fertilizer distribution and credit schemes for small-scale farmers
fertilizer distribution
and credit schemes
for small-scale farmers

fertilizer and plant nutrition service
land and water development division

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1. INTRODUCTION

More than 18 years experience in the FAO Fertilizer Programme on fertilizer use development under different local farming conditions in more than 40 developing countries has provided a wealth of information. It reveals not only the yield increasing effects of judicious fertilizer use, but also the constraints to this use, at the national, regional and farmer level. At the farmer level the constraints comprise: the farmers' lack of knowledge of modern agricultural techniques; ineffectiveness of extension services; insufficient credit facilities; inadequate fertilizer supply, distribution and storage facilities; and restricted possibilities for marketing farm products.

Once a demand has been created in a certain area or region for fertilizer and related inputs, the proper kinds of inputs must be available to farmers at the right time and place in sufficient quantities. There is usually a problem to find and appoint a reliable distributor in a newly developed fertilizer use area with an initially low total fertilizer consumption, who is prepared to supply farmers, frequently in remote areas, with small amounts of fertilizers which may have to be supplied on credit from the distributor's own limited resources. Consequently the distributor is not attracted to or in favour of being involved in such an undertaking.

Distribution to the farm level may be carried out by the traditional village retailers of consumer goods. However, these local businessmen have no experience with fertilizers so need to be trained to deal with them, and also provided with adequate knowledge on their agricultural aspects in order to be able to serve their farmer customers properly. The financial resources of these local traders are limited, and to add fertilizers to their existing range of goods they need credit for their acquisition from wholesalers, for their storage and for their transport. But the resources of the small farmers are also very restricted. They are, in many cases, not able to buy even a small amount of fertilizer and for this reason their access to credit is a vital issue in fertilizer use development.

In many developing countries, even though a variety of credit sources is available, such as local money lenders, retailers, several kinds of banks, marketing boards and agrarian development institutions, the credit terms are often very unfavourable, and in some cases, either there are no local representatives of the credit institutions or the procedures for obtaining credit are too complicated and time consuming for the small farmer who needs the credit well in advance of the sowing period. Even if all these sources are apparently available, the mass of the small producers of food crops may not have access to credit, because they lack land titles or other acceptable security. The FAO Fertilizer Programme endeavours to find a solution to the various constraints to fertilizer distribution and credit supply through pilot schemes for fertilizer distribution on credit to small-scale farmers.

To deal with such problems, the Pilot Schemes include:

a) supervised credit in kind, for limited cropped areas and a selected crop, on the basis of a revolving fund;

b) fertilizer distribution by an officially appointed agency;

c) administration of the fund by a Government-appointed body;

d) assistance by the extension service and by other agencies associated with the scheme.
The objectives of the pilot schemes are given in Section II and the following sections contain examples of experience gained in various countries, using different channels to make fertilizers readily available to farmers in developing countries under varying stages of economic development. These channels include private retailers, cooperatives, marketing and processing enterprises and development institutions. They all have three common components: teaching and training, distribution and banking. The costs and benefits of different systems are also described.
II. PILOT FERTILIZER AND RELATED INPUT CREDIT SCHEMES FOR SMALL-SCALE FARMERS

1. SIGNIFICANCE OF THE SCHEMES

A fertilizer and related input pilot scheme has a particular significance because it provides a means for a group of farmers, on a voluntary basis though with a common motivation, to obtain recommended fertilizers and other tested inputs on credit, for selected crops on a limited area. The scheme not only provides the inputs to the farmers but also encourages them to use improved cultivation techniques. The whole scheme is based on the use of a revolving fund.

2. OBJECTIVES

The objectives can be grouped under four main headings, although the items in them are often interrelated.

2.1 Production

- To increase crop production through efficient use of fertilizers at recommended rates, and other inputs, and by improved practices previously tested and proved to be technically and economically practicable.

2.2 Distribution

- To promote group orders for fertilizers and related inputs;
- to provide for the distribution and timely supply of inputs;
- to provide facilities for marketing of farm products;
- to establish a fertilizer revolving fund;
- to improve repayments of loans through group guarantee;
- to use the revolved proceeds of fertilizer sales exclusively for the procurement of additional fertilizer.

2.3 Credit

- To facilitate credit procedures and to grant sufficient and timely credit on reasonable terms to farmers through officially approved institutions.

2.4 Human Relations

- To improve regular personal contacts between farmers on the one hand, and extension workers, distribution and bank agents on the other, in order to promote personal and mutual confidence;
- to establish or strengthen farmers' organizations.
3. BASIC PRINCIPLES AND RESPONSIBILITIES FOR A FARM INPUT REVOLVING FUND

3.1 Basic Principles

a) The funds, as the property of the government, should be administered by an authorized government-controlled institution.

b) The operation of the funds should preferably be guided by a government nominated national or local "Input and Credit Committee" composed of representatives of the appropriate agencies and bodies participating in the scheme.

c) The funds should be deposited in a special account in a government authorized bank or credit institution responsible for its administration.

d) The use of the funds should be reported every 6 months to the appropriate controlling and participating bodies, the accounts audited once a year, and the balance sheet certified once a year.

e) The loans should be short-term in order to recycle the funds as revolving funds.

f) The funds should be linked to permanent government institutions operating in the area or with well-established farmers' organizations in order to ensure continuation of the operation after termination of the project.

gh) International project staff should never be directly involved in credit operations such as administration, distribution and the recovery of loans.

h) The government should maintain the original value and purchasing power of the funds.

3.2 Responsibilities

i) International staff

The responsibilities of the international staff to ensure the correct functioning of the funds consist of supervising and supplying assistance to local institutions responsible for fund operations. As they are continuously in touch with the farmers, they know their repayment capacities and their farm conditions. For these reasons the international staff should advise the Input and Credit Committee on matters concerning:

- farm-gate cost of inputs to be distributed including transport and handling cost;
- credit limits;
- repayment terms and interest.

ii) Input and credit committee

The responsibilities of this committee for the smooth running of the activities of the funds may be summarized as follows:
- determining the price of inputs, amount of credit per farmer, rate of interest, schedule of repayment, and criteria for the collection of the repayment;
- preparing the necessary loan application and recording forms (see annexes);
- arranging the processing of loan requests, timely distribution of inputs, and technical advisory service to ensure that inputs are properly and effectively used on the selected crops.

As, in practice, the government-nominated Input and Credit Committee may lack the necessary legal authority to undertake direct recovery actions against defaulters, the Committee may delegate part of its responsibilities to a credit institution and entrust it with handling the disbursement and collection of fund loans through farmers' organizations.

4. CRITERIA AND CONDITIONS FOR SUCCESSFUL OPERATION OF PILOT SCHEMES

From experience, a number of conditions have been evolved which should, as far as possible, be met in establishing a supervised distribution-credit scheme for small farmers based on the group approach.

The basis of all these conditions is that fertilizer distribution within the scheme should be effectively integrated with extension, agricultural marketing, training and management. The conditions listed below relate to various aspects of the programme and its participants.

4.1 Participants in the Scheme

i) Number of participants

- To make an impact on an area, the number of participants in the scheme should not be too small. Initial participation by 50% of the farmers is ideal.
- The number of farmers forming a group should, however, be restricted so that effective contact on a personal basis by extension, banking and supply agents remains possible.
- To foster mutual security, confidence and contact, the groups should be based on either kinship, residential proximity or ethnic background.

ii) Selection of participants

- Members of a group should each have the same 'weight' as farmers, in terms of size of holdings, means of production and willingness to repay.

iii) Repayment by participants

- As, even with group guarantee arrangements, it is not always possible to get non-defaulters to pay for defaulters, a security margin should be built into the programme, e.g. by a) insisting on a down-payment at the time of ordering fertilizer; or b) passing on, in the farm-gate fertilizer price, only a part of the discount obtained from the retailer and transporter by
group ordering. A 5-10% margin is usually enough to cover bad debts.

From the beginning there should be strict insistence on repayment, because the success of a scheme is highly dependent on the repayment rate.

4.2 Assistance to the Scheme

- Extension workers, bank and supply agency representatives should visit the scheme participants regularly, particularly at the initial stage of the scheme, to inform them of the details regarding delivery of the fertilizers, provision of credit and its repayment, in order to gain their confidence and to improve mutual understanding as a basis for a favourable attitude at repayment time.

- Field days should be organized; the first after application of the fertilizer, to see its visual effect; the second at harvest, to show that the value of the larger yield is more than adequate to repay the credit.

4.3 Fertilizer Supply

- A scheme should not be initiated unless a firm demand has previously been created.

- All fertilizers should be sold and ordered in advance, e.g. two to three months before delivery time.

- A fertilizer store should be made available in the village.

- The fertilizer should be delivered on time.

4.4 Choice of Crop

- Initially the scheme should concentrate on the predominant crop in the area.

- A steady market must exist for the selected crop.

- The value/cost ratio of the crop selected must be two or more.

4.5 Credit Supply

- All loans are in kind, related to a limited area and a particular crop.

- Interest should be included in the credit system, in order to prepare participants for having to pay the normal bank interest after termination of the scheme.

- Cumbersome procedures should be avoided.

4.6 Revolving Fund

- To ensure continuity of the revolving fund, it should be maintained at 100% of its value.

- All essential forms should be clear and simple. Examples of such forms are contained in Annex A.
III. CHOICE OF FERTILIZER DISTRIBUTION CHANNELS

Various avenues for the distribution of fertilizers have been tested and applied in practice. In those cases where there was a total lack of distribution infrastructure, new channels had to be created, while in others where the existing channels were not functioning well they were activated and tested for their usefulness.

The eight channels which have proved their value in practice, for the distribution of fertilizer on credit to small-scale farmers are given in the sequence in Table 1. Independent of the stage of economic development, each distribution scheme must aim to satisfy the farmer, the distributor and the credit supplier.

1. FERTILIZER DISTRIBUTION CHANNELS FOR EARLY STAGES OF ECONOMIC DEVELOPMENT

The first three distribution channels mentioned in Table 1: farmers' associations, licensed traders/rural stockists, credit cooperatives, have proved their value and usefulness in an early stage of rural economic development where the possibilities for the sale of crops are restricted. The farm products are mostly sold at the village and in neighbouring villages not too far away. These channels have little governmental control and the investments are low. A simple village store has to be built and the village heads, or licensed traders, have to receive a certain commission for their activities. In the case of credit cooperatives a store keeper has to be appointed.

1.1 Farmers' Associations

i) Distribution through 'Village Heads'

A group of groups of farmers are formed with guidance from the appropriate government department and a group leader designated. In order to establish a guarantee of repayment, the members of the group sign a loan application and loan agreement contract, which is countersigned by the head of the group, the chief of the community and the supplier of the fertilizer. The group leader is responsible for preparing the list of buyers, stocking the fertilizer and repaying the loans (Annex D).

The group leader should be selected according to certain criteria:

- he should be respected by the members of the group and have moral authority;
- he should have a place in good condition on an accessible road in which to store the fertilizer;
- he should be able to read and write at least in the local language;
- he should be acceptable to the administration, but not a member of it;
- he should neither be too young nor too old.

The system of using 'Village Heads' as fertilizer distributors began in 1974, in the province of Kasai Oriental in Zaire, and has been very successful, showing a repayment rate of 97%. The crops involved in the scheme were maize, groundnuts and cotton.
<table>
<thead>
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<th>Distribution channels according to the stage of economic development</th>
<th>Investments needed</th>
<th>Countries where the distribution system operates</th>
</tr>
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<tr>
<td><strong>Channels created</strong></td>
<td><strong>Minimal:</strong></td>
<td>Burundi</td>
</tr>
<tr>
<td>1. Farmers' associations</td>
<td>Village store</td>
<td>Ecuador</td>
</tr>
<tr>
<td>(Village heads, administration of communes, missions of religious orders)</td>
<td></td>
<td>Zaire</td>
</tr>
<tr>
<td>2. Licensed traders/rural stockists</td>
<td>Store and stock</td>
<td>Kenya, Nigeria, Philippines</td>
</tr>
<tr>
<td>3. Agro Service Centre</td>
<td>Store and stock</td>
<td>Indonesia, Peru</td>
</tr>
<tr>
<td>4. Credit cooperatives</td>
<td>Store, stock and storekeeper</td>
<td>Botswana, Lesotho, Turkey</td>
</tr>
<tr>
<td><strong>Channels existing</strong></td>
<td><strong>Considerable:</strong></td>
<td></td>
</tr>
<tr>
<td>1. Marketing and processing enterprises</td>
<td>All from 1) to 4) require full business investment for staff, offices, stores, transport, training and operating capital</td>
<td>Algeria</td>
</tr>
<tr>
<td>a) processing enterprises-millers</td>
<td></td>
<td>Brazil</td>
</tr>
<tr>
<td>b) marketing enterprises</td>
<td></td>
<td>Cameroon</td>
</tr>
<tr>
<td>- private enterprises</td>
<td></td>
<td>Ecuador</td>
</tr>
<tr>
<td>- production cooperatives, service and supply corporations</td>
<td></td>
<td>Kenya</td>
</tr>
<tr>
<td>- farmers' cooperatives</td>
<td></td>
<td>Morocco</td>
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<tr>
<td>2. Credit institutions</td>
<td></td>
<td>Nigeria</td>
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<tr>
<td>3. Irrigation authorities</td>
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<td></td>
<td></td>
<td>Brazil, Ecuador, Morocco</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ecuador</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ethiopia, Syria</td>
</tr>
</tbody>
</table>
The formation of the groups proceeds as follows:

- farmers and agricultural assistants in the community make a list of people suitable to function as chief of a group of farmers;
- the leader of the Fertilizer Programme visits each proposed chief and inspects the possible storage space for fertilizers and makes an estimate of the cost of repairing suitable buildings;
- a meeting is organized with the chiefs of each community to inform them of their responsibilities;
- each chief of a group prepares a list containing the names of the farmers within his group and their fertilizer needs;
- group contracts, with an explanation of the tasks of the chief, are sent to Kinshasa by the leader of the Fertilizer Programme;
- at a second meeting with the chiefs of the groups, in the presence of the chief of the community, the responsibilities of the group leaders are confirmed;
- after consultation with the leader of the Fertilizer Programme, the leaders of the groups are informed that they will receive a commission, usually of 3%, on the fertilizer sales;
- the chiefs of the communities testify that they agree with the choice of the group leaders;
- a detailed list is prepared with the names, addresses, occupations and other useful information on the chiefs of the groups in order to obtain their official appointment by the regional representative of the Government;
- the bank involved is asked to agree to send a representative to the communities in order to receive the credit repayment collected by the chiefs of the groups.

Due to the success obtained with fertilizer distribution on credit through the 'Village Heads' system, the World Bank intends to start in Zaire, with the assistance of FAO, a large Smallholders Maize Project based on this system, covering 47,000 hectares and 130,000 smallholders.

In Burundi the rural development service creates farmers' groups according to commodity, e.g., groups of poultry breeders who cultivate maize for poultry feed. The farmers obtain the fertilizer on credit, against payment in kind through the development service which sells the poultry. They then repay the credit provided when selling the poultry or, in the case of cotton, after the harvest. The distribution system based on farmers' groups is very successful as the repayment rate has been 100%. The groups of farmers have now been institutionalized and are legally approved farmers' associations.

ii) Missions of religious orders

Missions of religious orders may also act in the same way as Village Heads, being responsible for fertilizer distribution and the collection of loan repayment. In 1970 a scheme was set up in Ecuador with the Mission Andina del Ecuador (MAE) and was later entrusted to the Department of Rural Development. The scheme showed good results and in one year was extended from three to six zones, and is continuously expanding to new ones.
iii) **Communities**

If the fertilizer distribution is through communities, it is the community administration which is responsible for its distribution on credit and collection of repayment. In 1975 this form of distribution started in Burundi with cash payment for fertilizer; today the system works with credit in kind.

In 1972/73 there were already five pilot distribution and credit schemes established in Algeria. Here too, the schemes are based on groups of farmers and carried out with administrative assistance from the community administration, the 'Délégation de l'Agriculture et de la Réforme Agraire' of the province and its branch at village level supplying technical advice, whereas the fertilizer is transported and distributed by the 'Société Agricole de Prévoyance', an institution dealing with buying farm produce. The latter also collects the repayments and remits these to the special account of the revolving fund.

iv) **Government or quasi-governmental institutions**

These deal with agricultural export products, such as cotton and coffee. They distribute the fertilizer to specific groups of farmers who sell their product through the institution. The fertilizer is provided on credit in kind against delivery of the crop. Such a credit distribution system, in which a crop lien is incorporated to better ensure repayment, works best with cash crops since the possibility of selling the crop elsewhere is less than with food crops.

This system is used for cotton in Kasai Oriental province in Zaire. The fertilizer is distributed by a state owned, cotton buying institute (Office National des Fibres Textiles) which is also responsible for the collection of the repayments of the loans at the time the crop is delivered. With the help of the FAO Fertilizer Programme, an almost identical system was established by the 'Office des Cultures Industrielles du Burundi' (OCIBU) in Ngozi province for coffee growers.

In the Cameroon, distribution of fertilizers for cash crops such as coffee, cocoa and cotton, is already institutionalized because of the well-organized markets for these crops. Fertilizers for food crops are sold for cash by 'Postes Agricoles'. A distribution system for providing fertilizers on credit for cash crops is being developed in Fertilizer Programme pilot schemes on the basis of group orders.

It has been demonstrated in Tunisia with pilot schemes for potatoes, groundnuts, fruit and wheat, that fertilizer on credit can be handled by an institution buying farm produce, such as the so-called 'Office des Céréales'. This farm produce buying institute supplies credit in kind through the local 'Cooperatives de Services' which are responsible for the collection of the loans and maintaining the revolving funds at 100% of their initial value. The extension services provide the necessary technical assistance and control the application of the recommended fertilizer rates. Repayment of the loans varies between good to excellent.

1.2 **Licensed Traders/Rural Stockists**

In many villages private retailers play a predominant role in the marketing of all kinds of consumer goods. They may also provide fertilizer on credit to farmers.
They often know the credit-worthiness of farmers and are well placed to follow up repayment of loans and are more flexible in providing credit than institutions. No bureaucratic procedures are involved. However, in the majority of cases the resources of private distributors are very limited and their ability to supply their farmer customers with fertilizer on credit depends on their own credit-worthiness as judged by a wholesaler or a commercial bank. Moreover, to compensate for their risks in selling fertilizer on credit using their own funds they are bound to enlarge the profit margin. As a distributor, however, a private retailer fits very well into a fertilizer distribution and credit scheme especially if he does not have to buy the fertilizer on credit. What he does need is a suitable place to store fertilizers, and to be willing to learn how to store them properly, initially for small quantities provided on consignment.

The Kenyan input supply scheme is an offspring of the FAO assisted Fertilizer Programme in Kenya carried out from 1970 to 1973. The problem was that existing stockists and cooperatives lacked operating capital and therefore could not hold stocks sufficient to meet farmers’ requirements. However, they were willing to pass on credit to farmers. The Kenya Commercial Bank, aware of the success of FAO’s pilot fertilizer distribution and credit schemes, was prepared to finance a number of stockists on a pilot basis with the result that, in 1974, 20 districts were already participating in the scheme.

At the start of a scheme District Crops Officers, in cooperation with the FAO expert, compile lists of stockists in selected districts. The Branch Manager of the Bank scrutinizes the list according to the bank’s rules for credit-worthiness and about one-third or one-half of these originally selected qualify. The District Crops Officers circulate the list of qualified stockists to the main fertilizer suppliers. The stockists responsible for recovering the loans, are free to choose their own suppliers and get very close technical guidance and advice from District Crops Officers as well as from FAO experts. They supply the credit in kind to their customers. The usefulness of this distribution channel is clearly demonstrated by the fact that private distributors in Kenya handle over 60% of the credit for fertilizer sales. In the majority of cases they also buy farm products, thus securing repayment. This distribution system has proved very successful.

1.3 Agro-Service Centres

An Agro-Service Centre is a village-level nucleus providing all that small-scale farmers need to increase their production, such as inputs, technical assistance and credit, and it aims at mass adoption of new agricultural techniques in food production.

In order to be self-sufficient in food production, the Republic of Indonesia started programmes for this purpose under BIMAS, a mass agricultural extension programme, and INMAS, a mass intensification programme. Both programmes provided farmers with subsidized fertilizer and other agricultural inputs, but only under the BIMAS schemes could farmers obtain credit for agricultural inputs, subsidized fertilizer and a living allowance in selected areas. The major emphasis was on irrigated rice. In the framework of the BIMAS programme, for which the Bank Rakjat Indonesia was the agent for the supply of credit to small-scale producers, village units, consisting of four to seven villages, were established for the distribution of BIMAS production loans. The unsatisfactory performance of the credit programme, in terms of the productive use of loans and their recovery, led to trying a new approach with the assistance of FAO in a pilot scheme in the province of Jogjakarta in 1969.

\(^1\) In the last few years most of the increased fertilizer sales have gone to the small-scale farming areas.
The pilot scheme's objectives, amongst others, were to establish a direct and permanent relationship between the credit supplier and agricultural producers; to reach a much larger number of farmers; to make credit more flexible and better adjusted to real needs; to reduce the cost of credit and to involve farmers' associations in the credit procedures; to improve the distribution of inputs by involving the private sector; and to improve the storage, processing and marketing of farm produce.

In a village within a unit of villages, an office of the agricultural bank of Indonesia was set up, while the government fertilizer distribution agency (P.T. Pertani) and a number of private traders established one retail outlet for inputs for every two villages. In addition the Ministry of Agriculture provided one extension agent to each unit. Initially, each participating village was visited once a week to establish close contacts with participants in the scheme. The performance of the scheme was extremely successful. After one year it was extended to other areas and a year later, marketing loans for storage and processing were introduced.

Fertilizer distribution in Peru is a state monopoly entrusted to the National Enterprise for Commerce of Inputs (ENCI). Until 1976, the network of distribution sales points consisted of only 41 fertilizer stores of which 32 were located in the coastal strip and 9 in the Sierra region (Andean Highlands). The main distribution problem in Peru was insufficient storage capacity in the Sierra region. Many farmers were unable to obtain their fertilizers or had to travel long distances (200-300 km) over very poor roads to buy a few bags and then transport them home, generally using public bus services. In order to improve fertilizer distribution, a national fertilizer distribution system was designed by FAO and ENCI which envisaged the appointment of 186 sales agents, improvement of the storage capacity of ENCI and a more realistic pricing policy. In 1976/77, in order to help the government speed up the implementation of this system, 14 distribution and credit schemes were established in the Production Agencies (villages) in the Sierra region and each agency was provided with an initial stock of fertilizer through the FAO Fertilizer Programme.

Each scheme involves 15-20 participants and they are grouped into Production Cooperatives. A detailed plan is worked out with local leaders which includes the provision of fertilizers and other inputs, technical assistance, and facilities for marketing of crops. The schemes became part of the National Distribution System which forwarded many requests to FAO for increased fertilizer allocations to spread the pilot areas throughout the country. As a result of the schemes and the cooperation with ENCI, fertilizers are now available in the Sierra region when and where needed by the farmers, at reasonable prices which are equalized at all ENCI deposits and private licensed dealer's outlets, by subsidizing the transport costs.

1.4 Credit Cooperatives

In 1967, as a result of the successful FAO-sponsored "credit in kind" fertilizer schemes, the credit cooperative section of the Agricultural Bank of Turkey decided, in agreement with the government, to enlarge greatly the Pilot Scheme Programme. The schemes were based on group ordering and mutual guarantee. Farmers participating in the pilot schemes were selected not only by the village community, but also by reliable officers from the agricultural credit cooperatives and the extension service. In these schemes FAO was responsible, in cooperation with the Ministry of Agriculture, for the necessary training and services and the overall organization for fertilizer demonstrations, field days, supervision of fertilizer application, and with the credit cooperatives, for the selection of the farmers, supervision of group guarantee signing, provision of credit, purchase and distribution of fertilizers and recouping of loans. The fertilizers were distributed by the state supply organization. On this basis 40 schemes were carried out in 17 provinces. Farmer members of credit cooperatives repay loans in cash after selling their crops. No interest is paid except for a nominal fee for administrative costs.
2. FERTILIZER DISTRIBUTION CHANNELS FOR ADVANCED STAGES OF ECONOMIC DEVELOPMENT

Experience gained in more economically advanced countries indicates that fertilizers can successfully be distributed on credit to small farmers through several institutions which, however, require greater investment and infrastructure which includes administrative staff, office buildings, warehouses, means of transport and provision for distribution costs. Sometimes, a number of services are offered as a package because the advantages of integrating fertilizer distribution with crop marketing and linking them to credit are recognized; extension forms part of this package. In many cases, however, not all these items are well covered and the actual service is poor. Moreover, credit procedures are often too complicated and lengthy to be of value to small-scale farmers.

2.1 Marketing and Processing Enterprises

These types of enterprises deal with specialized crops such as sugar, tobacco, oil seeds, fruit and vegetable marketing and processing. They expect to buy farmers' produce of a certain standard quality and, in the case of sugar and fruits, on a delivery schedule which fits into their processing or transport system. To achieve such a purpose, they are prepared to deal with crop-linked fertilizer credit and distribution operations and to supply related services. However, credit supplied for a specified crop has the drawback that such a system fails to support agricultural development as a whole in areas with diversified crops.

2.1.1 Processing enterprises

If millers are active in a country they should be considered as a potential source of credit. As a result of the successful operation of the FAO Fertilizer Programme in the Philippines, which started in 1972, pilot fertilizer distribution schemes on credit were established in rice, maize and sorghum growing areas, where fertilizer distribution channels were relatively weak or non-existent. The schemes were aimed at a timely and adequate provision of recommended fertilizers to small-scale farmers, orderly marketing of crops and involvement of the private sector, specifically rice millers, in the distribution system. The schemes were based on a close working relationship between the FAO Fertilizer Programme, the Philippine Government represented by the National Food and Agriculture Council (NFAC), and the private sector represented by a marketing agent responsible for the distribution of fertilizers. The fertilizers are purchased from local dealers who deliver the fertilizers to the warehouses of registered millers who are marketing agents of the National Grains Authority (NGA).

The following procedures are involved in the schemes:

i) the marketing agent selected by the Fertilizer Programme is required to deposit a payment bond or an amount on time-deposit in favour of the Programme, equivalent to the cost of the fertilizers delivered, to cover any losses that might be incurred during the operation of the scheme;

ii) the Fertilizer Programme provides the marketing agents with the fertilizer at an ex-warehouse price as an initial seed capital (Annex C);

iii) in consultation with the production technician, the marketing agent selects only non-Masagana farmers who have no access to credit;¹

¹ Masagana - a rice production scheme which includes provision of credit for fertilizers.
iv) the fertilizer loan is secured by a promissory note (Annexes D and E) and repayment by the farmer, in produce, is based on the current produce price, but not below the officially set floor-price;

v) the marketing agent charges farmers for fertilizer obtained strictly in accordance with the listed fertilizer price authorized by the central government Fertilizer and Pesticides Industry Authority (FPIA) in the district, plus interest at the rate of 1% per month;

vi) the marketing agents collect repayments and deposit the proceeds of fertilizer sales within a month of the end of the cropping season based on ex-warehouse prices plus 1% interest per month accrued from the farmer, in the special account of the Programme at the local branch of the National Bank. The amount deposited becomes the fertilizer Revolving Fund of the scheme;

vii) for the succeeding cropping season, the marketing agent in coordination with the production technician assesses and evaluates the fertilizer requirements of the farmers and informs NFAC through its Programme Officer (Annex F);

viii) NFAC requests permission from FPIA to purchase the required fertilizer at the ex-warehouse price (Annex G);

ix) upon arrival, the Programme authorizes the Provincial Programme Officer to withdraw the necessary funds from its account at a local branch of the Philippine National Bank (Annexes H and I).

The schemes have been very successful so far, as regards a significant increase in fertilizer use and demand, fertilizer distribution and farmers' incomes, as well as in the repayment rate. Their procedures are expected to be more widely adopted for marketing and distribution arrangements for both agricultural inputs and produce in the Philippines.

In 1978, they were adopted by the fertilizer manufacturing firm, Planters Products, which serves about 70% of the fertilizer market in the Philippines. Initially about US $27 million was set aside to provide loans for rice farmers for fertilizers and pesticides with cash repayment after harvest against a "trust agreement" assigning an equivalent portion of the farmer's rice harvest as payment of his loan. The provision of fertilizers and pesticides and loan repayment is through the firm's dealers, most of whom are accredited NGA buyers. Delivery of the borrowers' grain is to NGA bonded warehouses which may or may not be owned by the dealer. The loans are for a period of six months at 12% per annum, plus a service charge of 2% which is waived if the loan is repaid on time. If payment is delayed, the dealer may recover the loan by selling the required amount of the farmers' stored grain at the prevailing price to the NGA. The dealer may, however, provide additional credit and extend the loan repayment period for the outstanding loan if he is satisfied that repayment was not made because of natural causes. Experience has shown that the repayment rate of loans is good and usually in time.

2.1.2 Marketing enterprises

In developing countries there exists a spectrum of marketing enterprises: private, cooperative, or government-owned, which may be considered as potential sources of credit to farmers with which to buy fertilizer. What they have in common is their buying and marketing of farm produce and that any credit they supply can be crop-linked.
The financial resources of many of these enterprises are frequently insufficient to provide loans for the acquisition of fertilizers by small-scale farmers. However, once provided with fertilizer on credit by a Pilot Scheme, they are able to carry out and continue fertilizer distribution on credit, backed by a Revolving Fund.

2.1.3 Private marketing enterprises

In 1969 the FAO Fertilizer Programme started its activities in two States in Central Brazil and extended them to the North Eastern States in 1972. In the greater part of these states fertilizers were unknown or their use was very limited, with only 5% of the total fertilizers being used on food crops. After the Fertilizer Programme activities had created a demand, it was not possible to interest or motivate the existing fertilizer distributors to serve farmers in these remote and vast areas.

For this reason the Ministry of Agriculture asked COBAL (a company engaged in buying and distributing farmers' produce in these areas) to look into the problem. Aware of the excellent results obtained with pilot distribution schemes in Central Brazil, COBAL was prepared to cooperate with EMBRATER and FAO in the distribution of fertilizers on credit in the following way.

Fertilizer application rates are established by crop and region by FAO/EMBRATER and this information is conveyed to the State Coordinator of the Fertilizer Programme who supplies it to the extension field officers. The extension officers prepare credit plans and estimate the area to be fertilized. They also prepare lists of scheme participants, the crops and areas to be fertilized by each after the credit plans have been approved and then inform the COBAL agent through the State Coordinator. The formulae, types and quantities of fertilizers needed and participating municipalities are then determined by the Coordinator and the COBAL agent. The latter confirms the fertilizer farmgate prices and with the extension officer arranges a meeting with the farmers to confirm the individual orders which the agent sends to the relevant COBAL branch. The branch buys the fertilizers requested on two months' credit and, after advising the COBAL agent, transports the fertilizers to the municipalities. The COBAL agent informs the extension officer of the day the fertilizers are to arrive, and he in turn informs the farmers who come to receive the fertilizers. They sign the receipts upon which the COBAL agent receives the corresponding amount of credit from the local bank to pay the fertilizer wholesaler. EMBRATER is responsible for collecting loan repayments after harvest, and since farmers are totally dependent on EMBRATER for loans and all other forms of assistance, there is no problem with loan repayments. In this system COBAL performs the function of a retailer, and in doing so has had a favourable effect on farmgate fertilizer prices offered by other fertilizer distributors.

2.1.4 Farmers' cooperatives

In Kenya most districts have a cooperative union with affiliated societies and farmers producing cash crops are usually members of a society. Their main activity is the collection and marketing of produce. The unions usually order inputs for the societies who sell them for cash crops or on crop lien credit terms to their members. An FAO Pilot Fertilizer Distribution and Credit Scheme was established for a coffee and maize growers society.

\footnote{Empresa Brazilira de Assistencia Technica e Extensao Rural - Brazilian Institute for Technical Assistance and Rural Extension.}
The cooperatives provided the necessary credit, based on a fertilizer donation for the 2,000/3,000 farmers involved, while FAO and the extension service supplied the technical assistance and control.

The present structure of fertilizer distribution in Nigeria consists of two different sectors: Government, which imports fertilizer as specified by State tenders, and is responsible for storing and distributing it to districts or village stores, and to village wholesale agents at subsidized prices; and private enterprises or cooperatives. Under the former, authorized village commission agents receive supplies by government transport which they are committed to sell at government fixed prices.

In Kano State one of the main problems was that farmers could not get fertilizer at the right time and in sufficient quantities. Moreover, farmers' access to credit was very limited. In order to try to find a solution to these problems in 1974 the FAO/NORAD Fertilizer Programme, on the basis of a fertilizer donation, started to distribute fertilizer on credit through cooperatives whose financial resources were too limited to start fertilizer distribution. Today the State Fertilizer Committee, established in 1976, is responsible for the programme. The FAO and extension service supply the necessary technical assistance and supervision as usual. The cooperatives collect repayments and pay them into the revolving fund account in the Cooperative Bank in Kano after deduction of a certain commission. The repayment of the loans has been very satisfactory. In the meantime the government has increased its support in terms of credit to farmers and has provided high rates of subsidy which have improved the value/cost ratio substantially and the enthusiasm of farmers for fertilizer. It is clear that a good value/cost ratio is a basic condition for effective fertilizer use promotion.

2.2 Credit Institutions Organizing Fertilizer Sales on Credit

Sometimes credit institutes are prepared to use their funds for lending to small-scale farmers. Commercial banks are frequently very reluctant to do so, considering this business too risky and troublesome. However, in several countries public banks are engaged in fertilizer distribution.

In Morocco fertilizer sales on credit are very important, as it is estimated that 90% of the farmers cannot afford to pay cash. In 1966 farmers were motivated by the results of the Fertilizer Programme to use fertilizer. The National Agricultural Credit Fund (CNCA) was looking for a solution to the problem of local agricultural credit distribution on the mutual society principles. At the suggestion of FAO, pilot credit schemes based on the establishment of mutual cereal growers' groups were carried out in close cooperation with CNCA and the Development Directorate (DMV). The schemes were established according to the following general rules:

a) CNCA does all the planning in close cooperation with the extension service;

b) CNCA's provincial offices and the extension officer of the Fertilizer Programme indicate the fertilizer treatment and rate to be used, time and method of application and arrange the supply of improved seeds;

c) the regional agricultural credit fund controls the financial aspects of the operation;

d) the CNCA loans to producers' groups must bear the normal rate of interest of 6% per year for short-term loans;
e) Each group of farmers must adopt its own rules of procedure and elect a chairman, deputy chairman and treasurer;

f) Farmers agree to accept joint responsibilities for each other and to this end each farmer has to deposit security in the amount of 10% of the loan granted. This security remains frozen with the CNCA until the whole of the loan granted to the group is repaid;

g) For the first year the loan must include enough fertilizer and seed for 2 ha per member. For subsequent years the ceiling was increased to 4 ha. The pilot fertilizer distribution and credit schemes have been highly successful. The immense interest initially aroused by the groups gradually dwindled due to additional support by the government to wheat growers through the "Operation Fertilizer" scheme, including fertilizers provided on an interest-free loan for one crop year by the Ministry of Agriculture, and secondly, because the national agricultural credit fund started to provide loans to individual growers without having to provide a security deposit.

The Banco Nacional de Fomento (National Development Bank) of Ecuador has had in operation for several years a controlled farm credit programme which includes the financing of fertilizer purchases. Credit from national sources granted at an annual rate of 8% could be obtained by land-owning farmers only. The system did not satisfy the farmers as the loans became available too late and coordination and cooperation among fertilizer distributors, the bank and extension services were unsatisfactory.

FAO assistance was requested to establish a pilot scheme for fertilizers covering distribution, marketing and credit. The National Federation of Savings and Credit Cooperatives (FECOAC) was appointed as the state agency for the implementation of the scheme. The technical assistance was supplied by FAO and the extension service. The cooperatives purchased the fertilizers from firms in the private sector, distributed them to the farmers and collected the repayments. The scheme started with an initial donation of 20 tons of fertilizer from FAO with only one cooperative involved and the success was clearly demonstrated by the fact that after six years 29 cooperatives were working with FAO donations for their Revolving Funds. The terms were six months' credit, at 1% per month. The repayment rate was about 90%. Pilot Schemes of supervised credit are now working not only with fertilizer, but also with other farm inputs. In addition, the Credit Institute started to plan a demonstration programme, under which each cooperative lays out demonstrations using fertilizer and related inputs.

The Pilot Schemes established in Minas Gerais in Brazil had the additional purpose of educating farmers in the use of credit systems existing in the country. It adopted a form of "supervised credit" in which fertilizers supplied on credit were used on crops that were economically the most important in the areas, and in conformity with the quantities and methods of application recommended by the experts who directly supervised these schemes. The coordination committee for the Pilot Schemes was established by the Ministry of Agriculture with representatives from FAO, the Executive Group of Vegetal Production, Ministry of Agriculture, and the extension service. The committee determined the areas where the Pilot Schemes would operate, the total hectares per farmer per crop, the crops to include in the schemes, the farm-gate prices for the fertilizers and when the fertilizers were to be distributed and stored.

The credit in kind was supplied through the extension service, which has a very strong position in Brazil as farmers are dependent on the consent of this service for each kind of assistance they need, loans, seeds, etc. The repayments were as usual deposited in a special account.
2.3 **Irrigation Authorities**

In Peru, irrigation authorities also became involved in the distribution of fertilizer. In irrigated areas, because agriculture depends totally on the supply of sufficient water to the crops, the irrigation authorities are very powerful and are able to exert great pressure on the farmers.

The Ecuadorian Institute of Hydraulic Resources (INERHI) has been involved in FAO Pilot Fertilizer Distribution and Credit Schemes in three zones which are based on an initial donation of fertilizer and a revolving fund.

2.4 **Agricultural Development Banks**

In several developing countries in Africa and Asia, agricultural banks are a main source of credit for the acquisition of farm inputs but only in a few cases are they direct distributors of fertilizers. For example, the Tanzania Rural Development Bank distributes fertilizer to relatively large cooperatives; in Syria the Agricultural Cooperatives Bank handles all fertilizer supplies and also all agricultural credit; whereas in Ethiopia the Agricultural and Industrial Development Bank is responsible for the procurement, distribution and sale of agricultural inputs to small-scale farmers.

The FAO Fertilizer Programme was introduced in Syria in late 1961 and phased out in 1968, but the government allotted sufficient funds to ensure the continuity both of the Programme and of Pilot Fertilizer and Credit Schemes with the same policy up to 1970. After 1970 the multiplot demonstrations were discontinued but the system of fertilizer distribution on credit was institutionalized.

Five years of successful pioneer work of the Ethiopian Ministry of Agriculture assisted by the FAO/Danida Fertilizer Demonstration and Pilot Credit Scheme and bilateral projects resulted in 1971 in a concentration of development efforts through the creation of a nation-wide extension programme. The Agricultural and Industry Development Bank (AIDB), primarily responsible for financing the procurement, distribution and marketing of fertilizer and related inputs and short-term credit schemes, in 1972 established a subsidiary known as the Agricultural Inputs and Marketing Service (AIMS) to act as its agent. AIMS became responsible for the import of fertilizers and other agricultural inputs, their provision to small and commercial farmers, government agricultural organizations, agricultural cooperatives, and package projects on credit, and for the marketing and warehousing facilities for grains.

As AIMS did not have a distribution network, an agreement was reached with the Extension and Project Implementation Department and with other distributing agencies to serve as AIMS' representatives for the marketing of fertilizer and other inputs to peasant farmers and in the supply and collection of production credit. The distribution of fertilizers on credit to small farmers by these agencies was developed by means of FAO pilot schemes. The system of fertilizer distribution on credit developed is now fully incorporated and institutionalized in Ethiopia.
IV. COSTS AND BENEFITS OF FAO PILOT DEMONSTRATION
AND CREDIT SCHEMES

It is recognized in the countries where FAO has a Pilot Fertilizer Distribution and Credit Scheme that the farmer participants increase the quantity and value of their crop production per hectare. However, there are still doubts expressed in some quarters that such an increase is not sufficient to justify the expansion of the Scheme. They argue that any credit programme is costly; and in a successful programme, the value of the benefits must exceed the costs. While benefits are mainly the increases in crop production attributable to the scheme, the costs include not only the fixed capital and the operating costs, but also the opportunity costs on the funds invested. Unfortunately the latter cost varies considerably between countries and would require a much more detailed study to determine the cost of alternative use of funds which goes beyond the scope of this paper.

In analysing FAO’s Pilot Fertilizer Distribution and Credit Schemes, it is advisable to examine the likely contribution of the programme to the development of the national economy as a whole, not only their direct costs and benefits, since it is the balance on the social accounts which serves as the ultimate guide to government policy. Economists often refer to this type of appraisal as economic analysis.

When undertaking an economic analysis of the Pilot Schemes, the discount flow method was employed, with the ultimate purpose of determining the internal rate of return on investment, which would give a benefit-cost ratio of one. By using discounted cash flow, the true rate of return on investment can be obtained, because it is possible to know the present worth (or present value) of future earnings. The World Bank uses this type of analysis in determining the economic feasibility of projects.

A discounted cash flow analysis was performed to determine the economic internal rate of return of two of the FAO Fertilizer Programme’s Fertilizer Distribution and Credit Schemes: one in the Philippines and the other in Nigeria. They have been operating for the past six years and a fair amount of reliable cash flow information for both the annual costs and benefits was available.

Example 1: Philippines

In 1973, a pilot scheme was established in Cotabato, Philippines, to satisfy the increasing demand for fertilizer brought about by the success of FAO Fertilizer Programme demonstrations on fertilizer use. The Scheme utilized the existing facilities of a National Grain Authority registered rice and maize miller. From an initial 25 t of fertilizers distributed during the first year, the scheme expanded its operation to reach a peak of 814 t fertilizer distributed in 1976. An examination of the economic return on investment for the six years that the scheme has been in operation, using a discounted cash flow analysis, indicates that the internal rate of return is about 35% (Table 2).

Since the scheme made use of the already existing facilities of the rice and maize miller, the fixed capital component of the costs was reckoned as the share of the schemes in the costs of the facilities which were also used for other purposes. The full component of the operating cost (fertilizer) was recorded during the first three years and the final value of the fertilizer stock at the end of the sixth year, including the value of the revolving fund, was reflected in the salvage value. The operating costs included those for labour and management and other administrative
Table 2

<table>
<thead>
<tr>
<th>Year</th>
<th>Costs 1/</th>
<th>Total</th>
<th>Incremental Benefit 2/</th>
<th>Net Cash Flow</th>
<th>Present Worth Factor 30%</th>
<th>Present Worth 30%</th>
<th>Present Worth Factor 35%</th>
<th>Present Worth 35%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1973</td>
<td>2349</td>
<td>16</td>
<td>2365</td>
<td>120</td>
<td>-2245</td>
<td>.769</td>
<td>-1726</td>
<td>.741</td>
</tr>
<tr>
<td>1974</td>
<td>0</td>
<td>242</td>
<td>242</td>
<td>190</td>
<td>-52</td>
<td>.592</td>
<td>-31</td>
<td>.549</td>
</tr>
<tr>
<td>1975</td>
<td>0</td>
<td>1046</td>
<td>1046</td>
<td>886</td>
<td>-160</td>
<td>.455</td>
<td>-73</td>
<td>.506</td>
</tr>
<tr>
<td>1976</td>
<td>0</td>
<td>529</td>
<td>529</td>
<td>2963</td>
<td>+2434</td>
<td>.350</td>
<td>+852</td>
<td>.301</td>
</tr>
<tr>
<td>1977</td>
<td>0</td>
<td>455</td>
<td>455</td>
<td>2521</td>
<td>+2066</td>
<td>.269</td>
<td>+556</td>
<td>.223</td>
</tr>
<tr>
<td>1978</td>
<td>0</td>
<td>438</td>
<td>438</td>
<td>2430</td>
<td>+1992</td>
<td>.207</td>
<td>+412</td>
<td>.165</td>
</tr>
</tbody>
</table>

Internal rate of return = 30 + 5 \( \frac{256}{278} \) = 30 + 4.6 = 35%

Benefit-cost ratio at 35% discount rate = 1

1/ Fixed capital is the estimated cost share of the Scheme on the existing facilities used also for activities other than those for the Scheme. Operating costs for 1974 and 1975 include cost of fertilizer at $216/t.

2/ Based on yield response of 8 units of crop per unit of plant nutrient and rice price of $150/t.

3/ Salvage value of fixed capital.

4/ Salvage value of fertilizer stock, including revolving fund by 1978.
costs. The benefits reflected an average yield response of eight metric tons of paddy for every metric ton of plant nutrient distributed, at a crop price of $150/t.

It should be noted that a 35% internal rate of return was obtained in spite of using in the analysis what seems to be over-valued fixed capital costs and under-estimated yield response to fertilizer. The estimated fixed capital share of the scheme, which is equivalent to $276/t of the annual throughput is on the high side. In many places in Cotabato, yield response of ten is quite common. By keeping this in mind, one would appreciate that a 35% internal rate of return is a conservative estimate; the true rate could easily be more than this if these adjustments are made in the fixed capital cost figures and benefits.

Example 2: Nigeria

The pilot scheme in Kano, Nigeria, was established in 1973. Like the one in the Philippines, the scheme made use of the existing facilities for fixed capital. The operation of the scheme involves an annual throughput of 500 t of fertilizer.

A discounted cash flow analysis of its first six years of operation revealed that the scheme realized an internal rate of return of 37% (Table 3). While at this rate of return, the scheme can be considered as a viable and economically sound project, a higher rate of return could have been possible had the analysis been on the basis of higher value crops such as groundnuts, which give a higher net return per unit of plant nutrient.

The Philippines and Nigerian experiences were just two of several FAO Fertilizer Programme schemes which have shown promise of success in terms not only of increasing the small farmers' crop production and income, but also in contributing to the developing countries' social benefits.
### Table 3

**Discounted Cash Flow of Fertilizer Programme Distribution and Credit Scheme in Kano, Nigeria (Throughput of 500 t/year) Indicating a 37% Internal Rate of Return in Hundred $US**

<table>
<thead>
<tr>
<th>Year</th>
<th>Fixed Capital</th>
<th>Operating Costs</th>
<th>Total</th>
<th>Incremental Benefit</th>
<th>Net Cash Flow</th>
<th>Present Worth Factor 35%</th>
<th>Present Worth 35%</th>
<th>Present Worth Factor 40%</th>
<th>Present Worth 40%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1973</td>
<td>2 400</td>
<td>0</td>
<td>2 400</td>
<td>0</td>
<td>-2 400</td>
<td>.741</td>
<td>-1 778</td>
<td>.714</td>
<td>-1 714</td>
</tr>
<tr>
<td>1974</td>
<td>0</td>
<td>806</td>
<td>806</td>
<td>1 258</td>
<td>+ 452</td>
<td>.549</td>
<td>+ 248</td>
<td>.510</td>
<td>+ 231</td>
</tr>
<tr>
<td>1975</td>
<td>0</td>
<td>786</td>
<td>786</td>
<td>1 268</td>
<td>+ 472</td>
<td>.406</td>
<td>+ 192</td>
<td>.364</td>
<td>+ 172</td>
</tr>
<tr>
<td>1976</td>
<td>0</td>
<td>121</td>
<td>121</td>
<td>1 943</td>
<td>+ 1 822</td>
<td>.301</td>
<td>+ 548</td>
<td>.260</td>
<td>+ 474</td>
</tr>
<tr>
<td>1977</td>
<td>0</td>
<td>121</td>
<td>121</td>
<td>1 943</td>
<td>+ 1 822</td>
<td>.223</td>
<td>+ 406</td>
<td>.186</td>
<td>+ 339</td>
</tr>
<tr>
<td>1978</td>
<td>0</td>
<td>121</td>
<td>121</td>
<td>1 943</td>
<td>+ 1 822</td>
<td>.165</td>
<td>+ 301</td>
<td>.133</td>
<td>+ 242</td>
</tr>
</tbody>
</table>

\[
\text{Internal rate of return} = 35 + \left( \frac{88}{206} \right) = 35 + 2 = 37% \\
\text{Benefit-cost ratio at 37% discount rate} = 1
\]

\( ^\dagger \) Fixed capital is the estimated cost share of the Scheme on the existing facilities, used also for purposes other than those for the Scheme. Operating costs for 1974 and 1976 include costs of fertilizer at $272/t.

\( ^\ddagger \) Based on yield response of 6 units of crop per unit of plant nutrient and cereal price of $229/t.

\( ^\gamma \) Salvage value of fixed capital.

\( ^\gamma \) Salvage value of fertilizer stock, including revolving fund by 1978.
V. SUMMARY AND CONCLUSIONS

Providing supervised credit for fertilizer to motivated groups of small farmers is an important and direct route to a permanent rise in the income and standard of living of the mass of the rural population, provided there are reliable crop markets and a reasonable relationship between crop and fertilizer prices.

The distribution of fertilizers on credit is hampered by a lack of capital and credit resources of potential distributors/retailers.

To broaden and to accelerate fertilizer use development, financial resources need to be made available to the mass of under-capitalized potential fertilizer distributors/retailers.

A system of fertilizer distribution on credit will be viable only if the farmer, the distributor and the credit supplier are satisfied.

The success of a system of fertilizer distribution on credit is better assured by the effective integration of supervised credit, technical services and agricultural marketing, and by ensuring that the Revolving Fund maintains 100% of its initial buying power.

The stage of economic development of the country and its regions determines the kinds of distribution channels that may be used successfully.

The cost of all Fertilizer Programme pilot fertilizer distribution and credit schemes has been modest in terms of FAO staff and gift fertilizers. Generally, one FAO expert supervises all pilot schemes within a country and the quantity of gift fertilizer provided for a scheme generally ranges from less than one hundred tons to a few hundred tons of material.

The purpose of a pilot scheme is to mobilize public and private services and resources to serve the fertilizer and related input needs of small-scale farmers. The benefits to such farmers, private enterprises and to the government are obviously large. The experience shown by the first six years of operation of pilot schemes in the Philippines and Nigeria, which yielded a 35% and 37% internal rate of return respectively, in a discounted cash flow analysis, are by no means small economic gains. At these rates of return, the international financing agencies should be prepared to undertake the financing of similar schemes in developing countries where distribution and credit are the main constraints to increased fertilizer use.
ANNEX A

EXAMPLES OF SIX FORMS FOR VARIOUS TRANSACTIONS CONCERNING LOANS, AGREEMENTS, CREDIT AND REVOLVING FUND

PROJECT NAME

Form No. 1

LOAN APPLICATION

I ................................................ of .............................................
(full name and address of applicant)

born ¹ .................................. .............................................
(date and place of birth)

presently cultivating .................................. hereby request
(indicate acreage and location of farm)

Farm Input Revolving Fund Credit Committee the following items on credit in kind
and/or cash for the following services to be used on my farm:

<table>
<thead>
<tr>
<th>Item and/or Services</th>
<th>Deadline for delivery ³/</th>
</tr>
</thead>
<tbody>
<tr>
<td>In kind (description)</td>
<td>Quantity</td>
</tr>
<tr>
<td>..................</td>
<td>...........</td>
</tr>
<tr>
<td>..................</td>
<td>...........</td>
</tr>
<tr>
<td>..................</td>
<td>...........</td>
</tr>
</tbody>
</table>

Cash for:

I agree to take delivery of these items if they are available from the supplier/
delivered to me before the dates shown above.

__________________________________________  __________________________________________
Applicant's Signature  Witness

¹/ Date and place of birth requested because in some countries many people have
the same family name.

²/ In some projects a cash down-payment of 10% to 25% of the value of the items is
required to better ensure the acceptance of the items by the farmers at the time
of their delivery and should be included here if such a down-payment is to be
made at the time of the request and subtracted from the amount of credit provided
as shown in the Loan Agreement.

³/ Delivery date is specified because in some projects items have arrived too late
for the farmer to use them yet he has been obliged to take and pay for them.
PROJECT NAME

LOAN AGREEMENT

I .................................................. of ..................................................

(full name and address of recipient)

born ..................................................

(date and place of birth)

presently cultivating ..................................................

(indicate acreage and location of farm)

hereby acknowledge receiving from the Farm Input Revolving Fund and Credit
Committee the following items in kind and/or cash for services */ */ detailed hereunder:

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

on the understanding that I shall pay for the above items over a period of

..................................................

(insert number of months or years)

I therefore undertake to effect cash (or kind)

payments of this amount plus (one) per cent per month interest, on the outstanding

balance in accordance with the following schedule ..................................................

(insert the method of payment, e.g. the whole amount within 8 months, or .............

................................................ per month due at the last day of each month, for .............

................................................ consecutive months, or at different intervals) .............

into the following bank account ..................................................

(title of account, ref. number, address of bank)


Signature of farmer .......................................................... Witness ..........................................................

Date: ..........................................................

*/ It may be desirable to disburse the loan (kind and/or cash) over a period of months
in keeping with the production programme of the farm. If so, the model form No. 4
"Advances Received from the Farm Input Revolving Fund" could be attached as an
annex to this Loan Agreement.

*/ If the credit is disbursed through a farmer association or a cooperative, the
following statement should be added and signed:
We, the Chairman and the Treasurer respectively of the .................
(insert full name and address of the farmers' association or cooperative concerned)

have witnessed ......................... signature to the above
(insert name of farmer)

form. We undertake to report to the Farm Input Revolving Fund and Credit Committee at the end of ......................... on the status
(indicate loan repayment dates as above)

of repayments and to deposit the money collected to the Farm Input Revolving Fund and Credit Committee within five days from repayment.

Signed:  
Chairman of Organization/Association  Treasurer of Organization/Association

Date: __________________________
PROJECT NAME

PURCHASE OF LIVESTOCK ON CREDIT

AGREEMENT AND RECEIPT

I .................................................. of ..................................................
(full name and address of recipient)

born ..................................................
(date and place of birth)

presently cultivating ..................................
(indicate acreage and location of farm or village)

..............................................
(or pasture)

hereby acknowledge receiving on credit from the Farm Input Revolving Fund and Credit Committee the following livestock and material:

.................................. head of .................................. Value ...........
(cattle, pig, sheep, poultry)

Wire for fencing .................................. Value ...........

Other materials .................................. Value ...........

I do hereby agree to the following terms:

1. On receipt of the .................................................. to pay to the Farm Input Revolving Fund and Credit Committee the sum of ........... which is not less than 10% of the total purchase price of cattle and other material supplied by the Committee.

2. After ..................................................
(specify length of time, as decided by the Project Manager/Credit Committee)

.................................. I will sell the ..................................
(produce or livestock)

and pay the Committee the balance of the purchase price of the ..................................

3. I agree to care for the ..................................................
(in the manner specified by the Committee.)
4. Before receiving the ......................... I agree to construct a night pasture of a size of not less than ......................... per animal (acres/ha) plus holding paddock and squeeze or appropriate housing, etc., as specified by the Committee.

5. If a ......................... appears to be sick or injured, it is my responsibility to notify the Committee representative Mr. ......................... or the District Veterinarian at the earliest possible opportunity.

6. If a ......................... is lost, strayed, or stolen or is in any way unaccounted for, I will be completely responsible.

7. I also acknowledge and agree that if any of these terms are not complied with according to the considered opinion of the Committee, the ......................... will immediately be collected and removed from the farm and either issued to another farmer or sold and any profit accruing from this transaction will belong to the Committee for inclusion in the Farm Input Revolving Fund.

________________________________________
Signature of Farmer

________________________________________
Date
## PROJECT NAME

**ADVANCES RECEIVED FROM REVOLVING FUND IN RESPECT OF:**

<table>
<thead>
<tr>
<th>Name of farmer</th>
<th>Date of birth</th>
<th>Location of farm</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>1. Land preparation</th>
<th>Acres</th>
<th>Rate per acre</th>
<th>Amount received</th>
<th>Signature</th>
<th>Date received</th>
<th>Interest at 1% per month</th>
</tr>
</thead>
<tbody>
<tr>
<td>Down-payment for land preparation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Balance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total ...... hrs tractor work at $ ...... per hr</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| 2. Seed and fertilizers | | |
|-------------------------|--|--|--|--|--|--|
| Seed                    |       |               |                 |           |               |                          |
| Fertilizers             |       |               |                 |           |               |                          |

| 3. Transport and labour charges | | |
|-------------------------------|--|--|--|--|--|--|
| 1st instalment                |       |               |                 |           |               |                          |
| 2nd instalment                |       |               |                 |           |               |                          |
|                                |       |               |                 |           |               |                          |

| 4. Insecticides | | |
|------------------|-------|---------------|-----------------|-----------|---------------|--------------------------|
|                  |       |               |                 |           |               |                          |

| 5. Harvesting      | | |
|---------------------|-------|---------------|-----------------|-----------|---------------|--------------------------|
|                     |       |               |                 |           |               |                          |

| 6. Interest as calculated | | |
|---------------------------|--|--|--|--|--|--|
| Equivalent in bags at ...... bags |       |               |                 |           |               |                          |

<p>| 7. Marketing charges at ...... per bag | | |
|----------------------------------------|--|--|--|--|--|--|
| Total due to Farm Input Revolving Fund |       |               |                 |           |               |                          |
| Less - Deposit paid                    |       |               |                 |           |               |                          |
| Net Amount Due                         |       |               |                 |           |               |                          |</p>
<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Postage and bank charges</td>
<td></td>
</tr>
<tr>
<td>Stationery expenses</td>
<td></td>
</tr>
<tr>
<td>Other miscellaneous expenses</td>
<td></td>
</tr>
<tr>
<td>Loans which are likely to be written off by the Committee</td>
<td></td>
</tr>
<tr>
<td>(details of amounts and justification for write-off attached)</td>
<td></td>
</tr>
<tr>
<td>NB: Writing-off not recommendable during the lifetime of the</td>
<td></td>
</tr>
<tr>
<td>project</td>
<td></td>
</tr>
<tr>
<td>Stocks written off (details attached)</td>
<td></td>
</tr>
<tr>
<td>Surplus/(Deficit) to date</td>
<td></td>
</tr>
<tr>
<td>Interest on Bank deposits</td>
<td></td>
</tr>
<tr>
<td>Interest on loans to farmers:</td>
<td></td>
</tr>
<tr>
<td>Received to date</td>
<td></td>
</tr>
<tr>
<td>Accrued at</td>
<td></td>
</tr>
<tr>
<td>Marketing charges received</td>
<td></td>
</tr>
<tr>
<td>Other miscellaneous income</td>
<td></td>
</tr>
</tbody>
</table>

\[1\] This form is prepared by the Revolving Fund Input and Credit Committee and three copies sent by the Project Manager to FAO Headquarters, Country Project Officer, every six months.
**PROJECT_NAME**

**REVOLVING FUND BALANCE SHEET AT ............... ½**

<table>
<thead>
<tr>
<th>Assets</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance at Bank-Current account</td>
<td></td>
</tr>
<tr>
<td>Deposit account</td>
<td></td>
</tr>
<tr>
<td>Loans to farmers ½</td>
<td></td>
</tr>
<tr>
<td>Accrued interest on loans to farmers</td>
<td></td>
</tr>
<tr>
<td>Amounts receivable in respect of proceeds of sale of farmers' produce</td>
<td></td>
</tr>
<tr>
<td>Stock of bags, fertilizers, seeds, and pesticides</td>
<td></td>
</tr>
<tr>
<td>Other accounts receivable</td>
<td></td>
</tr>
</tbody>
</table>

---

½ This form is prepared by the Farm Input Revolving Fund and Credit Committee and three copies sent by the Project Manager to FAO Headquarters Country Project Officer every six months, cc: Accounts Section and Agricultural Banking & Credit Group.

[½] A schedule listing those loans which have not been repaid in cash or in kind on the due dates with suitable explanations of the reasons for non-payment should be attached.
EXAMPLE OF SMALLHOLDER MAIZE PROJECT AGREEMENT - ZAIRE

REPUBLIQUE DU ZAIRE
PROGRAMME NATIONAL ENGRAIS FAO

Région du (dia): .......................................................... Collectivité de (dia): ..........................................................
Zone de (dia) : .......................................................... GROUPE de ..........................................................

Contrat nº: ................................................................ Kontala nº: ................................................................

PROJET PILOTE DE DISTRIBUTION D'ENGRAIS A CREDIT
(Tshisumbu tshia diabanya dia manga a bufuka ku mabanza)

CONTRAT D'ENGAGEMENT DE REMBOURSEMENT DES ENGRAIS A LA RECOLTE
(Montala wa bukokeshi bia difuta dia mabanza a bufuka tshikondo tshia dipola, dinowa)

Je soussigné (meme) .................................................. habitant à (musombela ku) ..................................................
................................. né le (mulela mu dia) ................. à (ku) .........................
................................. porteur de la carte d'identité nº (nimela ya mukanda wa mbuku) ...
................................. délivrée à (mufundisha ku) ......................... demande en tant que chef du
................................. groupe de planteurs de la liste ci-jointe à acheter de l'engrais à crédit aux conditions
................................. suivantes; (ndi ndomba bia mundi mfumu wa tshisumbu tshia babidime bena mena adi ku
................................. listito bia kwangata bufuka dibansa biloudishe muchindu udi ulonia eu).

<table>
<thead>
<tr>
<th>Type d'engrais</th>
<th>Prix par 50 kg (mushinga wa 50 kilo)</th>
<th>Date limite de livraison (Ditaku dia ndakelu wa diffila)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Le détail par planteur figure sur la liste jointe et je m'engage à prendre livraison de la
marchandise si elle est disponible aux prix et date ci-dessus. (Dikonkenona dia kaluba
konso kadi katangila tshidime kadi mu lisita, ne ndi ngitala bua kwangata bintu padibio
keko ku mushinga ne ditu difunda). Je m'engage en tant que chef désigné du groupe de
planteurs de la liste ci-jointe les sommes dues par eux et à les verser au compte
bancaire nº (ndi ngangata bujitu bu mundi mfumu wa tshisumbu tshia basumbi ba manga a
bufuka dibanza, musungibwe kudi bena mena adi alonda a, bua kusangisha makuta abu
onso adiba bampesha ne bia-ku ela ku tshibutshilo tshia makuta tshidí ne nimelo) .................
Agence de (mu muaba kampanda eu) ......................... du Projet Pilote de Distribution d'engrais à crédit (mu dina dia Projet Pilote wa
diabanya dia manga a mufuka dibanza), la somme à rembourser est de (bungi bua
mfualanga ya dipingaja idi) ................................. Le versement en
sera fait à la date de (diela dia mu kasheta ne dikala mu matuka) .........................
dernier délai (dituku dia ndakelu)

Visa du chef de Collectivité
(tshiela tshia mulombodi wa Collectivité) ..........................

Signature du Chef de Groupe
(Dina ne tshiala tshia mfumu wa tshisumba) ..........................

fait à (bienza ku) ................................
le (dia) ............................../............................../19
**Zaire**

**Smallholder Maize Project**

*République du Zaire*
*Programme National Engrais FAO*

Liste n°: .......
Mena n°: .......

Région du (dia): ............... Collectivité de (dia): ...............
Zone de (dia): ............... Groupe de (Tshisumba tshia): .............

**Projet Pilote de Distribution d'Engrais à Credit**
*(Tshisumba tshia diabanya dia manga a bufuka ku mabanza)*

**Liste de Planteurs Adherants au Projet Pilote**
*(Mena a ba bidima badi mu tshisumba)*

<table>
<thead>
<tr>
<th>N° d'ordre</th>
<th>Nom et Prénom (dina)</th>
<th>N° Carte d'Identité (no ya mukanda wa tshitadi)</th>
<th>Engrais Achetés (bufuka busumbe)</th>
<th>Signature (tshiela)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Quantité kg (bungi)</td>
<td>à la demande (ku dilemba)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Qualité (buimpe)</td>
<td>de la livraison (difila)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Valeur en Z (mushiga mu Z)</td>
<td></td>
</tr>
</tbody>
</table>

Total à rembourser (bungi bonso bua difuta) ..........................................................

Je soussigné (Meme) ....................... déclare que les planteurs dans la liste ci-dessus ont bien acheté les engrais à crédit (ndi ngamba ne ba bidima bonso bana mena adi kulu aa mbsumba buanga bua bufuka dibanza).

Fait à (bienza ku) ....................... / 19 ............
le (dia) / ............. / 19 ............

Signature du Chef de Groupe
(dina ne tshiela mfumu wa tshisumba)

*Signature du Chef de Collectivité*
*(tshiela tshia mulombodi wa Collectivité)*

*Visa du Chef de Collectivité*
EXAMPLE OF MEMORANDUM OF AGREEMENT - PHILIPPINES

KNOW ALL MEN BY THESE PRESENTS:

This Memorandum-Agreement entered into this ______ day of ____________, at Quezon City, by and between:

The National Food and Agriculture Council (NFAC) represented by Hon. Arturo R. Tanco, Jr., in his capacity as Secretary of Agriculture and Chairman-Coordinator, NFAC with official address at Diliman, Quezon City hereinafter referred to as the "COUNCIL" and -

The ____________, a duly ________________ ________________, with official address at ________________, hereinafter referred to as the "MARKETING AGENT".

WITNESSETH

WHEREAS, Paragraph C, Appendix I, of the Plan of Operation, FAO/NFAC/FFHC Fertilizer Programme in the Philippines provides for the establishment of a pilot fertilizer credit scheme as part of the second phase operation thereof;

WHEREAS, there is an imperative need to establish and operate a fertilizer credit scheme in ________________ as a result of fertilizer trials and demonstrations conducted in said province which has created a firm and steadfast demand of fertilizer by farmers;

WHEREAS, the COUNCIL is intensifying its campaign to increase proper fertilizer application to marketable crops by making available fertilizer to marginal or non-Masagana farmers on easy repayment terms.

NOW THEREFORE, for and in consideration of the above premises the COUNCIL and the MARKETING AGENT hereby agree to establish and operate a pilot fertilizer credit scheme in _____________ subject to the following terms and conditions:

1. That the COUNCIL shall provide the MARKETING AGENT Urea fertilizers as initial seed capital for the establishment and operation of a pilot fertilizer credit scheme in ___________.

2. That the MARKETING AGENT shall post a guarantee payment bond or deposit an amount on time deposit at local PNB in favour of the COUNCIL in an amount equal to the cost of fertilizers plus an interest rate delivered from time to time. The bond shall guarantee and answer for any
losses that might be incurred during the operation of the scheme and shall be released only upon full liquidation and clearance of the accountability of the MARKETING AGENT to the COUNCIL;

3. That the MARKETING AGENT shall provide the cost of handling, transport and other services required for the transfer of fertilizers to the warehouse of the MARKETING AGENT, that is, from __________ to __________ including the cost of storage handling, rebagging and distribution of fertilizers to selected farmers;

4. That the MARKETING AGENT shall only deal with recommended fertilizers to the non-Masagana farmers secured by a promissory note, executed by said farmers to pay after one crop season or deliver to the MARKETING AGENT so much of his produce equal to the value of fertilizers acquired, based on the current price but shall not be below the floor price set by the NGA in __________;

5. That the MARKETING AGENT shall furnish the Provincial Programme Officer a copy of the promissory note duly executed by the farmers;

6. That the MARKETING AGENT shall charge the farmers for fertilizers obtained strictly in accordance with the listed socialized retail price in the district plus an interest rate of one percent (1%) per month;

7. That the MARKETING AGENT shall liquidate the total proceeds of the sale of fertilizers in equal amount to be turned over to the COUNCIL based on the ex-warehouse prices in the place where the fertilizers are withdrawn, plus an interest rate of one percent (1%) per month on retail price accrued from the farmers within one month after the end of the cropping season. The MARKETING AGENT together with the Provincial Programme Officer shall deposit same to the account of the FAO/NFAC Fertilizer Programme at local PNB Branch, __________. The MARKETING AGENT shall furnish the Provincial Programme Officer a copy of the deposit slip;

8. That the MARKETING AGENT shall deposit a bi-weekly (quincena) collection to the PNB Branch in favour of FAO/NFAC Fertilizer Programme and failure to do so without justifiable reason, a penalty of two (2) percent per month of any amount due shall be charged by the COUNCIL;

9. That all fertilizers purchased locally shall be marketed with FAO/NFAC Fertilizer Programme by the MARKETING AGENT under the supervision of the Provincial Programme Officer;

10. That all or part of the proceeds of the sale of all FAO/NFAC Fertilizer donated directly or indirectly within but not beyond __________ shall be deposited at local PNB Branch, __________, to the account of FAO/NFAC Fertilizer Programme represented by the Provincial Programme Officer;

11. That the Provincial Programme Officer shall submit a monthly report to the COUNCIL regarding the operation
and activities of fertilizer credit schemes;

12. That all fertilizers donated directly or indirectly but not beyond \_
    shall be made an integral part of this Agreement.

This Memorandum-Agreement shall take effect upon signing of both parties.

FOR THE MARKETING AGENT

_____________________________________

FOR THE COUNCIL

ARTURO R. TANCO, Jr.
Secretary of Agriculture &
Chairman-Coordinator, NFAC

CONCURRED:

DOMINGO F. PANGANIBAN
Executive Director

Witness

Witness
EXAMPLE OF PROMISSORY NOTE

FARMERS PROMISSORY NOTE

FAO/NFAC FERTILIZER PILOT CREDIT SCHEME

<table>
<thead>
<tr>
<th>Qty.</th>
<th>Unit</th>
<th>Articles</th>
<th>Unit Price</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 kg/bag</td>
<td>Urea (46-0-0)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50 kg/bag</td>
<td>Amophos (16-20-0)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50 kg/bag</td>
<td>Muriate of Potash (0-0-60)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total... ₱_____

ADD: INTEREST 1% per month (____ days) _______

GRAND TOTAL ..................

Hectarage covered: _________________________

Date of delivery of Fertilizer: ______________

Date of delivery of Agri. Products: ___________

__________________________________________________________________________

Signature

__________________________________________________________________________

Address
EXAMPLE OF PROMISSORY NOTE

FAO/NFAC FERTILIZER CREDIT AND DISTRIBUTION SCHEME-THRU:

DELIVER-RECEIPT-PROMISSORY NOTE

Name of Borrower/Farmer
Address
Farm Location
Hectareage/Size of Farm
Date of Delivery of Fertilizer
Term of Loan

<table>
<thead>
<tr>
<th>Qty.</th>
<th>Unit</th>
<th>Articles</th>
<th>Unit Price</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

TOTAL .... P

I, the undersigned farmer-borrower, agree and bind myself to pay within _______ days from date hereof and/or immediately after the harvest of the current cropping season of _______, 197_ at interest at the rate of one percent (1%) per month until the whole amount thereof shall have been fully paid or to deliver to __________________ at their warehouse at _______ so much of my harvest sufficient to pay in full my above-stated account.

That in the event the note is placed in the hands of a lawyer for collection, I hereby further bind myself to pay TEN PERCENT (10%) of the amount due as Attorney’s Fees, which Attorney’s Fees shall not, however, be less than FIFTY PESOS (P50.00) and such other legal and necessary expenses and other liquidated damages as may be incurred by the creditor or his order in case collection is enforced before the courts.

Done at ______________ this __________ day of __________ 197__.

GUARANTOR FOR PAYMENT:

________________________  ________________________
Farmer                   Farmer                  Signature of Farmer/Borrower
EXAMPLES OF VARIOUS ORDER/PURCHASE/CREDIT INSTRUCTIONS

RADIOGRAM/TELEGRAM

EXECUTIVE DIRECTOR
NFAC, DILIMAN,
Q.C.

REQUESTING AUTHORITY TO PURCHASE ________ BAGS
UREA _________ BAGS 16-20-0 AND _________ BAGS SULPHATE FOR
USE OF OUR FAO/NFAC FERTILIZER CREDIT SCHEME IN _________ STOP

NFAC, PPO

The Executive Director
Fertilizer Industry Authority
Makati, Rizal

Sir,

We would like to request authority for ________, NFAC Provincial
Programme Officer, BAR _________ to purchase _________ bags of urea
fertilizers, _________ bags of 16-20-0 and _________ bags of 21-0-0 for
the Pilot Credit Scheme under the FAO/NFAC/FFHC Fertilizer Programme in
said programme. The fertilizers will be purchased at ex-warehouse prices,
Planters Products, ________.

Anticipating your usual cooperation on this matter.

Very truly yours,

Executive Director
Mr. 
NFAC, Provincial Programme Officer 
Bureau of Agricultural Extension 

Dear Mr. ____________________

This has reference to the letter of NFAC Director Domingo F. Panganiban dated ____________, in your behalf, regarding the fertilizer requirements of the Pilot Credit Scheme of the FAO/NFAC/FFHC Fertilizer Programme in ________________.

The FERTILIZER INDUSTRY AUTHORITY hereby authorizes you to purchase ___________ bags of urea fertilizers, ______________ bags of 16-20-0 and ___________ bags of 21-0-0 at ex-warehouse prices from ________________.

Please coordinate with Mr. ____________________ of Planters Products regarding the availability and withdrawal of these fertilizers.

Very truly yours,

______________________________
FIA Executive Director

cc: Mr. _______________, FPI
AUTHORIZATION

To Whom it May Concern:

This is to authorize Mr. _______________, Provincial Programme Officer, _______________ to withdraw the amount of ₲ _______________ from the FAO/NFAC Fertilizer Programme Account at PNB, _______________, to be used in buying PNB bank drafts addressed to Planters Products, _______________. Said amount will be utilized exclusively for the purchase of _______________ of 21-0-0 and _______________ at 50 kg per bag for the operation of the Pilot Fertilizer Credit Scheme.

_________________________________
Project Manager/Associate Expert
THE FAO SOILS BULLETINS

1. Soils of the arid zones of Chile, 1965 (E**)
2. A survey of soil laboratories in 64 FAO member countries, 1965 (E**)
3. Guide on general and specialized equipment for soil laboratories, 1966 (E**)
4. Guide to 60 soil and water conservation practices, 1966 (E**)
5. Selection of soil for cocoa, 1966 (E**F*S**)
6. Aerial photo interpretation in soil survey, 1967 (E*F*S**)
7. A practical manual of soil microbiology laboratory methods, 1967 (E**)
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