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TRIP REPORT

FAO/FIAC Latin America Regional Seminar
on Fertilizer Pricing Policies and Subsidies

Lima, Peru

October 17-23, 1981

Fertilizer Technical Assistance

TVA 1-74

by

National Fertilizer Development Center
Tennessee Valley Authority
Muscle Shoals, Alabama 35660

November 19, 1981

UNITED STATES GOVERNMENT

Memorandum

TENNESSEE VALLEY AUTHORITY

TO : Billy J. Bond, Manager of Agricultural and Chemical Development, TVA; and
John L. Malcolm, Bureau of Science and Technology, AID

FROM : Conrad B. Kresge, Administrator, International Fertilizer Section, TVA

DATE : November 17, 1981

SUBJECT: TRIP REPORT TO LIMA, PERU, OCTOBER 17-23, 1981

The purpose of the trip was to represent AID by presenting a paper and participating in the formal and informal discussions of the FAO/FIAC Latin America Regional Seminar on Fertilizer Pricing Policies and Subsidies. Thirteen of the 22 invited Latin American countries were represented: Argentina, Bolivia, Brazil, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guyana, Honduras, Mexico, Peru, and Venezuela. Nicaragua had planned to participate but at the "last minute" decided not to be represented. The 13 presented country reports on fertilizer pricing policies and subsidies; most were high-quality presentations. One set of the country reports and the special papers presented is available in the International Fertilizer Section. A copy of the provisional programme outline is attached.

Peru's responsibility as host for the seminar was carried by the government association called ENCI (Empresa Nacional de Comercializacion de Insumos). Once Dr. John Couston, FAO, was on the scene to end the confusion, ENCI proceeded very well with the arrangements. This organization also presented the main portion of the Peru report. The special papers presented are listed on the attached provisional programme under "synthesis of country reports." Under "Fertilizer Supply," Mr. Ricardo Fort of Peru presented the paper on Fertilizer Infrastructure and Distribution System while Mr. Wladimir Puggina of Brazil (ANDA) presented the one on Fertilizer Distribution and Farm Credit. Frank Meissner also discussed the workings of the Interamerican Development Bank (IDB). Because of a last minute conflict, the conference was held at the Touring y Automovil Club del Peru, rather than at ALIDE as indicated in the attached conference opening remarks by Mr. Antonio Botel-Aleia, FAO Regional Representative for Latin America. Note his reference to a probable Near East regional seminar of this type in 1982.

Following are some gleanings I made based on the various proceedings and discussions during the conference:

1. Import requirements in Latin America are estimated to be:

	<u>1979/80</u>	<u>1985/86</u>
N	52%	26%
P ₂ O ₅	32%	47%
K ₂ O	100%	90%

The major increase in N production is expected from Brazil, Mexico, and Trinidad.



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2. MULTIFERT was created out of the 1973-74 "fertilizer crisis" to obtain by pooling better conditions for fertilizer purchase and sale in Latin America. Current members are Bolivia, Costa Rica, Cuba, Ecuador, Guatemala, Mexico, Nicaragua, Panama, Peru, and Venezuela. There are some indications of emerging activity for MULTIFERT.
3. Mexico is the only government in Latin America with a direct subsidy on fertilizer; in fact, it controls all elements of fertilizer production and prices. Peru has just initiated what amounts to a subsidy on fertilizer transportation costs within the country. Venezuela dropped its fertilizer subsidy program in March 1981. Generally, the country reports reflected a dissatisfaction with direct fertilizer subsidies. There seemed to be more interest in programs to subsidize crop markets and prices.
4. The conference requested that the U.S. present an outline of its incentives to farmers to use fertilizers. After consultation between the U.S. representatives, Mr. Richard Kortvedt, USDA-ERS, presented the U.S. "picture." This included crop support and set-aside programs, tax incentives to farmers and industry in general, and support of research and development. The group was very interested in the indirect types of "subsidies" used by the U.S.
5. Several formal and informal reports and discussions focused on fertilizer quality control and the possible government role therein. For example, the Dominican Republic is concerned that the current industry quality control may be inadequate. Colombia and Argentina seemed pleased with their government control programs.
6. Several countries, particularly Colombia, pleaded for help in developing an organized way to get accurate country data on which to base government programs. (The need for reliable country data was stressed during the conference.)
7. Generally, country participants were very appreciative of the opportunity to formally and informally discuss government programs that have and have not succeeded.
8. Attempts were made to get a conference consensus on issues discussed at the seminar. This was finally accomplished to some degree in the conclusions of the seminar which will be available at a later date, but will include some of the points discussed in this trip report.

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One-half day during the seminar was devoted to a field trip to the Fertilizantes Sinteticos S.A. "FERTISA" plant at Callao, Peru (Port of Lima). Main fertilizer products at the relatively small plant are ammonium nitrate and ammonium sulfate. The plant seemed relatively well run but activity was slow during the time of our visit.

Finally, I spent several hours at the USAID offices in Lima. Agriculture Division representatives Loren Schulze and John O'Donnell were on leave or in the U.S. However, I had a long discussion with Jack Rosholt, Chief of the Regional Development Division. Jack was very interested in extension to Peru of the TVA experience in regional development. I left some material with him on the International Shortcourse on Agricultural Resource Development to be offered by TVA-USDA in May-June 1982. I also invited him to visit TVA concerning his regional development work and interests.

Conrad

CBK:DE
Attachments

FAO/PIAC Latin America Regional Seminar on
Fertilizer Pricing Policies and Subsidies

PROVISIONAL PROGRAMME

1. General

- a) Role of fertilizer in agricultural development -- R. Rortvedt
- b) International Fertilizer Supply, Demand and Prices with emphasis on Latin America -- J.W. Couston and P. Louis

2. Country Reports

- a) Presentation by participants of the fertilizer situation in their country (outline attached)
- b) Synthesis of country reports:

(i) Fertilizer Use

- Fertilizer response by main crops
 - Fertilizer use and food self-sufficiency
- } A. Cohen

(ii) Economics of Fertilizer Use

- Fertilizer/crop price relationships)
- Farmer incentives and incomes) C. Kresge
- Constraints to fertilizer use. - P. Louis

(iii) Fertilizer Supply

- Fertilizer infrastructure and distribution system, efficiencies and constraints
 - Fertilizer distribution and farm credit
- } Two lecturers from the region. Can you suggest any names?

(iv) Pricing Policies

- Fertilizer pricing including subsidies -- J.W. Couston
- Crop pricing including crop insurance -- J. Abbott/~~R. Roberts~~

(v) Fertilizer Policies and Measures

- Analysis of alternative policies and measures for fertilizer use development of participating countries -- M. Mudakar

3. Summary and Conclusions

OUTLINE FOR COUNTRY REPORT

1. The Country in Brief - Basic facts of country and the role of agriculture in the national economy, with particular reference to food production.
2. Fertilizer Supply - Production, imports, exports, consumption, prices infrastructure and distribution system to farm, including farm and distribution credit.
3. Fertilizer Promotion - Recommendations for fertilizer use, fertilizer response by major crops.
4. Economics of Fertilizer Use - Fertilizer/crop price relationships, pricing policies and incentive measures, including subsidies for fertilizers and crop support prices.
5. Constraints to Fertilizer Use - Physical and economic.
6. Plans for Increasing the Economic Use of Fertilizers - Overcoming physical and economic constraints and long-term plans, policies and measures for increasing fertilizer use particularly by small-scale farmers to increase their crop production and incomes.

FAO/FIAC REGIONAL SEMINAR ON FERTILIZER
PRICING POLICIES AND SUBSIDIES

Lima, 19-23 October, 1981

Opening Statement

Distinguished Participants, Ladies and Gentlemen

I wish to welcome you to this Seminar on behalf of FAO, FIAC and the Government of Peru which kindly agreed to host this Seminar. We thank the Government of Peru for inviting us to hold this Seminar in this lovely city of Lima. Thanks are also due to ENCI, the National Enterprise for Input Marketing for the arrangements it has made to hold the Seminar and to ALIDE, the Association of Financing Institutions for the Development of Latin America for providing the excellent conference facilities.

Distinguished Participants, Ladies and Gentlemen, I believe you all know what FAO stands for. However, you may not all know what the four letters F, I, A, C or "FEEAC" stand for. They stand for the Fertilizer Industry Advisory Committee. This Committee was established by the Director-General of FAO 20 years ago when the FAO Fertilizer Programme was started under the Freedom From Hunger Campaign banner. The purpose of the Freedom From Hunger Campaign was to mobilize resources from non-governmental sources for agricultural development projects in the developing world. There was no United Nations Development Programme at that time nor did governments directly finance projects operated by United Nations agencies then. These developments came later.

Therefore FIAC was created to provide financial and technical assistance to the FAO Fertilizer Programme. It still does so to-day but most of the financial assistance to the Programme now comes from donor governments.

Since 1960, the Fertilizer Programme has operated in 48 developing countries throughout the world; eleven in Latin America - they are the six countries in Central America and Ecuador, Colombia, Paraguay, Brazil and Peru, in South America.

The purpose of the Fertilizer Programme is to assist governments in promoting the efficient use of fertilizer, particularly amongst small farmers, as one of the principal means of increasing their crop and food production and their incomes.

The Programme has carried out hundreds of thousands of fertilizer trials and demonstrations in farmers fields and trained thousands of extension workers. The results show that when used correctly fertilizers do not cost, they pay!

On average the value of the crop response in these trials and demonstrations was worth over 2 to nearly 5 times the cost of the fertilizer applied, depending on the country and the crop. For all crops and all countries, the average best response was 67 percent and the return was 3.8 or nearly 4 times the cost of the fertilizer applied.

For Latin America, potatoes showed the best average response of 150 percent with a return of 7.8 times the cost of the fertilizer applied. The lowest best response of 83 percent was on cotton which gave an average return of 2.8 times the cost of the fertilizer. The response of rice was 101 percent and the return was 4.7 times the cost of the fertilizer. The comparable figures for groundnuts was 97 percent and 2.7 and for maize 84 percent and 2.2.

It must be repeated that these results were obtained in the fields of small farmers.

To support the Fertilizer Programme FIAC has a number of Working Parties which deal with the technical and economic aspects of fertilizer use, marketing and credit.

The Working Party on the Economics of Fertilizer Use is responsible for this Seminar. It is the third in the series of regional seminar, the first two having been held in Bangkok, Thailand for Asia and the Far East and in Dakar, Senegal for French and English speaking African countries. It is intended to have a similar seminar for the Near East region in 1982.

Let us look at food production in the Latin America region. If the present trend of production and demand continues, the Latin America region as a whole will only cover 83 percent of its food requirements by the year 2000 - significant drop from 97 percent in 1975. The FAO study, Agriculture: Toward 2000, however, indicates that the Latin America region is capable of attaining an annual average growth rate in its food production of 3.8 percent (3.8% cereals), which if attained would cover the expected growth in demand.

To achieve this increase in food production will, however, require the more widespread adoption of improved technology such as the use of fertilizer and other inputs to increase crop yields. It is recognized that fertilizers have so far accounted for more than 50 percent of the increase in crop yields throughout the world.

The success of high-yielding varieties, particularly of rice and wheat, has been largely because of their responsiveness to fertilizers. In spite of the fairly rapid increase in fertilizer consumption in some countries in the region, the average use per hectare of agricultural land at about 44 kilograms of the three major nutrients combined, is still only a third that of the developed countries. This partly explains why yields of foodcrops in Latin America are still relatively low. The average cereal yield for example is about 1.6 tons per hectare.

The achievement of higher crop yields and greater production, depends on a combination of factors. Fertilizers and improved seeds have already been mentioned. The others are water, pesticides and good crop management practices.

Another important input is credit, especially directed to assisting small farmers. It is generally required to enable them to purchase sufficient quantities of the different inputs. It is also important that the inputs are available in sufficient quantity within easy reach of farmers when they want them.

The ready and timely availability of credit and other inputs will have an influence on the farmers use of them, but the most compelling factor influencing the farmers decision to do so, is the prospect of increased crop production and greater financial returns. Experience shows that appropriate policies which provide the economic incentive for farmers to use fertilizers and other inputs results in higher yields and greater crop production.

The most common forms of incentives provided to farmers are price supports and input subsidies. Crop insurance is also of importance in some countries.

When considering prices of fertilizers and crops, although their level is important, of major concern to the farmer is their relationship. Subsidies can help to keep price relationships favourable, especially when an input such as fertilizer is first introduced and farmers are being encouraged to use it, and during periods of cost-price squeezes.

It is interesting to note that the growth rate of fertilizer use has been greater in countries with direct fertilizer subsidies than in countries without such subsidies. Between 1970 and 1980 the growth rate of fertilizer consumption in the Near East was 10.3 percent for countries with direct fertilizer subsidies but only 6.5 percent for those without. In Africa the comparable figures were 15.3 and 8.8 percent and in Latin America 12.6 and 7.4 percent. In the Far East and Pacific region, where all countries had direct fertilizer subsidies, the growth in fertilizer consumption during the period was 18.7 percent.

Although there is extensive production of both livestock and crops in Latin America, most farmers in the Latin America region, especially those raising food crops, have small holdings. If the productivity of these small farms is increased, even if not greatly, the gain multiplied by the millions of farms, would have a tremendous impact on the food supply of Latin America and the world.

It is estimated that 28 percent of the required increase in food production to feed the world population in the year 2000 will come from the expansion of cultivated land, the remaining 72 percent of the increase must come from higher yields and greater cropping intensity. Overall fertilizers are expected to account for 50 percent of the increase.

Since it is the small farmer that produces most of the food in the developing countries it will be in the villages where the struggle to produce more food will be won or lost. It is for this reason that the Director-General of FAO now insists that all agricultural projects must have criteria and approaches which will benefit the small farmer.

The value of this Seminar is the opportunity it provides for the exchange of your experiences so as to better design and implement policies and measures which will provide the incentive for the small farmers in each of your countries to increase their crop production and incomes.

The presence here of those who make or implement input and crop production policies for countries in the region and of international experts will be particularly useful in such an exchange.

I wish you a successful meeting. Your deliberations, however, will only be of value to small farmers if government policy makers and fertilizer producers adopt and implement those measures required by farmers for them to use fertilizers profitably to raise their crop production and incomes. In other words, fertilizer policy must be part of food policy if food production is to be increased.