final say as they feed the people

Question
Number

8.7 What role should the Inputs Unit of the Ministry of Agriculture play in providing the required information?

	Number	%
Research data	6	43%
Same data as present but on a timely basis	5	36%
Don't know - don't receive any at present	4	29%
Total respondents	14	

(note : does not add due to multiple answers)

8.8 In your opinion, what has been the effect of the decontrol of prices and liberalization of fertilizer imports on your information requirements?

	Need less information		Need more information		No effect	
Number	0	0%	10	71%	4	29%

8.9 What is your assessment of the long-term profitability of staying in fertilizer distribution?

	Number	%
Profitable	8	57%
Larger volumes but lower margins	2	14%
profitability will improve if no govt interferenc	2	14%
margins will remain low	2	14%

Question
Number

8.10 What in your opinion are the critical success factors for long-term profitability in fertilizer distribution?
(critical success factors are those key areas where things must go right in order to achieve long-term profitability. Critical success factors can include both internal factors over which you have some control (eg getting the right product mix, logistical efficiency, developing a large and stable distribution network etc) and external factors over which you have less control (eg government policies on producer prices, continued availability of aid fertilizer, low international fertilizer prices etc)

- Internal	Points (first=5, fifth=1)
Right mix of products	29
Strong distribution network	16
Logisitical efficiency	14
Choice of suppliers and timing	11
Competitive price	9
credit facilities	5

- External

Producer prices + timeliness of pmt	43
KNFA should lower 2000 tonne limit	19
Stable int fertilizer prices/exchange rate	19
Government policies	18
Availability of donor fertilizer	12
Credit to farmers	7
Freedom to buy a mix from best possible sou	5
Aid fertilizer & its % of the market	5
Coffee and tea prices	5
Timely payment to farmers	4
Stop non genuine sellers	3
Govt should still help with prices/sudsidise	2