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Mr. Robert Flick
Sr. Vice President- Projects
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Development International
50 F Street, N.W., Suite 900
Washington, DC 20001

Dear Mr. Flick:

The 1983 report, "Fertilizer Bulk Blending in Costa Rica" prepared for AID by ACDI, concluded the following:

> "The problem of government involvement would most easily be solved by selling FERTICA to the grower associations, cooperatives and farmers who are its primary customers. A majority of the company stock would have to be in non-government hands for this to be successful."

This recommendation appears to be a stated goal of the current divestiture activity, although various references are non-specific; i.e. "ownership of 40 percent of the shares should be substantially in the hands of the rural sector", or "The government hopes that both the organized and unorganized rural sector will have opportunity to acquire FERTICA shares."

The divestiture program is proceeding on schedule. The current approach does not include any involvement by the consumer groups. The bad image that FERTICA acquired (under Esso, the government of Mexico and the government of Costa Rica) was mainly due to poor communications with the consumers. Unless the divestiture program involves the consumer groups, these problems will not be corrected. In the belief that GOCR truly desires to have the ownership in the hands of the organized and unorganized rural sector, I have prepared the attached consumer strategy paper to address this transfer.

The past financing, tax and accounting issues are not addressed. It is assumed that these issues are resolved by the appropriate agencies before the production facilities can be packaged in a form which can move forward as part of

a viable business to serve the needs of Costa Rican agriculture. It is also assumed the economic, social and political consequences of restructuring the package are resolved by the appropriate agencies.

The strategy paper should be helpful to those individuals or groups that want the restructured FERTICA package in the hands of the Costa Rican agriculture sector. It is hoped that distribution of this paper can be made to those organizations which would benefit from this participation. The ultimate success of the divestiture may depend on this involvement.

Sincerely,

A. J. Soday

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Attachment

FERTICA PRIVATIZATION

I. OBJECTIVE

The objective of privatization is to restructure FERTICA into a strong viable entity capable of providing the fertilizer requirements at a reasonable cost to the agribusiness community of Costa Rica.

II. SUMMARY

FERTICA has the capacity to produce the fertilizer requirements of Costa Rica. It can produce these fertilizers in the form the growers demand or request. The facilities to produce the consumer demands must be salvaged and packaged in a form that can move forward in the private business community. The packaging process must include removal of the political, financial and social shackles which impede rational business decisions. The package should also address the communication problems between the producer, distributor and consumer by direct involvement of these groups in the venture.

III. WHO SHOULD BE INVOLVED?

The major agribusiness groups of Costa Rica should be actively involved in this divestiture. These are the organizations which have as a primary function or

responsibility the supply of the desired fertilizers in the right quantity, at the appropriate time and at an affordable price for their constituents. These business groups may be represented by, but not restricted to, the following:

- FEDECOOP, the coffee cooperative federation,
- CAFESA, representing some of the major coffee growers,
- The major horticulture cooperatives and other specialty crop cooperatives,
- Private fertilizer distributors and dealers,
- The major plantation companies or associations representing the banana, sugar cane, rice, palm oil, cotton, maize and soya growers.

Each of these organizations represents growers with similar but specific requirements with respect to fertilizer acquisition. Each of these organizations should have sufficient volume of fertilizer business to provide the clout necessary to have their requirements appraised in the production plan for the plant. It is assumed that these organizations would have the choice of providing the products through their plant or purchasing the products on the international market place.

Each of these organizations has a close association with their member/customers. By knowing the production areas involved, the current cropping practices and the changing trends or conditions within these groups, each

organization has the information necessary to assemble the production plan for the plant. This is the type of information that plant management must have if they are to do an adequate job of inventory control -- a major business flaw in the current system.

It is recommended that a representative from each of these groups be designated, and that these representatives be involved in the packaging process of the divestiture and be the communication channel to their member/customers.

IV. WHAT PRODUCTION FACILITIES SHOULD BE INVOLVED?

If FERTICA did not exist, it would be simple to define the fertilizer production facilities required to provide for the fertilizer requirements of the agribusiness of Costa Rica. At the very most, a bulk blending facility with raw material storage and bagging equipment would be required on each coast. The Atlantic facility would be considered marginal, but with proper management, it could be feasible.

With FERTICA, adequate bulk blending, raw material storage and bagging facilities are available on both coasts. Additionally, the chemical plant with ammonium nitrate facilities and basic NPK manufacturing facilities is available. With proper management, these facilities can be an asset to the country and to its agribusiness community. The products from the chemical plant have found a favorable use by the growers of Costa Rica. Many grower groups have expressed a preference for these materials and have

indicated that they would pay a premium for these products. Therefore, it is assumed that they would import these products if they were not produced by FERTICA.

There are surplus facilities at the chemical plant. One nitric acid unit, one ammonium nitrate unit with prilling facilities, the sulfuric acid unit and the ammonium sulfate unit must be considered useless at this time. These facilities have no salvage value. Unless some production through these units appears eminent, they should be removed from the system.

V. WHAT ARE THE FACILITIES WORTH?

The facilities are worth their logical replacement value, i.e. the installed cost of two fully equipped bulk blending plants. In today's market, a $1 million per plant is more than adequate. Therefore, $2 million in capital investment would supply the fertilizer production facility requirements of Costa Rica. This is the alternative value by which to judge the FERTICA package.

The chemical fertilizer facility cannot justify or tolerate any appreciable asset value. Due to the age of this facility, the relatively low production capacity of the plants and the questionable length of service to be demanded of them, the asset value to the Costa Rican agribusiness community must be considered zero. The fact that the plant exists and is a useable part of the package is a positive factor for the growers -- a definite asset to Costa Rica.

VI. FERTILIZER TYPES AND AGRONOMIC FACTORS

It has been generally accepted that the nitrogen in the soil must be converted into the form of nitrate before becoming available to the growing plants. The conditions in the soil contributing to nitrification are warmth, sufficient but not excessive moisture, and nearly neutral or alkaline soil.

Little has been published concerning the relative worth or agronomic value of the various types of fertilizers in the Costa Rican agribusiness community. However, the growers have observed that some fertilizer products are superior to others. They are aware that they can depend on certain materials to produce a definite yield at harvest. Many of the growers are unwilling or cannot afford to gamble on new fertilizer types or materials. If new fertilizers are forced on them (i.e. the only fertilizers available), who will be responsible for the failed crops, poor quality, low yields and missed markets? Decisions are being formulated which can have a drastic affect on the livelihood of many Costa Rican growers and currently they do not have a voice in these changes.

Bulk blend fertilizers are normally made with urea, diammonium phosphate (DAP), and potash (KCl). Some tropical crops are not tolerant of chloride; therefore, sulfate of potash (SOP) is used extensively in the region. The nitrogen in these bulk blends is in the ammonical and organic nitrogen forms.

The chemical fertilizer, as produced by FERTICA, is nitrate based. About half of the nitrogen values is in the nitrate form and is immediately available to growing plants, while the other half of the applied nitrogen values is nitrifying.

In the U.S., chemical fertilizers are normally produced with phosphoric acid, and sulfuric acid is used to adjust for the desired nitrogen content. The nitrogen in these U.S.-produced chemical fertilizers (10-20-10, 12-24-12, 20-20-0, etc.) is in the ammonical form similar to the blended fertilizers. Switching from these chemical fertilizers to the bulk blends does not represent any major change in fertilizer practice agronomically. However, switching from FERTICA chemical fertilizers to bulk blends does represent a fundamental change in practice which may not be acceptable agronomically for some crops and some growing areas of Costa Rica.

Two subtle changes have occurred wherever urea-based blends have replaced U.S. type chemical fertilizers:

- In blends, urea replaces some ammonium sulfate and sulfur deficiencies are appearing in heavily farmed areas. The growers in these areas are having to apply supplemental sulfur, usually as ammonium sulfate. Having to apply supplemental ammonium sulfate greatly reduces the economic advantage of bulk blended fertilizers.

- Urea can degrade upon application to the soil and prior to nitrification. Depending upon temperature and moisture conditions, the effective use (nitrogen uptake by plants) can be reduced by as much as 50 percent in extreme cases, and by 30 percent in many situations. The low cost advantage of urea may not translate into economic savings to the grower when the cost of transport, storage and application is considered.

VII. WHAT IS FERTICA STOCK WORTH?

The Controller General has indicated a valuation of 5.79 billion colones or about $86.4 million and $8.64 per share. Assuming that 40 percent of the shares are purchased and that the purchasers get all the product, they would be investing $230 per ton of product. Purchase of stock in the above price range would be difficult to justify.

The alternative replacement cost, the rational value the growers should use to judge their participation, is about $2 million or about $0.20 per share or $13.30 per ton of product. This is in the general value range which would normally be expected by the growers. However, recommendation for purchase could only come when the total package is evaluated; i.e. when the restructuring process has resolved the restrictions and obligations currently imposed.

that they have been a part of the decision-making process, the growers should not feel the resentment towards the emerging organization which they felt toward FERTICA in the past.

IX. MISCONCEPTIONS

Some projects, products or ideas concerning the FERTICA organization are surfacing in various areas and are discussed here.

Compacted Fertilizer. The new plant in Guatemala and some plants in Europe have been the basis of some promotion of this process as a replacement of the chemical plant. Compaction can produce a homogeneous fertilizer but compaction is a very expensive process. Compacted product is not superior to a properly blended fertilizer using the same ingredients. Compaction costs (capital and operating) are high with the net effect that sales margins are reduced by approximately $10 per ton at high production rates, and substantially more if the plant is used for custom formulation. Note that some materials are not amenable to compaction, limiting the type of products which can be produced. It would be extremely difficult to justify this process for the Costa Rican trade. Compaction is not recommended.

Calcium Nitrate. This material is a by-product of modern European nitrophosphate processes. The calcium nitrate must be removed from the solution phase of the phosphate digestion process to adjust the ratio of nitrogen

VIII. WHO SHOULD PURCHASE THE STOCK?

The average grower in Costa Rica would have difficulty justifying the purchase of stock. The average grower would not have the time or inclination to monitor the stock and provide the communications needed by management to make the decisions concerning his product requirements.

Non-aligned investors would probably not be attracted to this stock unless it floats appreciably lower than $0.20 per share ($13.30 per ton of product). Inasmuch as the objectives of the speculative investor is directly opposed to the objectives of the grower (profit is generated at the expense of the grower), the open sale of stock would not appear to be in line with stated objectives of the government divestiture.

The stock should be in the hands of the volume handlers of the products. These are the groups which can take direct shipment of the product from the plant and include the cooperatives, the major grower associations, the plantation growers, the private distributors and dealers. The stock should be purchased in proportion to the expected amount of product off-take by each group. These stockholders should be represented on the Board of Directors of the emerging organization which controls the plant. Representation should be proportional to the amount of stock owned or controlled. This mechanism can assure the necessary flow of information between the grower and the fertilizer producer to facilitate objective management decisions. Knowing

to phosphate in the finished product. For the Europeans to be able to offer many of the fertilizer grades common in world agriculture, they must remove and sell the calcium nitrate. The process involves refrigeration and is expensive, even in those countries with low ambient temperatures to work with. These producers must sell this calcium nitrate or convert it to ammonium nitrate for their process to be feasible. Calcium nitrate could be removed from the process at FERTICA, but the expense could not be justified.

Calcium nitrate can be produced from ammonium nitrate (a reversal of the European process), but there would be no value added. It would cost the grower more to make, bag, transport, store and apply calcium nitrate than ammonium nitrate. If the grower has a need for calcium or acid adjustment, lime or limestone directly applied is the economically preferred method. Production or sale of calcium nitrate is not recommended in Costa Rica.

Ammonium Sulfate. Ammonium sulfate is a major by-product of most industrialized nations. Sulfuric acid is utilized in numerous metallurgical and chemical processes. In many instances, the acid is recovered as ammonium sulfate. These industries must dispose of this material to be able to continue production of the more profitable products. Currently this product is yielding some profit, but it may be seasonal. Direct manufacture of ammonium sulfate from virgin acid is rarely justified unless a cheap source of sulfur is available.

The sulfuric acid/ammonium sulfate plant at Puntarenas reflects on the management which approved it. Unless Costa Rica has an increasing need for capacity quantities of sulfuric acid, this plant should not operate. It is also difficult to justify money for its maintenance. It is doubtful that it has any salvage value. These facilities should have zero value in the restructured package.

Ammonium Nitrate. The benefits of ammonium nitrate in agriculture have been proven world wide and is the nitrogen product of choice in many areas. Ammonium nitrate is also a major supply to the mining and construction industries as a blasting agent. FERTICA has a somewhat small but steady market for this material, and this market should expand as the productive capacity declines world wide. Ammonium nitrate (both grades) should be produced as long as the chemical plant remains a viable supplier to the growers of Costa Rica.

The nitrate plant provides flexibility in the manufacturing area, necessary in a process where the use rate changes with the grade of fertilizer being produced. The nitrate area of the plant carries a share of the management overhead cost of the nitric acid area as well as the ANF and this overhead will remain regardless of the product mix.

Ammonium nitrate is an excellent fertilizer material and should not be priced competitively with urea. Each of these materials has inherent advantages for some

applications, and each material should be utilized in those advantageous areas.

The statement has been made that FERTICA can have a foreign exchange loss from the export of ammonium nitrate. How is this possible? Current prices in the central Gulf area for ammonia is a $1.00 per unit of nitrogen (plus freight) and for ammonium nitrate about $3.10 per unit of nitrogen (plus freight) with freight favoring the raw material, ammonia. Under these conditions, the only way to have a foreign exchange loss is by poor management.

X. FERTILIZER COSTS AND PRICING

Marketing in an area in which the selling price is established by the government but the input costs fluctuate appreciably presents an unusual challenge to management and makes profit forecasting a political diversion. It would appear that the pricing of fertilizer products should be related to the commodity prices of the raw materials in order to allow the producers to recover their production costs and the growers to reap the benefits of astute purchasing.

The present system would appear to severely restrict management. Assuming management is charged with viable operating practices, how should it react to a situation where the fixed price would not allow a positive margin -- should it operate at a loss or not provide the service?

This system would not be favorable to either the plant or the grower.

In blended fertilizers and in some chemical grades, ammonium sulfate has been used as a filler to adjust the nutrient content of the product. The current cost of this material restricts its use as a filler. Management, with the pricing restrictions, must make a decision between producing a quality product with a reduced margin or producing a reduced quality product with a favorable margin.

Table 1
CURRENT RAW MATERIAL PRICES
Central Gulf Region, Less Freight

Nitrogen Materials	$/Unit of Nitrogen
Ammonia	$ 1.00
Urea	2.10
Ammonium Nitrate (ANF)	3.10
Ammonium Sulfate (AS)	4.05

Phosphate Materials	$/Unit of P_2O_5
Phosphate Rock	$ 0.70
Triple Superphosphate (TSP)	3.05
Diammonium Phosphate (DAP)	3.05+ 1.30 for N

Potash Materials	$/Unit K_2O
Muriate of Potash (MOP)	$ 2.00
Sulfate of Potash (SOP)	3.90

(A unit is defined as one percent of a ton or 20 pounds.)

Note that the prices in Table 1 provide some latitude in the choice of materials used for formulating a particular grade of fertilizer. However, each of the ingredients impart characteristics to the product. Therefore, these characteristics should be considered when assembling the product. The grower must be able to have a choice of the type of materials used in producing the product it uses.

Note from the prices that urea would appear to be an economic choice of nitrogen carrier over ammonium nitrate. However, for some applications, urea may be only 70 percent effective. In this case, there would be no economic advantage to the grower in using one material over the other. In those applications where the urea may be less than 70 percent effective, nitrate would be the economic choice of material and the most dependable.

The above examples promote the pricing of fertilizers based on the raw materials used in their manufacture. The producer can viably react to the needs of the grower and they will have a choice in the quality of the fertilizer they purchase.

XI. MANAGEMENT

It is recognized that management changes must be effected when FERTICA is privatized. The form of management is dependent upon the structure of the emerging organization.

If debt/equity exchange is involved, management must be responsive to the financial institutions. This arrangement may be beneficial to the holding banks and to the Central Bank, but it may not necessarily be responsive to the needs of the agricultural community.

If the stock in FERTICA is in the hands of the consumer organizations, the management must be structured to be responsive to the shareholders. The management package would be tailored to meet the obligations of the consumer organizations. Since there could be overlap in responsibility between the consumer organizations and the producer, some economies in management overhead could be effected.

FERTICA's public image is poor. The bad image is partially a reflection of the forces exerted on management by other government organizations. The resulting financial condition is not necessarily appraised from an enlightened position. On the other hand, the bad image in the market place (at the consumer level) is a result of the indifference of central management to quality and distribution problems in the use areas. This portion of the bad image problem must be attacked with the same vigor as the financial problems since maintaining or increasing market share is critical to the success of the emerging organization.