REPORT OF THE UNITED STATES PRESIDENTIAL AGRICULTURAL TASK FORCE TO PERU

AGENCY FOR INTERNATIONAL DEVELOPMENT
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PREFACE

Two events were responsible for the creation of the United States Presidential Agricultural Task Force to Peru. The first was an address by President Reagan to the World Affairs Council of Philadelphia on October 15, 1981, just a few days before the Third World Summit Conference in Cancun, Mexico. In Philadelphia the President outlined the basic attitudes and policies that his Administration would articulate in its relationships with the Third World, including those applicable to agricultural development.

He said that U.S. assistance "would be guided toward the development of self-sustaining productive activities -- particularly in food and energy". And he added that "Our emphasis will be on the importance of market-oriented policies. We believe this approach will create rising agricultural productivity, self-sustaining capacity for research and innovation, and stimulation of job-creating entrepreneurship in rural areas." That basic philosophy will be evident throughout our report.

President Reagan did not, however, ignore the role of government. That would be both unrealistic and counterproductive. As the President put it, "Government and private enterprise ... must co-exist ... and cooperate. We must always ask: Is Government working to liberate and empower the individual? Is it creating incentives for people to produce, save, invest and profit from legitimate risk and honest toil? Is it encouraging all of us to reach for the stars?" Fortunately, the present Peruvian Government is working diligently to achieve these laudable goals; that was evident throughout our two weeks in Peru.

Philadelphia is an historic site for Americans, the home of Independence Hall where many of our own basic rights and freedoms were conceived. Therefore, it was most appropriate for President Reagan to call attention to the importance of individual freedom in the development process. Perhaps the key phase of his speech is the following: "Free people build free markets that ignite dynamic development for everyone." That is something we must all remember as we evaluate the economic development policies and programs of any nation. There is no doubt about the validity of President Reagan's assertion, for data on the economic performance of nations is available for perusal in any major library. As President Reagan pointed out, "A mere handful of industrialized countries that have historically coupled personal freedom with economic reward now produce more than one-half the wealth of the world".

The other event of relevance to our task force effort was the Cancun summit itself. At that conference President Reagan reiterated the U.S. policy positions that were first announced in Philadelphia, and fully committed the United States to assisting in agricultural development in the Third World. In the aftermath of Cancun, many nations have asked for U.S. help. Peru was selected as the first to whom a response would be made (see letter from President Reagan to President Belaunde in Appendix A). This task force is the result.[1] We hope it will be beneficial to both nations.

As members of the initial task force, we are proud to have participated in this important endeavor, and are most grateful for the personal involvement and support of President Belaunde, and the superlative cooperation of Minister Ericsson and everyone else with whom we worked in Peru. We would also like to offer our sincere appreciation to the United States Agency for International Development, which provided magnificent support for our endeavors.

1/ Members of the Task Force and their respective backgrounds are as follows:

Dr. Clayton Yeutter, Task Force Leader - President and Chief Executive Officer, Chicago Mercantile Exchange; former Assistant Secretary of Agriculture; former Deputy Special Trade Representative, and Ambassadorial post; for many years a farmer-rancher-cattle feeder in Nebraska.

Frank R. Light - President and Chief Executive Officer, Sun Diamond Growers of California, a large fruit and vegetable cooperative with marketing operations throughout the world; Director, National Council of Farmer Cooperatives, the principal cooperative trade association in the United States.

Walter W. Minger - Senior Vice President, Bank of America; responsible for all of the bank's worldwide agribusiness relationships including all agricultural lending activities.

Dr. John Pino - Director for Agricultural Sciences, the Rockefeller Foundation; Trustee, International Center of Tropical Agriculture (CIAT); Trustee, International Agricultural Development Service (IADS); past Chairman, Board of Trustees, International Laboratory for Research on Animal Diseases (ILRAD).

Robert L. Ross - President and Chief Executive Officer, Latin American Agri-Business Development Corporation (LAAD), Coral Gables, Florida; Director of numerous agribusiness companies in Mexico, Honduras, Panama and elsewhere; Director, the Agribusiness Council, New York; Agribusiness consultant for many Latin American enterprises.

James H. Starkey - Universal Leaf Tabacco Co., Richmond, Virginia; former Deputy Undersecretary of Agriculture; former Assistant Special Trade Representative; former Agricultural Attache to Colombia and Assistant Agricultural Attache to Mexico.

Dr. Fred Mann, staff support to the Task Force - Assistant Director of International Agricultural Programs, University of Missouri; nine years of Peruvian experience on agricultural technical assistance programs.

SUMMARY

The following statement was submitted to President Belaunde at the conclusion of the task force visit to Peru. It then constituted our preliminary reaction to what we had seen and learned. In retrospect we find it to be an accurate summary of our evaluation of Peruvian agricultural policies and our recommendations for the future. Therefore, we respectfully reaffirm it now.

Task Force Statement

On February 5, 1982 Presidents Reagan and Belaunde announced simultaneously that Peru would be the first country to which the United States would send a Presidential Agricultural Mission.

This was appropriate, for Peru has set a course of political and economic democracy which will allow it to make good use of these collaborative efforts. In addition, Peru already has made agriculture its number one development priority.

Finally, Peru is a country which has provided the world with many contributions in agriculture. It is the native home of the potato. Over two hundred varieties grow in the country and today much of the germ plasm needed worldwide is produced in Peru.

Peru has also developed a number of important crop varieties being used throughout the world: The "Naylamp" and "Inti" high yield rice varieties; tropical corn and sorghum varieties which are used in the Andean region and now being tested for use by farmers in our own southwest; the "zapata" barley variety developed at La Molina; and Peruvian varieties of cacao which are resistant to a number of common plagues.

In offering our comments and suggestions, we do not pretend that we in the U.S. have solved all our own agricultural problems; many of them are similar to those we have found in Peru. We must both try to improve our performance in food production, processing, and marketing.

As members of the Presidential Agricultural Mission to Peru, we are honored to have spent two weeks in this inspiring country. It was a busy time; we traveled from Lima to Jauja, Huancayo, Tarma, San Ramon, Puerto Bermudez, Tingo Maria, Tarapoto, Yurimaguas, Bagua, Chiclayo, Piura, Ica, Chincha, Chancay, Huaral, Huacho, Huaura, Puno and Arequipa with numerous stops in between. We talked with dozens of government officials and, more importantly, hundreds of Peruvian farmers.

We were very impressed by what we saw. The challenge of getting the most out of the Peruvian agriculture sector is an awesome one, but the opportunity is there. What impressed us most of all is the Peruvian farmer himself, including the most remote campesino. He has a magnificent attitude, a positive one. He wants to learn, to increase his yields, to have better

cattle or sheep or crops, to improve his economic situation for the benefit of himself and his family. He is a good student, a fast learner, and he eagerly carries out what he learns if financial resources and financial rewards are available. There can be no better environment for economic development in agriculture.

The primary need of the Peruvian agricultural economy is for incentives. In a democracy, those who produce are those who are rewarded for doing so. The Peruvian Government has made tremendous progress in this respect over the past 22 months. The changes are truly remarkable, and a credit to the excellent leadership the country has had. The government has already removed many of the economic disincentives to agricultural production. It is to be congratulated on doing so, and encouraged to finish the task. This will stimulate more agricultural production, which will be beneficial to both producers and consumers.

The benefits of recent changes have not yet reached all the people of Peru, for there is always a lag involved when economic policies are dramatically altered. But we believe the sense of direction is a sound one, and that Peruvian agriculture is on the verge of significant economic growth.

One must begin with water, an invaluable resource in a country with limited arable land. That resource must be carefully conserved and efficiently used, particularly on lands already under irrigation. Many existing irrigation systems are deteriorating, and that process must be reversed. Tariffs that are exceedingly low and irregularly collected do not provide an incentive for efficient water use. They should be increased over time to encourage more rational water use. Much more attention should also be given to water administration.

New lands could also be brought under irrigation in order to feed a growing population and expand Peruvian exports. Priority consideration should be given to small projects. In many cases the cost-benefit ratios of small projects will exceed those of much larger ones. Furthermore, production response will be quicker and the benefits of irrigation can be diffused throughout the country. Finally, the investment will often be modest, involving only canals and in some cases a small dam.

Roads must also be a high priority for Peruvian agriculture, because transportation of products to urban areas carries a very high cost. It is important to quickly finish the bridges and other critical sections of the Marginal Highway in the central and northern high jungle, and to supplement that effort with more farms to market roads in areas already under agricultural production.

When new lands are brought into use, it is also important that they be properly conserved for the generations to come. Land, especially in the selva, is a fragile resource, and must be carefully managed, particularly during its early years of production.

It has been the experience of all countries throughout the world that governments often do not do a good job either of supplying inputs such as fertilizer to farmers, or of marketing their products. If these functions are provided by the private sector, they will generally be carried out more effectively, for there is an incentive to do so. Your government is moving in that direction, and we expect those changes to have a positive result.

It is also important to Peruvian agriculture to have a sound international trade policy. Duties on imports of machinery and equipment that are essential to agricultural development have already been reduced. Exports should receive a major thrust, for the country still has a fragile balance of payments situation. In this regard, Peru can take advantage of its enviable position as a producer of items not grown in many other parts of the world. Alpaca wool and tropical fruits are two good examples. The government should facilitate endeavors of the private sector in this area, but should not be in the export business itself.

Credit is a major problem in all developing nations, and Peru is no exception. Becoming a knowledgeable producer is of no consequence if one does not have the credit to produce. The Banco Agrario is dedicated to meeting the credit needs of Peruvian agriculture, but it cannot do the task alone. As a consequence, thousands of Peruvian farmers are either obtaining expensive credit from informal sources, such as wholesalers, or doing without, which puts them at a bargaining disadvantage in selling their products. This is not a healthy situation and must be corrected. We hope the Peruvian Government will follow policies designed to increase savings, thereby permitting banks and other financial institutions to compete in providing credit to Peruvian agriculture.

Marketing is a problem that has long been ignored in Peru and many other countries, including our own. Though the U.S. has a sophisticated marketing system for food products, it is imperfect and we are giving it much more attention today than we did 10 years ago. Peru should do the same. What the system lacks most is competition. Though thousands of producers, wholesalers, and retailers are involved in the marketing process, there are many situations in which a seller really has only one buyer, and a buyer only one seller. This is not competition; too many participants in Peru's agricultural marketing system are in a position of economic vulnerability. The solution, in our opinion, should come primarily from the market participants themselves, for correcting the situation is principally a matter of organization. The government can play a facilitating role, and can ameliorate the situation by much improved price information, and by helping to eliminate credit vulnerability. If more private firms were involved in the marketing process, wherther they be producer cooperatives, or other firms buying, packing and trasnporting product to urban areas, or processing it locally, the marketing process would be far more competitive and efficient. This would improve prices for farmers and reduce prices for consumers.

The Peruvian Government has already established an excellent environment of policies and incentives for agroindustrial development. Once a few key roads are finished, we are confident that agroindustrial investment will increase dramatically. This is important for it would be economically advantageous to transport processed product from the sierra and the selva to the metropolitan areas of Peru and to other countries rather than to ship raw product as is the case today. The opportunities are excellent, one example being the production of palm oil in the Tingo Maria-Tarapoto area.

Finally, we want to emphasize the need for more agricultural research and extension. Without these, Peruvian agriculture cannot prosper. Both programs require leadership, organization, and financial commitment. They also require dedication, and a willingness to enter the campo to help the campesino learn the basics of production and financial management.

Peru's extension service deteriorated greatly during the 1970s and is now being rebuilt. That efforts is deserving of strong support. The extension load will also be alleviated by greater involvement of the private sector in all facets of Peruvian agriculture.

Agricultural technology presently available in Peru is already quite good. If Peruvian farmers take advantage of it, they will be able to increase production significantly. For example, cultivated grasses in the Puno area are increasing the carrying capacity for sheep and alpaca by three or four times. When brought under irrigation they increase carrying capacity as much as 10 or 15 times. That is truly spectacular progress. There are also varieties of wheat available which, with proper management, can provide high yields in the Sierra.

In summary, there is much to do if Peruvian food production is to increase. The government has already done much, but there is more to be done. The private sector need only be given the chance to function, to re-generate itself, to respond to incentives. The most powerful incentive of all is to improve one's way of life. There is no doubt about the presence of that incentive in Peru's farmers. We observed it over and over during our two weeks in Peru. If they are turned loose, and helped in a modest way, they will respond eagerly and effectively to Peru's leadership, broad policy orientation, and determination. We are optimistic about the future of Peruvian agriculture and agroindustry.

INTRODUCTION

Peru can have a productive, efficient agricultural sector. That is the bottom line of this report, and it is an optimistic one. Peru has both the natural resources and the people resources to compete with anyone in the world in the production of a whole host of agricultural products.

Why then is it not now doing so? Why is it so far from reaching its potential? There are many reasons, and we will in our report comment on most of them.

There are grave problems indeed in Peruvian agriculture. In addition to serious natural obstacles such as scarcity of water for irrigation and a ruggedness of terrain which greatly complicates transportation, the agrarian reform policies carried out by the previous military government totally decimated the basic structure of Peruvian agriculture. Private property was expropriated with inadequate compensation, managerial and entrepreneurial talent was forced out of the agricultural sector, supporting government services such as market information, research and extension were virtually dismantled, and production disincentives and market distortions were institutionalized. As a result, the current administration is starting practically from square one in its efforts to develop the agricultural sector.

Formidable as these problems may be, they are not insoluble. The present government has already made substantial progress, but it still has a long way to go. The biggest problem of all is that of incentives or, more properly, the lack of incentives. Peru's farmers are no different from those of any other country. Provide them with sufficient incentives, and they will work and produce as efficiently as anyone. Without incentives, their production languishes.

This is not to suggest that the necessary incentives should be provided by government. On the contrary, we believe that Peruvian agriculture would be far healthier and much more prosperous if government would largely stand aside -- not in all policy areas, but in most of them. The Peruvian private sector is basically sound; it simply needs to be unshackled, a process that the present government has already begun. We hope our report will provide worthwhile recommendations as to how the unshackling process can be accelerated, and how the Peruvian Government can complement and support its private sector, rather than compete with it.

UNLEASHING THE PRIVATE SECTOR

Agriculture, in any country, operates most efficiently when it works within a cohesive conceptual framework. It works most efficiently when buyers and sellers of agricultural products are free to deal directly among themselves, with government involvement limited to policies for achieving general economic and social priorities. Government efforts (in Peru and elsewhere) to control agricultural prices, supply farm inputs and provide marketing functions typically have led to inefficiencies, the wasteful allocation of resources and, most importantly, reduced incentives throughout the system.

In most countries, the most effective way of transferring agricultural technology has been through private channels with some complementary public services. New seed varieties are best sold by the companies which develop them. Processing plants have a self interest in maximizing production by their growers; hence, they typically hire their own agronomists to advise farmers on how to improve yields and quality.

When governments place themselves between farmers, their markets and their sources of inputs, the system eventually breaks down. The impact on Peruvian agriculture of government policies and interventions over the past 15 years confirms this experience. Many representatives of agroindustrial companies, farmers and cooperatives in Peru confirm that there is a clear correlation between private efforts to stimulate agricultural production and the absence of government intervention. For example, several new non-traditional fruit and vegetable processing plants in Peru have active programs designed to help their suppliers increase output and productivity. This contrasts with the ENCI experience in fertilizer distribution, the flour milling industry, and (with one notable exception) the dairy industry.

The government has publicly announced its intention to create a free market economy, in marked contrast to prior economic policies. It is hoped that such a free market orientation will prevail in all agricultural commodity systems within a year.

Businessmen and farmers with whom we conferred generally react favorably to the present government's strategy, although short term dislocations are inevitable. One cannot shift from the heavy government involvement in agriculture which prevailed in Peru under the military government to a private sector agricultural economy without some trauma. The government will simply have to alleviate that trauma as best it can during the transition period. It should have the cooperation of the agroindustry private sector in this respect, for that sector has much to gain -- in both efficiency and profitability -- from the changes that are underway. These changes are worthwhile, for a free-market production and agribusiness system is the quickest, most efficient route to increased agricultural productivity, self-sufficiency in at least most basic foodstuffs, improved availability and use of farm inputs, the development of new, high value, non-traditional exports, and, above all, higher farm incomes.

A CHANGING POLICY ENVIRONMENT

Largely as a result of the legacy of the preceding government, current agricultural policy in Peru constitutes a classic case of objectives and policies in conflict. The current government recognizes the fundamental importance of agriculture to the sustained development of the economy and has given highest priority to the development of the agricultural sector. Nevertheless, significant economic distortions and disincentives to agricultural production still remain.

The economic risk of agricultural production in Peru falls mainly on the farmer who is subject both to the uncertainties of nature and of governme policy. He lacks market information, credit, technical assistance, crop insurance and support prices (except for corn and rice) to limit downside price risk. At the same time he often finds his selling prices controlled by government actions aimed at restraining consumer food prices. The effective development of Peruvian agriculture requires a climate of confidence and certainty with respect to government policy and the opportunity for the farmer or the investor in agriculture or agroindustry to make a profit.

Any hope for the rapid development of Peruvian agriculture in the shortrun must be based on the private sector. This is the only group that appears to have the expertise as well as the motivation to do the job 1/ In areas not subject to price controls and state monopolies, the development of agriculture is dynamic. The private sector is developing markets, building processing plants, providing financial assistance to growers and also providing management supervision and technical assistance. There is much room for further development and improvement, but at least a start has been made. The areas subject to state control, on the other hand, suffer from inefficiency, lack of credit, lack of technical assistance, and prices which appear neither to reflect relative production efficiencies nor national priorities.

This has been explicitly recognized by the current government which has undertaken a series of measures designed to reduce government intervention in the marketplace and to support the private sector. These include a gradual elimination of price controls on foodstuffs and agricultural inputs, liberalization of imports and passage of an agricultural promotion and development law which provides a series of incentives for investment in agriculture and agroindustry.

1/ The one exception to this optimism is the present unsatisfactory performance of many agrarian reform cooperatives. Those problems are discussed more fully later in this report.

The government should continue its efforts to provide a policy climate which is supportive of the role of the private sector. In this regard the establishment of a clear and consistent agricultural policy is of fundamental importance. This should start with an evaluation of Peru's production

prospects for both the domestic and international markets. Such analysis should provide a basis for establishment of a sound agricultural price policy which gives reasonable price security to producers and reasonable supply security to consumers. To accomplish this, goals and objectives need to be long-term -- perhaps established in a five-year plan -- to develop public confidence and reduce uncertainty. Where support prices are necessary or desirable for public policy reasons, they should reflect production efficiencies and should be established prior to planting time.

It would also be desirable to establish a mechanism for maintaining a dialogue with the private sector and obtaining its input, understanding and acceptance of policy decisions. This could be done through an advisory committee system (similar to the one used in the U.S. for trade negotiations) with an overall policy committee chaired by the Minister of Agriculture with representation from the major interest groups, and individual commodity committees for the major crops. Committee representation should span the entire marketing spectrum from producer to consumer. Open discussion should be encouraged, but it should be clear that the committee recommendations are "advisory" to the Peruvian Government.

In evaluating Peru's agricultural policymaking apparatus, the issue of staffing immediately comes to the fore. President Belaunde and others who are deeply immersed in policy formulation simply cannot make sound decisions unless they have top level staff support. Today there is just not enough depth or breadth of analytical talent in the Peruvian Government to provide the quality of analysis that is needed. The inadequacies are particularly apparent in the Ministry of Agriculture, which does not have sufficient trained people to do economic analyses essential to considered decisionmaking.

The Peruvian Government should take steps to rectify this situation immediately. In the short run, this will require reallocation of some of Peru's scarce human resources to the staff support areas where they are most needed. In the longer run, more Peruvians must be trained in essential analytical skills, either locally or abroad. USAID may be able to help in such an effort.

In the area of prices, conflicting policy objectives have led to a number of anomalies. In some cases this reflects subordination of "agricultural policy" to a "food policy" designed to hold down prices on basic food products in urban areas. Wheat is a good example where costly government subsidies keep the price to the consumer at a level which is about one-third less than the current world market price. This price not only provides no incentive for

domestic production, it actually discourages production. As a result, only about 10% of Peruvian wheat consumption is produced internally. Imports, which now total one million tons annually, cost the government an estimated $200 million in foreign exchange and about $60 million in subsidies. A realistic producer price together with the use of high yielding wheat varieties could result in increased domestic production, reduced imports and lower foreign exchange and consumer subsidy outlays.

Recommendations

(1) Internal price controls on wheat should be liberalized and the price permitted to rise to the world market level (i.e., price of imports). This would eliminate the consumer subsidy and at the same time increase the producer price by one-third. A realistic producer price should provide a basis for determining whether domestic wheat production can be expanded on an efficient basis.

(2) Agricultural support prices (precios de refugio) should be set at levels below prevailing world market prices. This would provide an incentive to Peruvian farmers to become internationally competitive. And it would assure Peruvian consumers of reasonably priced food while also eliminating the need for costly consumer subsidies.

Since a number of Peru's major agricultural products now have support prices far above the level suggested (with rice being perhaps the most conspicuous example), a transition " phase down" period will undoubtedly be necessary. Alternatively, Peru could examine the desirability of using both a "target price" and "support price" in its farm policy scenario, with the higher target price providing income protection as the support price is reduced to an internationally competitive level. Tariffs (to be discussed more fully in the next section) can also be used for protection from competing imports until Peruvian farmers become more productive.

(3) State monopolies should be phased out. It is clear that ENCI's fertilizer operations, as an example, are extremely inefficient and ineffective. Fertilizer prices are about 30% above world market levels due to the need to market high cost fertilizer from state-owned companies. The price equalization system also taxes the producer on the coast to subsidize producers in the sierra and selva. 2/ However, despite the subsidy system which equalizes fertilizer costs in all areas of the country, only 10% of the farmers in the interior are using fertilizer. Under the monopoly there are inadequate incentives for promotion of fertilizer use through activities such as technical assistance and extension which would be provided in the normal course of business by profit oriented private enterprises.

2/ We have no quarrel with the policy of providing special economic benefits of various kinds to the sierra and selva. But it seems to us that such benefits -- whether they relate to fertilizer prices or anything else -- should be financed by the general public (i.e., the Peruvian taxpayer) and not by just one segment thereof, viz. the coastal farmer.

TRADE POLICY

Import Restrictions

The government has made significant progress in reducing obstacles to both imports and exports. However, a number of contradictions and uncertainties remain. The evidence strongly suggests that imports have in some cases (beef and dry milk, for example) managed to hold down internal food prices. But in the process this has undercut domestic producers of dairy and livestock products, and has created uncertainty regarding the direction of government policy. The liberalization of corn and soybean imports and reduction in duties on agricultural machinery have been supportive of agricultural development. However, the current intention to establish a uniform tariff level of 15% for agricultural imports and to impose licensing controls risks creating new disincentives and distortions.

Trade policies must complement and support agricultural policy objectives if investment in agriculture is to be encouraged. The government should, therefore, clarify its trade policy objectives and ensure that they are implemented in a consistent manner.

The new tariff policy is a step in the right direction. However, a uniform tariff set at an arbitrarily determined level would invariably result in excess protection for some sectors, and insufificient protection for others. It would make more sense to develop a tariff structure based on sound analysis of supply and demand fundamentals as well as relative costs of imports versus domestic production. For products where Peru has the possibility of developing efficient domestic production, and where some degree of temporary protection is warranted, tariffs should be established on an individual basis and at levels appropriate to the protection necessary. Over time the individual tariffs should be lowered, even though domestic producers will inevitably protest. This forces them to become competitive internationally. If they do not become competitive, imports will increase and the reduced tariff levels will help Peruvian consumers.

With respect to import licenses, it seems paradoxical that the government would on the one hand seek to eliminate distortions and disincentives in the domestic market, and at the same time put in place an import control system which does just the opposite. Import licenses are undesirable because they:

(1) Prevent competition. An import license has virtually the same negative effect as a quota. It provides an opportunity for windfall gains to those who hold licenses. The windfall is paid by consumers in the form of higher prices for both the domestic and imported product. By limiting competition, import licenses also foster domestic production inefficiency.

(2) Require establishment of a new bureaucracy for purposes of administration. Where imports are restricted, licenses must be allocated. Such a system is invariably subject to abuse.

(3) Increase the uncertainty of domestic producers, foreign exporters, importers and consumers regarding government intentions. As long as a licensing system is in place, there will always be concern by the trade that imports will be restricted or even embargoed on short notice. This not only creates an additional barrier to the orderly development of trade, but prices also increase as a reflection of the increased uncertainty.

(4) Results in lengthy procedures and administrative delays which increase the cost of doing business. This cost is invariably passed on to the consumer in the form of higher prices.

Recommendations

(1) The Peruvian Government should maintain its existing momentum toward trade liberalization. Its initiatives in this area have been especially courageous -- and they are also correct.

(2) Tariff revisions should be based on sound analysis of relative costs and should be supportive of agricultural policy objectives. Individual tariff levels should provide a "reasonable" level of protection to domestic industries that need it in order to encourage the development of those industries on an efficient basis.

(3) As an additional aid to the development of the agricultural sector, trade barriers affecting agricultural inputs -- machinery, irrigation equipment, fertilizer, improved seed, etc. -- should be reduced and, if possible, eliminated.

(4) Import licenses are undesirable and should be avoided. Import protection, where needed and approriate, should be provided through tariffs.

(5) The government should seek to maintain a realistic exchange rate policy.

Export Development

Peru has significant potential for the development of exports of a number of nontraditional agricultural products. Examples include exotic fruits (in fresh and processed form), fresh an processed vegetables, alpaca wool, rice, tobacco, and poultry meat. The incentives provided by the Agrarian Promotion Law for agroindustrial development should provide an excellent stimulus for private sector activity in this area.

The government can further facilitate these efforts by providing market intelligence, assisting in market development activities, and reducing administrative barriers to exports. With respect to market information and market development, the Peruvian Government may wish to consider setting up programs similar to those operated by the Foreign Agricultural Service of the USDA. These programs - which involve collaborative efforts by government and the private sector - have been tremendously successful in expanding U.S. agricultural exports.

Import Substitution

Peru's big ticket items among agricultural imports are wheat, feed grains (corn, grain sorghum and barley), oilseeds (particularly soybean oil), and dairy products. In recent years there have even been some imports of commodities such as rice, sugar, and beef. This year's agricultural import bill could be as high as $1 billion, an intolerable sum for a nation which has a severe balance of payments problem.

This import bill is excessive, and a high national priority should be assigned to reducing it. This should not, however, be accomplished by becoming protectionist. As we said earlier, Peruvian tariffs should be designed to complement the nation's basic agricultural policy. Within that context, we see little need for additional trade restrictions. In our judgment, protective actions are neither desirable nor necessary for Peru to reduce its dependence on agricultural imports.

The first step is to design an agricultural policy structure that will provide income protection to Peruvian farmers while at the same time permitting the phase down and elimination of consumer subsidies. We believe this tandem effort to (1) provide incentives, and (2) eliminate disincentives in the present system will generate an impressive production response from Peruvian farmers. It will also generate enthusiasm among Peru's research and extension workers, since they will be able to see immediate benefits from their own efforts. The agroindustry sector will respond too, for their domestic processing and marketing potential will expand.

The combination of all these factors should significantly improve Peruvian productivity in these products, enhance competitiveness, and reduce import penetration.

We are convinced that Peru can become self-sufficient, or nearly so, in many of the agricultural products which are now imported. The probabilities for wheat are limited in the short run, but even that could change with some exciting new varieties just now becoming available. Oilseeds are in the same category, but we see palm oil as having great potential in the upper selva. Alpaca wool from the Puno area should be highly profitable in many developed

country markets throughout the world. And that same area should be a low cost producer of sheep wool if irrigated grasses are extensively used. Finally, there is no reason why Peru should not be internationally competitive in corn production, and even in many dairy products.

One cautionary comment is in order. It will take time for Peru to become competitive in most of the products just enumerated. The farmers of other nations will not be "marking time" as Peruvian producers become more efficient. They will become more efficient too, so the question becomes one of how quickly Peruvian farmers can gain on their competitors. That will vary from product to product, and progress will have to be monitored by Peruvian officials.

For some products, self sufficiency may prove to be an illusive and impractical goal. There will be food products in which Peru cannot be internationally competitive, even in the long run. There is no disgrace in that; it happens in all nations. Peru cannot afford to expend vast sums of money to become self sufficient in such products, and should not do so.

A proper national goal for Peru would be to increase its level of self sufficiency in food production, and we believe that to be feasible. But Peru should avoid the political trap experienced by many other nations in this delicate policy area, viz., carrying self sufficiency to a costly and impossible extreme.

WATER

Aside from government policies the most important single deterrent to accelerated agricultural development is the distribution, management and use of water. This holds true for much of the sierra as well as the coastal valleys. About 30% of Peru's 3.4 million hectares of arable land is presently under irrigation.

Virtually all of the coastal land under cultivation is irrigated, while only a fraction of the farm land in the sierra and selva is irrigated (based on 1974 data):

	(Hectares)		
	Irrigated	Rainfed	Total
Coast	700,000	Negligible	700,000
Sierra	340,000	1,850,000	2,190,000
Selva	30,000	570,000	600,000
Total	1,070,000	2,420,000	3,490,000

Any discussion of water use must recognize that gross value of output from available land differs considerably among the three regions. Irrigated land on the coast yields 47% more than irrigated land in the sierra and 25% more than irrigated land in the selva. Irrigated land in the sierra is twice as productive as unirrigated land. When these differences in relative productivity are taken into account, the relative importance of arable land in different regions changes dramatically:

Hectares of Coastal Irrigated Cropland Equivalent

	Irrigated	Rainfed	Total
Coast	700,000	Negligible	700,000
Sierra	170,000	629,000	799,000
Selva	24,000	314,000	338,000
Total	894,000	943,000	1,837,000

Thus, although coastal land accounts for only 21% of cultivated land, it accounts for almost 40% of total value of farm output. Put differently, one average hectare of coastal cropland produces a gross value of output equivalent to 2.3 hectares of sierra cropland and 1.8 has. of selva cropland.

Greater productivity of coastal lands is inherently due to more favorable weather and soil conditions, better transportation, and superior production and marketing practices. Similarly, total irrigated land accounts for only 30% of total arable land but accounts for about 50% of total production by value.

The Efficient Use of Water and Funds for Irrigation Development

The higher productivity of irrigated land explains in part why Peru has placed such heavy emphasis on irrigation. In recent years public investment in irrigation has accounted for nearly 80% of total public sector investment in the agricultural and food sectors.

The government presently is committed to complete three major irrigation schemes totaling $1.7 billion in 1977 dollars (Majes-Siguas, Chao-Viru and Olmos). The cost of these projects presents a major burden in financing terms and in the accumulation of foreign debt.

Leaving aside the financial burden, there are serious questions about the economic returns and viability of these projects. Indications are that the agricultural portion of their cost will be approximately $15,000 per hectare for Majes, $7,000 for Chao-Viru, and $15,000 for Olmos. Even though the specific numbers may be subject to statistical interpretation and the vagaries of inflation, the per hectare order of magnitude is extremely high when compared with (a) the gross value of agricultural production per hectare in any of those areas, or (b) the present market value of comparable private land.

Average gross value of production on existing irrigated land in Peru was around $1,000 in 1979, which after deducting various inputs, yields roughly $500 in value added at the farm level. A comparison of this net output per hectare with investment cost per hectare of any of the three major projects results in an unacceptably low capital/output ratio. Economic returns also are far below any present international lending rate.

The present market value of private irrigated coastal valley land ranges from about $1,500 to $3,000 per hectare. This is probably a fair market appraisal of productivity using traditional irrigation and cropping patterns. As can be seen, however, it is far below the actual cost of adding irrigation through large schemes such as those mentioned.

Increasing the Efficiency of Water Use

Without attempting to appraise the net benefits or economic feasibility of any individual water project, it is clear to us that the most cost effective way to extend the benefits of irrigation in Peru is by increasing the efficiency of water use on existing irrigated lands, particularly in the coastal valleys.

Agricultural land on the coast has the triple advantage of closeness to major domestic markets, better access to seaports and year round growing conditions. A network of irrigation canals exists in most of the coastal agricultural valleys. Water already is being transferred from the Atlantic watershed to the Pacific coast.

Available evidence indicates that water is being misused on a large scale. Water, more than any other input, determines agricultural productivity on the coast. Major attention should, therefore, be given to quantifying the extent of misuse and to devising ways to improve use.

Water overuse and the lack of adequate drainage have caused salinity problems on large areas of land. Available information suggests that some 130,000 hectares of coastal irrigated land are affected by moderate to strong salinity and drainage problems, presumably the result of poor water and land management. This is an important economic cost since the goverment simultaneously is expending money on large irrigation projects on the coast designed to increase the area under cultivation.

The most important single deterrent to more rational use of water is the lack of incentive to do so. In particular, water usage fees payable to the "Juntas de Usuarios" and the "Comisiones de Regantes" are low and often are determined by hectares under irrigation rather than by amount used. Statistics provided us suggest that as much as 70% of these fees, low as they may be, are not collected. Since the "Juntas de Usuarios" need fees to maintain canals, the sytems often are not properly managed or maintained, leading to further water losses (and further refusals to pay by water users who feel they are receiving no maintenance services).

Fees should much more closely approximate the economic value of water as a scarce resource than they do today. (They might also be indexed in such a way as to avoid their erosion through inflation.) Taking as an example the Department of Lambayeque, an increase in the price of water of just one sol per cubic meter would mean the creation of a fund of approximately 1,500 million soles to be administered by the farmers of the Department.

Farmers currently paying 14,000 to 18,000 soles in costs per hectare of rice, pay only 40 centavos for 1,000 litres of water. Is there any wonder that there is little incentive to conserve water? This is the pricing of a "scarce" resource; In the same Department, farmers who use well water pay 12 to 14 soles per 1,000 litres of water.

Proper water pricing should lead to:

(1) The more efficient use of water within existing cropping patterns. This might involve changing irrigation schedules, use of different varieties requiring less water and different irrigation methods. (Efficient and low cost measuring devices are available which measure sub-soil humidity and reduce water waste.)

(2) Construction of better drainage facilities to reduce salinity on presently productive land and to reclaim once productive land lost because of rising salinity.

(3) Lining of secondary and tertiary canals to eliminate water filtration.

(4) Reviewing crop patterns, some of which may be economically viable only because of low value presently placed on irrigation water. For example, rice, corn, and sugar cane are three major water abosorbing crops. Such reviews should be done locally with farmer participation. In many cases, such review could lead to substantially higher values of production per hectare with less water.

(5) Analyzing the feasibility of using well water instead of surface water. Although wells have higher operating costs, the total cost of water may be less than with water obtained from large irrigation projects. Wells can also be used to supplement water that is available from alternative sources only during certain months of the year.

(6) More water presently lost to the sea during the months when rivers peak could be stored in mini-storage dams lined with plastic or similar material. Indications are that this method of adding new arable land might be commercially feasible at today's prices of irrigated land (assuming zero value for desert land).

While economic data appears to be lacking to precisely quantify potential production benefits from a review of existing water use, available information strongly suggests that improved water use efficiency will yield far greater short and medium term benefits than any alternative strategy.

Unfortunately, one cannot simply wave a magic wand and achieve more efficient water use. A more rational pricing policy will make an enormous difference, but research and extension personnel must play a major role too. Their efforts will be important in determining just what crops should be grown under irrigation in Peru, which varieties are preferable, optimum ways for determining when irrigation should occur and how much should be applied, ways to minimize evaporation, and for identifying and publicizing other aspects of water conservation.

Small Watersheds

Peru could dramatically increase its irrigable crop acreage, at relatively low cost, by developing small watersheds. This Andean nation has a tremendous resource in its thousands of rivers in all parts of the country. Politically, their development may not be as glamorous as a Majes or Olmos project, but it may help far more people. And it would provide much more food production with

a far smaller investment. In addition, the production benefits could be diffused among many geographic areas, some of which are among the lowest income areas of the country. For example, many of the small watersheds in the sierra can be tapped for irrigation simply by constructing a canal. Others might require a small dam, but usually that would be relatively easy to construct. In a lot of these potential projects, local construction help could probably be obtained at little or no cost to the government. (That has already been the experience in some areas.)

Small and medium-sized irrigation projects in 16 sierra departments have already been identified. There are 154 projects with several studies already completed. The estimated cost is an average 150 dollars per hectare. There are 94,000 hectares that would benefit 46,000 families already located there. During construction 6,000 workers would be employed and the production phase would give permanent employment to 25,000 workers. Many of these projects could be finished in less than three years time, a fraction of the time frame of the more complex projects. Many would contribute significantly to employment, at least in the short run, and would reduce migration to Lima.

The Peruvian Government should carefully evaluate the social and economic profitability of investing in a 100,000 hectare irrigation project that would come into production in 10 or 12 years, as compared to financing 154 projects totaling 94,000 hectares that can begin to produce in six months to three years.

TRANSPORTATION

Major Highways and Feeder Roads

Peru does not have adequate and reliable major highways or feeder roads from the farm to existing major transport arteries. Marketing of Peru's great agricultural potential will be inadequate without an improved road system. The only reliable and adequate system presently available is the Pan American Highway. This highway north and south of Lima soon will have serious traffic problems due to overloading. Highways from the jungle and sierra to the coastal populace regions are woefully inadequate, dangerous and unreliable.

The Peruvian Government, with external assistance, has placed top priority on construction of roads and bridges that connect major farm development areas with major population areas. This emphasis clearly should not be relaxed. Completion of these critical transportation links is essential to a healthy agricultural industry. A good road system eventually should eliminate the need to subsidize handling costs from one "transport handicapped area" to another.

Ocean and Inland Water Routes

Seaports along the Pacific coast are numerous, with the three principal ports being Callao, Paita and Pisco. The efficient operation of these ports is inhibited by physical congestion and burdensome customs paperwork. Positive steps apparently are underway at the port of Callao to alleviate some of these problems.

Utilization of smaller ports for north-south intra-country transportation by water is quite limited due to poor physical condition of piers and high stevedoring labor costs.

Rivers in the jungle regions of Peru currently are used in very modest ways for agricultural transport. Use of the internal river system presently does not appear to be economic for large tonnage shipments.

In the short term, to insure the expeditious development of agricultural exports and the import of necessary farm inputs, the Peruvian Government should facilitate port development programs that relieve congestion and provide sufficient terminal space for efficient use of ocean ship containers. The government should also review and simplify documentation requirements to enhance and orderly flow of commodities.

In the longer term, intra-country transport by water may be more economically efficient than other modes, while helping to conserve energy.

Air Transport

Facilities for air transport of valuable but extremely perishable commodities (such as flowers) appear adequate in the principal coastal areas. However, airfields in the sierra and jungle area need to be expanded to adequately support Peru's agricultural export potential.

Remote airfields in other developing countries have contributed materially to expeditious development of high value, perishable type production adjacent to them. The economic feasibility of internal air traffic development should be studied for both short and long-term opportunities.

Railroads

Railroad service in Peru is very limited and for all practical purposes none is used to transport agricultural products or inputs. Although feasibility studies have been made for constructing a rail line running north of Lima some 400 or 500 kms. to relieve traffic pressure on the Pan American Highway, there apparently are no immediate plans for that project. In fact, present railroads appear to be suffering from deferred and insufficient maintenance of rail beds and equipment.

Considering the unique terrain problems the national economy and other higher priority considerations, such as roads and water, consideration of railroads as an alternative means of transport in the short term does not seem practical. In the long term, however, because of generally greater energy efficiency and other environmental considerations, it may be in the best interest of Peru to evaluate rail as an alternative means for the transportation of agricultural products and inputs. A modern rail system should consider utilization of containers for ocean transport and "piggyback" techniques by which truck trailers are hauled long distances by rail, then "driven off" for delivery at the destination. Such a rail system could interface with "roll on-roll off" ocean shipping now being handled at the port of Paita.

CREDIT

A major input necessary to improve Peru's food system, i.e., the product chain from producer to processor, wholesaler, retailer, and eventually consumer, is capital. The capital market in Peru is not operating in a fashion that provides adequately for the financing of agriculture (farm production, marketing, processing). Most funds are made available to the commercial (i.e., non-agricultural) market which has (1) fewer constraints in lending conditions, and (2) a greater potential, at the moment, for repayment of its loans.

Interest rates are also a major problem. Though they seem terribly high to farm borrowers, dollar denominated rates of interest for agriculture are actually below international money rates and sol denominated loans to agriculture are typically below the rate of inflation (i.e., at negative "real" rates). While this is clearly attractive to borrowers, such a policy will inevitably discourage the generation of savings necessary to finance Peruvian agriculture. The amount of credit presently available is insufficient to meet farm needs, particularly if farmers respond to the new free market strategy by intensifying their use of agricultural chemicals, fertilizers, etc. Monetary policy impacts directly on the availability of savings which can be channeled to the agricultural sector. A policy of increasing the cost of money to reflect its relative scarcity would encourage better use of available resources, promote savings and increase the availability of credit to producers now outside the reach of institutional lenders.

The terms and conditions -- legal and procedural - surrounding the agricultural credit delivery system in Peru are such that there is no one institution that can meet the anticipated financial needs of the borrower, be he a farmer, cooperative, or agro-industrialist. In fact, in some areas institutional lenders provide only a limited (and grossly inadequate) share of total financing to the farm sector. For example, informal lenders (truckers and wholesalers) supply the bulk of funds utilized in the production and marketing of fruits and vegetables in Peru.

Problems of inadequate credit are related to the (1) supply of money, (2) understanding and communication between lenders and borrowers, (3) speed with which loan applications are processed for matching of loan advances to the actual use or need, (4) extent of paper work and documentation required, (5) proximity of lender to borrower, (6) somewhat arbitrary standards set by lenders for financing, (7) failure to increase loan size commensurate with inflation in input costs, (8) better lending opportunities elsewhere in the economy, (9) perception by lenders that agriculture is a high risk enterprise, (10) fractured nature of the financial system in Peru which creates limitations on services each of the financing entities can provide, and (11) institutional restrictions placed on certain of the financing agencies.

The existing farm credit system appears to have been designed to meet the needs of servicing a relatively unsophisticated group of borrowers. While there are many borrowers who do require close supervision, there does not seem to be a need to tar all borrowers with the same brush. Supervised credit does not need to be applied universally. There are many creditworthy small and medium size farmers.

Most farmers must look either to informal sources for their credit needs (wholesalers, e.g.), or to the Banco Agrario. Credit to agroindustry is available much more readily from a number of sources.

Commercial banks, including regional banks, rarely lend to farmers because they cannot compete with the interest subsidies of Banco Agrario, and because of the high risk nature of Peru's production agriculture, better alternatives for lending elsewhere, and constraints surrounding the pledging of collateral. Commercial bank direct lending that is done is short term. "Financieras" loan for longer terms but are unable to loan short. Banco Agrario, the only institutional lender dealing exclusively with farmers, does loan for short, medium and long term needs. It has, however, no competition except from informal sources.

Groups of farmers in various communities have expressed a strong desire to organize their own financial intermediaries. They are willing to capitalize these financing entities and will do so providing they have autonomy to service financial needs of farmers in the area.

Recommendations to Increase the Competitive Climate in the Agricultural Credit System

There is a lack of competition in meeting the broad credit needs of Peru's agriculture. To encourage the participation of more financial entities in agricultural financing, the following recommendations are made:

(1) Liberalize banking laws so that every financing institution has the right to provide financial services to farmers and agroindustry. This should involve short, medium and long term loans for production; equipment purchases or leases; land purchase and/or development; commodity loans; herd and flock expansion loans; loans to permit stockpiling of feed bought at advantageous prices; off-farm investment loans for fresh fruit and vegetable packing, commodity warehousing, marketing facilities and transportation equipment; pre-export and export financing, etc. In other words, Peruvian banking laws should permit financial institutions to meet the growing credit needs of Peruvian agriculture in an unfettered way.

(2) Permit and encourage local groups to organize banks, financieras and credit unions, which could compete with Banco Agrario in meeting local credit needs. Any shortfall in required equity provided by the local

organizers might be met by recourse to international bilateral or multilateral sources. This could be done by the issuance of subordinated debentures, or perhaps even by accepting equity from such sources. Further, to leverage the quasi or actual equity and to provide loan rates competitive with Banco Agrario, it is recommended that these financial entities be permitted to discount their farm loans on competitive terms with the Peruvian Central Bank.

(3) If the "linked credit scheme" (See Appendix B) is found acceptable, agroindustry processors who contract with individual farmers or cooperatives for their supply of raw product, and who provide "in kind" and cash inputs on a budgeted basis to their contract farmers, should also be permitted to discount their farmer-related advances with the Central Bank. This would provide still another alternative source of credit for farmers.

(4) As agrarian reform cooperatives take advantage of their new opportunity to reorganize, farmland will, in many cases, be distributed among former members. The "service cooperative" of agroindustry portion of the former cooperative should then be separately capitalized so as to operate as a viable handling, processing, or marketing entity. It could be organized as either a proprietary company with all stock owned by the former cooperative members, or as a new cooperative with hired management. This "handler" would need to be staffed to provide technical assistance to the former cooperative members who are now individual land owners. These "handlers" should be permitted to discount their farm-related advances to farmers with the Central Bank or, alternatively, with Banco Agrario.

(5) Modify Banco Agrario's procedures:

(a) As a general policy, Banco Agrario has been utilizing pro forma budgets prepared by the bank itself in setting up lines of credit to farmers. Under these budgets permitted advances for the payment of input costs often are not in synchronization with the borrower's needs. Good loan supervision should correct this defect. For exceptionally creditworthy borrowers it might even be feasible for the bank to accept borrower-prepared cash flow budgets.

(b) While Banco Agrario has shown a substantial increase in funds utilized and outstanding loans, that increase has not been commensurate with inflation in input costs. Inasmuch as there is an upper limitation on the line of credit that is dictated by the estimate of gross income, farmers are not receiving sufficient credit to provide optimum levels of inputs. This often forces borrowers either to obtain money from input suppliers, or reduce the level of inputs, likely resulting in lower yields.

(c) Further the bank does not include living expenses for the farming family. Living expenses should be included in any operating budget inasmuch as funds to provide expenses created by family needs will be taken out of the operating budget, or in the event that the bank controls are strong

enough to maintain the use of funds in the manner called for in the budget, then the family is forced into cottage crafts, or it must take on outside work to cover family and operating cost limitations of the line of credit.

(d) Another problem that surfaces when using estimated cash flow income to determine loan ceilings, is that a farmer's line of credit is usually established in advance of the growing season. The tendency is to use conservative prices and yields, which then result in a conservative estimate of gross income. This may not provide the farmer with adequate credit, unless as the crop season goes on and more favorable prices develop, the budget and line of credit are modified (to increase, if necessary, some of the advances for necessary inputs to generate higher yields).

(e) The Banco Agrario should also re-examine some of its arbitrary standards such as the amount of tractor horsepower per hectare. Our recommendation is that the bank eliminate such standards and rely on cash flow analysis to determine whether a particular farm can support the purchase of a tractor.

(f) The Banco has begun to initiate a program of supervised credit. This is to be coordinated with reorganization and expansion of the country's farm extension system. However, it will be some time before the agricultural extension service can provide the manpower to support such a joint effort. Until meaningful extension support is available, the Banco staff should spend most of their time with marginal borrowers who will benefit from technical and financial supervision.

(g) The Banco Agrario should permit farmers to finance the purchase of used equipment, subject to inspection and evaluation. Farm equipment is in such short supply and of such importance to the agricultural development of Peru that its availability should not be constrained. From a credit standpoint, there is no reason why loans for used equipment cannot be properly administered.

(6) Under present law, land cannot be pledged as collateral for certain types of credit. Neither can land be rented or leased. Holdings are limited to 150 hectares (except in the jungle, for tribal and cooperative holdings, and lands held in common) in size. In effect, Peruvian land is today assigned zero value. This severely distorts agricultural production practices in a myriad of ways.

Only products produced on the land have value and that value is realized only when crops are sold. Hence, if money is borrowed to plant, tend, and harvest a crop, only the crop and the proceeds from sale of that crop can be pledged as collateral for the production loan. This dramatically reduces the credit standing of Peruvian farmers.

The renting or leasing of land should be permitted by one farmer to another to the extent that total land farmed does not exceed 150 hectares. Present legal prohibitions might be overcome by permitting landowners to grant "use rights" of farmland for a fee (for the purpose of growing crops).

There are many aggressive farmers in Peru who could handle larger acreages of crops if given the opportunity to do so. But unless the purchase or lease of additional land (to the limit of 150 hectares imposed by the land reform) is permitted, there is no way that the farmer with limited savings or limited access to long term funds can expand his operation. These lease and purchase restrictions, which prevent farmers from expanding to the limits of their equipment, their managerial capability, and their other non-land resources, negatively impact on Peruvian efforts to increase agricultural output and productivity. Appendix C is an alternative scheme that might allow investors and farmers to work together under existing laws to develop permanent plantings of tree crops.

To further improve participation in agricultural financing by commercial banks, small and medium size farmers holding title to their lands should be permitted to pledge their real estate as additional collateral for seasonal and term loans. Term loans would be made for the development of lands and permanent plantings, or for the purchase of major pieces of equipment that cannot be paid for in one year. In the event of liquidation of a farmer's real estate because of non-performance on debt, the bank should be required to sell the real estate within a short period of time and only to another farmer who could acquire the parcel being sold and not exceed the limitation on total holdings of 150 hectares.

(7) Financing contract growers. Peru's commercial banks presently are providing short term financing to many agroindustries. However, farmers who might become integrated with a food processor have indicated that there is a general lack of adequate credit and technical assistance to enable them to produce the quantities and quality of raw product required by the processor. To diversify the credit delivery system, it is recommended that an agroindustry which undertakes a scheme such as the one diagrammed in Appendix B be permitted to discount with the Peruvian Central Bank funds it utilizes for the purchase of inputs from its contract farmers. Essentially, this would provide the farmers with credit prices competitively with loans made by Banco Agrario. (Credit for financing internal processing and marketing operations would be priced at whatever the bank charges its agroindustry borrowers.)

The agroindustry would need to operate its "farm credit" operation in a professional manner. The food company's technical staff would need to work with each farmer in preparing operating budgets that accurately reflect inputs, timing and costs, as well as estimating potential yields and income. This would serve to upgrade the manner in which farmers traditionally have been utilizing credit. In the longer run, this system also would enhance the farmer's ability to integrate financial aspects of farming with production aspects. By this means, the entire farm economy gradually can become somewhat more sophisticated in another aspect of agriculture that presently is missing -- financial management of the farming venture.

MARKETING

Peru has a myriad of marketing problems, most of them reflecting either (a) lack of organization of the market participants, or (b) lack of competition within the marketing system. This section of the report will deal with both theses issues.

Marketing Channels

Marketing channels in Peru are quite limited and, in fact, inhibit market growth and development. The identified channels for food distribution in Peru are:

(1) Government procurement and distribution.
(2) Agrarian reform "cooperatives".
(3) Private sector agroindustry, food processing and canning facilities, and poultry and meat processing.
(4) "Mayoristas" -- a wholesaling function for fresh fruits and vegetables.
(5) Private sector retailers -- supermarkets, "minoristas" (public market stalls), and street vendors.
(6) Independent farmers who individually sell their production to truckers/field buyers.

Government Procurement and Distribution

As we pointed out earlier in this report, government organizations involved in the procurement, storage and sale (domestic or export) of Peruvian agricultural products are not performing satisfactorily. Of particular concern is the tendency of producers and consumers to become dependent on these agencies notwithstanding their shortcomings and inadequacies. This inhibits sorely needed private initiative and creativity in both production and marketing. Examples are the acquisition and sale of fertilizers (ENCI); government acquisition and distribution of rice (ECASA); control of critical agricultural commodities, such as the importation of corn and price control of domestically produced corn (ENCI); government ownership of retail marketing organizations (EPSA), etc. These programs in general are economically unsound and an undue burden on the national treasury.

Commendably, the Peruvian Government is taking positive steps to return such activities to the private sector. When this is accomplished, inequities in distribution will diminish, and basic economic forces will play a stronger hand in determining which agricultural commodities will be produced in the various geographic areas of Peru.

Private Sector Processors

An exciting development in the Peruvian economy is the recent establishment of private sector agricultural processors. These include modern, apparently well managed, enterprises such as Liofilizadora del Pacifico S.R. Ltda., Agroex del Peru S.A., Frutas del Pais S.A. and Indalsa (Industrializacion de Alimentos) S.A.

There are problems, however. The fruit processing facility in San Ramon appeared to be short of fruit supply to support the capital investment and potential market. The tomato paste processing facility on the coast north of Lima is undercapitalized and not able to properly pay its farmers. On balance, however, these enterprises appeared to be going in the right direction with good leadership.

Although just starting to "blossom", poultry and meat processing industries appear to be in a good growth posture.

There appears to be sufficient government incentive to encourage private sector processors to continue to develop and expand. There is no question but that herein lies the "engine" for a new marketing direction so sorely needed. It also is an area where, with government "public relations" efforts, opportunities for joint ventures with foreign firms can realistically be expected to emerge.

Retailers and processors indicate that product flow of meat and poultry to the trade is good, especially when compared to fruits and vegetables. This may be attributed to a more developed private sector competitive structure as compared to fruits and vegetables. Meat and poultry producers' future growth and productivity can be enhanced by improved means of obtaining feed inputs (i.e., from private sector rather than government) and development of refrigerated storage and transportation. As in fruits and vegetables, producers could benefit from stronger industry organizations.

Wholesalers ("Mayoristas")

Aside from the sale of certain commodities that are directly acquired and distributed by the government, it appears that producers of domestically consumed foodstuffs have only three marketing outlets. The three non-government channels for sales distribution are:

(1) Small but growing agroindustrial sub-sectors, discussed earlier
(2) Limited direct farm to retailer sales for local consumption.
(3) The predominant marketing outlet -- the "mayorista".

Because the farmer direct-sales outlet and agribusiness sales at this time are relatively insignificant, the "mayorista" for all practical purposes is the only true sales outlet, especially for fruits and vegetables.

Retailers as well, for all practical purposes, have only one source of supply for fruits and vegetables -- the "Mayorista".

The mayorista exercises a unique monopoly type control over product flow to the marketplace and, through an informal organization, fixes prices to farmers and retailers alike. The mayorista is the only reliable home for the farmer's product and the only reliable source of product for the retailer. In addition, the mayorista provides a unique credit service to both farmers and retailers. This results in lack of competition in marketing channels, thereby creating distortions which:

(1) Lead to low payments to producers and high prices to consumers.

(2) Transmit erroneous supply-demand signals to producers, which in turn cause further distortions or waves in production and supply.

(3) Cause significant product loss due to distribution bottlenecks, inefficiencies, and lack of proper storage.

(4) Inhibit creative market development and productivity improvement in the entire system from producer to consumer.

(5) Virtually ignore export potential for commodities due to the limited scope of the "mayorista" service functions.

While it is fashionable to chastize the mayorista, one must also recognize that he provides a whole range of services within the marketing process: market information, packaging (such as it is), transportation, short term storage, and credit. He must also be compensated for a variety of risks, which often are substantial in a marketing system such as that which prevails in Peru.

Though wholesale margins may be excessive, there is little solid research data to demonstrate this conclusively. In fact, retail margins are far greater than those at the wholesale level, which probably reflects the large number of retailers and the low sales volume per unit.

All one can properly say at the moment is that there is far less competition in Peru's agricultural marketplace than there should be. The following is a discussion of various ways to deal with this most serious problem.

The Development of Alternative Enterprises

The Peruvian Government should facilitate the expeditious creation of alternative marketing outlets for producers which will in turn be alternative sources of supply for retailers. These new sources, which would compete with the established Mayorista system, could take several forms:

(1) Producer owned and professionally managed marketing cooperatives that may perform one or all of the following functions (not to be confused with existing agrarian reform "cooperatives"):

(a) Bargain for the sale of their member products to existing mayoristas, retailers, or retailer warehouse associations.

(b) Establish receiving, sorting, grading, processing, packaging and storage facilities, and sell end products to existing mayoristas, direct to retailers, to retailer warehouse associations, direct to consumers through the cooperative's privately owned retail markets, or to the export trade.

(c) Provide other services to their producer owner members. Such services might include certain types of financing; provision of storage facilities; standard containers for harvest and shipping; hauling services from farm to warehouse or processing plant; and procurement of farm inputs (equipment, fertilizer, seeds and other supplies). All services must be economically justified in terms of farmer members' returns on investment.

(d) Establish internal quality control standards and a price differential system that recognizes quality, productivity, packaging and added service values.

(2) Private sector investment in independent produce and packing houses (agroindustries) that perform the functions of purchasing, receiving, sorting, grading, packaging, storing, and selling fresh fruit and vegetables to mayoristas, to retailers or retailer warehouse associations, or to the export trade. This type of organization would compete with the farmer-owned marketing cooperatives discussed above. The "independent handler" could be owned by (a) one or more farmers who would thereby supplement their income by providing a private entrepreneurial service to other farmers; (b) a retailer organization or association; or (c) a foreign-domestic joint venture group.

(3) Retailer warehouse associations that purchase, store, and distribute commodities to their members. These associations could purchase from agrarian reform cooperatives, independent farmers, newly formed producer-marketing cooperatives, independent handlers, or new agroindustry companies. Once alternative channels of distribution are firmly established, large independent retail enterprises (private sector supermarkets) likely will broaden their own internal distribution systems and would be encouraged by economic realities to purchase from the various sources of supply discussed above.

(4) PRODEMPA is the government's proposed answer to the problem of alternative marketing opportunities. We believe that with some revisions PRODEMPA could provide the means and the stimulus for organizing some or all

of the entities just discussed in paragraphs (1) to (3), but at a much lower cost than is visualized in the proposed plan. As presently designed, PROCOMPRA is too bureaucratic, too grandiose, and too costly. The government's actual involvement in the creation of alternative sources of distribution must be minimal, not controlling, especially in the management process. Government can best help by encouraging the creation of alternative market sources -- not by being those sources. Examples of a proper governmental role would include:

(a) Emphasizing and publicizing its long-term commitment to private sector development.

(b) Providing training and educational support for the agribusiness community, along with professional repatriation incentives.

(c) Making available ready, adequate and flexible credit programs.

(d) Improved marketing information.

In testing the PROCOMPA concept small, homogenous production-marketing areas should be selected first. For example, the garlic producing area of Arequipa could be a test area since the vast majority of garlic farmers are concentrated there and the commodity has good export potential. This would enhance communications and offer a better chance of success. For the same reasons, a similar opportunity may lie in the lemon industry in Lambayeque and Chulucanas. A multiple product, farmer owned marketing cooperative may be appropriate for the Tarma area. The Tarma group could handle cauliflower, carrots, sweet corn, onions, cabbage, potatoes, broad beans, peas, etc.

Private Sector Retailers -- Supermarkets, Minoristas and Street Vendors

The Peruvian consumer, with few exceptions, has only one source from which to purchase food -- the "minoristas" and street vendors. The minoristas and street vendors are entrepreneurs who specialize in a limited number of vegetables, fruits, meats, grains, etc. There are literally thousands of them servicing the public.

Minoristas rent stalls in community marketplaces and procure their merchandise from mayoristas (wholesalers) on a daily basis. Street vendors, in contrast, have no stalls but provide essentially the same services as a minorista from their carts or simply from boxes or improvised "stands" at curbside or in the aisles of the public marketplace.

Depending on the supply/demand situation, these "retailers" sell at prices 35% to 50% higher than the prices of mayoristas. This markup covers a unique assortment of services such as grading, sorting, salvaging and locating the commodities that are purchased and resold daily. Virtually none of these retail outlets has any provision for the sustained storage of stocks.

There is one major private sector supermarket chain that caters primarily to the affluent. This chain, which sells through approximately 15 stores, utilizes modern merchandising techniques and, except for fruits and vegetables, is satisfied with the competitive acquisition of meats and canned goods for is retail outlets. However, the chain's only reliable source of fresh fruits and vegetables is the mayoristas. There have been times when the chain could have bought some of its needs directly from farmers at cheaper prices but was reluctant to do so for fear it would lose its source of supply for other fruits and vegetables (and at other times for the same product) attainable only through the mayoristas.

As indicated earlier, retailer procurement power needs to be enhanced in order to develop competition through alternative sources of supply. This can be accomplished by encouraging the creation of (a) retailer cooperatives similar to those suggested for producer cooperatives, and (b) private sector entry into independent retail chains that provide services beyod the simple "daily pass through" of commodities that presently are being performed by minoristas (but respond to the needs of the lower and middle class citizens, as contrasted to the current supermarkets).

Independent Farmers Selling Individually to Truckers/Field Buyers

Independent farmers not belonging to an agrarian reform cooperative virtually all sell their products to truckers/field buyers acting on behalf of mayoristas and the few agroindustrial organizations or representatives of the government.

A few farmers do some direct marketing of their product. Some also market their product through conventional farmer-owned cooperative organizations. However, these organizations are rare and have not often been successful due to the lack of grower commitment, adequate capitalization and professional management.

Commodity Industry-wide Organizations and Farmer Organizations

With a few exceptions, strong national associations representing individual commodity groups or farmer constituencies are lacking.

Commodity organizations or associations for individual products, such as potatoes, financed by producer assessment may be the most expeditious and efficient means of providing those producers with marketing and technological information and a vehicle to implement quality control procedures. Such organizations should be facilitated by law, requiring that all producers participate if a majority of them support the program. This would be similar to the federal and state marketing order acts in the United States.

Local and national organizations of farmers, financed by member assessments, which "lobby" for improved farm policies, roads, water resources management, etc. would also contribute to the competitive climate. Such lobbying also would help to assure an appropriate balance in use of government funds between agriculture and other sectors of the national economy.

Standardization

The planned organization of a cotton exchange is a step forward for cotton growers. The membership of this exchange will be made up of government representatives, and cotton buyers. The exchange would classify cotton, act as an escrow agent between buyer and seller, and insure contractual performance. The capital to set up and organize the cotton exchange is expected to come from a fee per quintal of cotton delivered.

The organization of commodity exchanges highlights the need for standardization of commodity grades. This is also an essential element of any export expansion program. There presently is no system for grading cattle, poultry, wheat, corn, or milk.

Along with standardization of grades, the standardization of containers would be desirable, particularly if Peru is to expand its exports of fruits and vegetables. Containers presently used in Peru do not satisfy the needs of foreign markets. Utilizing acceptable wood, paper, or plastic containers will add expense to the marketing function and will require new production systems for the containers. A substantial investment in plant, distribution, and in input cost of the finished product itself will be required to achieve container standardization. It may be somewhat premature, except on a pilot basis, to embark upon a comprehensive change at this time. But a start should be made (preferably by groups of farmers) within the fruit and vegetable industry to determine whether the domestic market will accept and pay for higher quality product and packaging.

Price Reporting

One specific contribution that the Peruvian Government could make to the marketing scene would be to establish a price reporting service. Information is one of the most valuable components of any marketing system, and one that is frequently lacking in developing countries. Peru is no exception, and that is why some market participants can at times take advantage of others. The latter simply do not know that they are being offered an unreasonably low price.

A price reporting service will not correct imbalances in bargaining strength (That must be done in other ways, as we have already indicated.), but it will make those imbalances more obvious to those who are disadvantaged and

to policymakers. In addition, as food marketing in Peru becomes more modern and sophisticated, accurate and timely price reporting will become even more important. Hence, it would be opportune to get such a system in being.

Price reporting reesponsibilities should be placed with the Ministry of Agriculture. Since the Ministry has severe staffing and budget constraints, such a program would probably have to be initiated on a "pilot" basis, with only certain crops or products to be included, and perhaps only in certain geographic areas. Fortunately, there is a great deal of flexibility in the design and operation of a price reporting system. Hence, it can fit within any budget constraints that are applied.

Since the U.S. Department of Agriculture has a similar and very effective system (called "Market News"), their help could be obtained in designing a program for Peru.

Marketing Summary

A successful agricultural marketing program can be realistically attained only through a profit-oriented private sector system involved in the necessary production, processing, storage, distribution, sales and financial management functions. The incentive or motivation to invest in or manage these activities comes from profits, if the activity is successful, or the fear of personal loss if the activity were to fail. Conversely, when personal risk is removed or when the board of directors and top management do not have an investment in the venture, there is little motivation for aggressive action.

Healthy competition thrives when alternative sources of supply, markets and distribution channels are available at all times. Alternative sources of supply in a free market foster efficiency and productivity. Pressures for reasonable prices to the consumer, responsive customer services, helpful product classification, meaningful quality control, and marketing flexibility arise from the seller's need to maintain or increase his market share.

Pressures to be competitive force the allocation of funds and talent to research and development, including the delivery of agricultural research data to farmers.

Competition also forces the successful organization to acquire and reward competent management. The infusion of managerial talent probably is more important than obtaining foreign investment. In short-term, talent can come from:

(1) Joint ventures (domestic and foreign).

(2) Repatriation of Peruvian talent that either has left the country or moved to urban jobs during the agrarian reform.

STORAGE

Private sector construction of warehouses (concrete upright silos, flat storage, potato cellars, refrigerated space, freezers, etc.) should be encouraged. This will assist in smoothing out product flows to the marketplace and in preserving quality. It can also enhance opportunities to attract foreign investment in Peru's food system.

Along with such construction, a publicly regulated warehousing system should be developed. Included should be authority to create title documents for stored commodities. These are a necessary adjunct to the financing and transfer of ownership of both bulk and finished goods for domestic and export markets.

The Peruvian warehousing industry should be operated on a "for profit" basis, for use by anyone willing to pay specific fees for services such as storage, fumigation, inloading and outloading, grading, drying, weighing, cleaning, preparation of title documents, etc. Warehousing operations could be organized as separate corporations with stockholders being local farmers, processors, tradesmen, other investors, or combinations of these, or as cooperatives.

Ample storage facilities not only would assist in dampening sharp price swings due to seasonal or other factors, but would also serve to provide a national reserve of the most important food commodities. One drawback in the carrying of reserve stocks (by either the private sector or government) is obviously the hihg cost of money today along with the initial cost of constructing warehouses. However, in the interest of national security, assuring a certain level of buffer stocks might be a desirable use of public funds.

As discussed earlier, Peru will need a system of producer support prices for basic commodities, at least for the immediate future. Such a system will not succeed, however, unless adequate storage facilities exist to take care of temporary over-supply situations. It is clear that the law against speculation has discouraged construction and utilization of storage by the private sector.

Recommendations

The government could play a useful role by:

(1) Modifying the anti-speculation law to permit storage of commodities by the private sector. This might be coupled with a requirement to report stock holdings on a periodic basis so that this information would be public and the system less susceptible to abuses; and,

(2) Providing a special system of credit or credit guarantees for construction of facilities for storage of agricultural commodities. In the short run and until private storage facilities become available, the Ministry of Agriculture could use ENCI's existing facilities to operate any price support programs which might be needed -- particularly if ENCI gets out of the fertilizer business.

AGRARIAN REFORM COOPERATIVES

One of the results of the agrarian reform in Peru was the establishment of "cooperatives" where the land is jointly owned and managed by individuals who in most cases had been workers on large land holdings. In the process, the prior management was generally dispossessed and, in many cases, forced out of the agricultural sector. This left a tremendous void in administrative and managerial talent. The majority of these cooperatives are poorly managed, deeply in debt and operating at a significantly lower level of productivity than before. The reasons for this loss of productivity include a lack of entrepreneurial incentive that would normally be provided in a private ownership situation, the shortage of management talent capable of operating complex enterprises, and the organizational structure itself, which makes it difficult to attract and keep good managers. (This results mainly from low pay levels and the lack of job security in a situation where the workers constitute the Board of Directors of the cooperative.)

This situation poses a serious policy dilemma for the Peruvian Government. On the one hand the country can little afford the continuing and drastic drain of productive resources which is now occurring. On the other hand, it would be politically difficult, if not impossible, to change the present organizational structure in any fundamental way. This means that the government must look for new ways to make these cooperatives more efficient and productive.

The Agrarian Promotion Law permits these cooperatives, through majority vote, to subdivide their land into private holdings. This could have positive results if conversion is to privately owned units of sufficient size to be economically viable. The incentive to produce efficiently in such holdings is likely to be much greater than under the present organization.

Many existing cooperatives probably will not, however, take the private property option because (1) there is insufficient land to create economically viable units, (2) the cooperative is producing plantation crops such as sugar which are generally more successful and efficient on a large scale, or (3) the members simply do not choose to do so. In such cases, the only alternative would seem to be to improve management. The problem is rapidly approaching the critical stage and will soon require decisive action.

The government should consider directing the Banco Agrario to implement a program of supervised credit for those cooperatives in financial difficulty, using their leverage over access to credit to assure adequate financial and administrative management. Where the necessary expertise is not available "in house", the Bank could contract with outside organizations for management assistance.

Over the longer term, management expertise will have to be developed within the enterprise itself. There are a number of ways in which this could be done, including establishment of special training courses by agricultural universities and ESAN. In addition, the government could set up a program to identify promising individuals from the cooperatives who could be selected for special training in Peruvian educational institutions or abroad. This would be an area where AID could usefully provide organizational as well as financial support.

The government should not subsidize the recovery of producer cooperatives which are failing financially. If they are not capable of being competitive and profitable by their own efforts, (with appropriate technical assistance), they should be allowed to fall into natural bankruptcy. This will permit other, hopefully more talented and aggressive, ownership and management to become involved.

Cooperatives in many instances appear to have become a pass-through welfare operation, with massive amounts of debt being forgiven by lenders. This probably has been done in recognition of the large number of landless laborers and cooperative members dependent on the cooperative for survival. The need to continue this type of welfare program (disguised as ligitimate debt but later forgiven) will remain as long as unprofitable cooperatives are sustained.

Not all cooperatives organized under the agrarian reform program are in a precarious position, but enough are (especially sugar cane and field crop co-ops) to suggest that the issue must soon be confronted headon.

Many of the beneficiaries of the agrarian reform program are personally ill-equipped to carry on a farming business. Their initial improved family income came about due to false perceptions of the profitability of the cooperative farm enterprise. Distribution of funds in excess of earnings apparently was paracticed regularly due to inept management, poor accounting, demands of members overriding management decisions, political sensitivity to the strength of the rural population, and poor administration of loans granted. Debt was treated as a substitute for income.

The present system of granting land virtually debt and cost free has led to serious abuse by some beneficiaries. Irrigable or irrigated land, one of Peru's most precious resources, is being converted to cash by such diverse activities as using top soil for the manufacture of adobe or kiln-fired bricks, sale of equipment, sale of farm buildings and improvements, and destruction of permanent plantings by conversion to firewood or charcoal. Addtionally, a great amount of permanent plantings appear to be abandoned and incapable of making a contribution towards Peru's need for foodstuffs and export earnings. Nor is cropland being farmed to its potential.

Agricultural production cooperatives have too often become violators of good land husbandry.

Present cooperative enterprises are costing Peru heavily in that: (1) welfare payments disguised as credit are a poor use of limited farm credit, and (2) the returns from assets -- principally land -- tied up in cooperatives are shamefully low and are continuing to decline, a trend which the country can ill-afford.

RESEARCH, EDUCATION AND EXTENSION

The REE (Research, Education and Extension) system currently is struggling desperately to recover from a period of suppression and decline. Fifteen years ago Peru had one of the strongest REE systems in all of Latin America. It is important to recognize that it is just beginning to recover from a period during which these services were deliberately dismantled, redirected and neglected. The relevant institutions were severely handicappped in fulfilling their traditional roles and, as a result, most of their programs were weakened substantially or disappeared entirely. Thus a current assessment of those institutions must be made in the context of that recent history, still reflected in staffing patterns, quality and direction of programs, administrative philosophy and institutional performance.

Given the importance of the agricultural sector in the total encomy, a strong research and extension effort is required. Special effort is needed to reach small farmers and to change their systems from subsistence to economically viable enterprises which contribute food to the marketplace and generate income to the farm family.

Considerable information is presently avilable for use in increasing yields and productivity. It is important to "package" that information into appropriate practices within the reach of all farmers. More importantly, farmers must have more than just information. They require technology appropriate to the farm system, timely access to production inputs (credit, fertilizer, chemicals, seed, etc.), and an efficient, competitive marketing system. If and when these elements are present in Peru, food production will increase. Weakness in any part of the production, marketing and consumption system will result in stagnant or declining production and high costs.

The research and extension system should give high priority to the testing of existing knowledge at the producer level, and to strengthening information delivery systems. There should also be close cooperation between public and private support agencies to address the special problems of small farmers.

Programs of the REE system should reflect national priorities in terms of commodity emphasis, geographic location, and economic importance. National goals with respect to agricultural self-sufficiency levels, trade balances, human nutrition, etc. must be translated into production policies which in turn affect research priorities. The present research programs do not seem to reflect an adequate relationship to such policy goals

Professional Staff

The single most important common denominator affecting performance of the REE system is the number and quality of professional staff. There is, throughout the entire system, a severe shortage of well-trained professionals to give leadership and dynamic direction to the various programs.

The largest concentration of well-trained professionals is located at the National Agrarian University, La Molina (UNA). It has a total of 40 Ph.D.'s (80% U.S. trained), 20 others with doctorates (not Ph.D.), and 106 with M.S. degrees (57.5% U.S. trained).

It is urgent for the short term that presently available talent from among the various institutions be mobilized into a cooperative effort to focus on critical priority areas. For the mid and longer term, a systematic and intensive program must be instituted to train scientists to fill key positions in the REE system. While costly, investment in advanced training is vital to the effectiveness of the REE institutions.

For the well being of the agricultural sector, it is imperative that government authorities give recognition to the importance of scientific talent. Highly trained professionals are a valuable resource. They must be accorded adequate salaries and work resources if they are to be retained. The alternative is a system whose staff is mediocre and unable to provide agriculture with needed leadership. The current salary structure is inadequate to attract and retain staff of that caliber.

Special provisions need to be instituted to bring salary scales of professionals more in line with competitive salaries for similar competence. At the same time, full-time staff should not be permitted to engage in activities which are in conflic with their official positions. Research and extension leadership must be chosen for its proven professional competence and not to satisfy polictical pressures.

Leadership positions in the research and extension services should be filled with career staff and not subject to politcal appointments. Nevertheless, scientists have an obligation to resolve urgent problems, to use resources efficiently and effectively, and to justify their programs on the basis of real impact in the field, not just on paper. Effectiveness of transfer of technology depends largely on quality of technology, ease of application, and economic relevance in increasing farm incomes or reducing risk.

A system of staff and program evaluations should be implemented, with professional advancement determined on the basis of proven contributions to agricultural productivity, marketing and related activities.

Funds and Budgetary Support

Almost without exception, institutional leaders in the REE system point to limited budgetary resources as a major constraint to their effectiveness. Although one might take issue with the "poverty syndrome" which is typical of many institutions, several obvious deficiencies do appear throughout the system.

Even though salaries are inadequate at the professional level, too high a proportion of resources go to salaries and administrative overhead. Operational funds are either not budgeted or are not made available. There is a great dependence on income from sales of products and services to support operational costs of research. This was observed in INIPA stations, at IVITA, and even at UNA. The practice of depending on sales income to support research is to be discouraged inasmuch as it leads to abuses, misinterpretation of functions as perceived by the public and, more importantly, distraction of professional staff time from their primary function of research.

As a minimum, the national budget must sustain core costs of staff and operations at a level to assure adequate performance of the system. Over expansion of the system beyond that which can be sustained must be avoided. This can be done only by avoiding duplication of effort among government agencies, careful delineation of priorities, the employment of staff who are truly essential to the RFE activity, and careful use of physical resources (machinery, apparatus, and supplies).

International funding can be enormously helpful in achieving desirable levels of operations, but these levels must be sustainable upon termination of external support. Externally funded programs which have ongoing budgetary implications beyond the grant or loan period should be carefully studied before they are accepted. There are examples of both good and bad assistance projects. Some have left important contributions and others simply deteriorate.

Growth in number and size of institutions should be limited to a level that can be accommodated to the national budget, giving priority to principal national institutions having responsibility for the sector.

No more than 70% of operational budgets should be allocated to salaries and administrative costs; the remainder should go for operations. Capital improvements and maintenance costs should be considered separately from operations in core budgets.

Budget implementation is a serious administrative constraint in INIPA. The current system appears to be unduly centralized, with complicated procedures for submission, approval, and payment of expenditure vouchers. There are 15 or more steps in the expenditure process at the level of INIPA administration and several more at the level of regional CIPA's. This staggering process reduces worker productivity and raises administrative costs. Administrative procedures must be simplified in order to effectively execute the budget. The budget implementation process takes so long that programs are impossible to carry out. Treasury should be able to advance lump sums to agencies, and expenditure authority should be decentralized.

Research Programs and Goals

INIPA must establish a set of priorities around which it can develop program thrusts. A clearly defined strategy must also be developed to achieve and measure progress toward stated goals and objectives. Donor grants and technical assistance, as well as international loans, should be rationalized within the framework of established priorities and strategies.

Within the framework of the Agrarian Promotion and Development Law, the Ministry of Agriculture has broad responsibilities in research, extension and marketing. Given the broad range of agroclimatic conditions and large numbers of crops and livestock species which can be produced, problems of developing the technological basis for increasing productivity are quite complex. Nevertheless, considering limitations in money and manpower, it is essential that clear priorities for major emphasis be established. (These priority areas obviously will include the major food products and those crops and livestock products with export potential.) Research and development goals are not clearly articulated, nor is strategy defined for accomplishing goals.

INIPA management recognizes the need to reduce the number of experiment stations. This objective should be supported even in the face of local pressures to increase regional and local activities. Alternative ways of meeting local research needs must be explored.

Collaboration between INIPA and other public and private institutions can be expanded. There are innumerable crop and animal species, forestry, and wildlife problems which need attention but are beyond the present scope of INIPA. As the lead research agency, INIPA should develop a total research strategy and encourage participation by capable scientists and institutions -- wherever they may be found -- in that effort. Althoug INIPA is expected to have a small fund of $1,000,000 to encourage cooperative research, it would be useful to consider including in the INIPA budget a line for Cooperative Research and Competitive Grants to directly support collaborative research.

INIPA has more than 50 contractual arrangements with international agencies. The institution must struggle with the many requirements of negotiations, management, execution and reporting for each contract. Many of the projects fit into priority needs, many do not.

Specific Recommendations

INIPA, as the lead research agency should immediatly establish national priorities and a program strategy.

INIPA should take full advantage of scientific and technical manpower located in various institutions which can contribute to overall goals of the research program.

A system of "selective acceptance" should be designed and established for contractual arrangements. The INIPA Planning Office should coordinate all internationally funded projects.

INIPA should move its downtown headquarters to a location more conducive to interaction with other agro-scientific institutions. The INIPA research staff should participate in promotion activities by conducting on-farm trials jointly with extension staff.

Extension and Promotion

The extension system recently was reorganized and began to function in September 1981. It is associated administratively with research in INIPA. The opportunity for providing effective technology transfer is thus enhanced. However, steps must be taken to make that association more effective. Professional leadership must be improved at all levels. Techniques and practices of the Service need to be expanded, strengthened, and in some cases reoriented. Effectiveness must be measured by the impact of extension on farmers and through improvement in the quality of life of farm families.

The extension program is based almost exclusively on the Training and Visitation system (Benor System). Extension and promotion staff are located at each CIPA and radiate from there to Zones, Agencies, and Sectors. The Service is headed by the Director of Extension, located in the INIPA offices at Lima.

Most of the staff of the Extension Service are inexperienced in field activities. Furthermore, although extension workers are supposedly fully integrated with research workers, in practice this has not occurred. Little research is conducted on farmers' fields. Although the concept of the Training and Visitation system is one means of conduting technology transfer, other procedures must also be used. There seems to be greater attention given to following the precepts of the Training and Visitation system than in what impact it is having in farmers' fields. Hopefully, the system will improve with time.

Cost effectiveness of the Training and Visitation system has not been addressed. Base line data of farmers to be affected is inadequate. There are not sufficient numbers of well-trained people to provide effective technical leadership. Nevertheless, it is important that current technology, which is adequate for many crops, be made available to farmers. The Extension Service also must address problems of access to credit and improvement of marketing procedures. Farmers must have timely information on credit and market opportunities if they are to increase profitability.

Radio diffusion is used, but not intensively enough. Other techniques for information transfer need to be developed.

Improvement of quality of leadership in the Extension Service is required. A few experienced research scientists, preferably at the Ph.D. level, should form a part of the cadre. Closer interaction between research and extension can be improved by involvement of both extension and research personnel in on-farm research. CIPA directors should insist on this practice.

Socio-economic aspects of extension activities should be strengthened, including the work with women.

National Agricultural Machinery Service

This service functions poorly and should be disbanded. The activity should be dropped from INIPA and be allowed to return to the private sector.

Education

There is no overall national plan relating to agricultural education. There is a surplus capacity for training general agronomists. There is a need to strengthen graduate education at the Masters level and to initiate Ph.D. programs in certain specialities at UNA. Greater use must be made of professional talent and research programs at UNA in development and use of technology.

There are 18 university level institutions providing education in agricultural sciences. Peru reportedly has more agronomists than Brazil. Most are trained for government service. None are trained specifically to enter into the private sector, such as in agribusiness activities. Only UNA offers graduate level education and that is limited to the Masters degree. With the exception of UNA few universities conduct research of consequence.

At the present time, the greatest concentration of Ph.D. and M.S. level agricultural scientists is found at UNA. They have an important contribution to make in science and technology. They do not have the vehicle to diffuse that information to farmers. The linkage to the national research effort of INIPA must be strengthened. Not enough use is made of joint appointments, joint projects, and joint strategies toward problem resolution. Although a certain degree of competition is desirable, this must not stand in the way of effective collaboration.

The capacity of UNA to provide adequate graduate education should be strengthened and some Ph.D. programs should be initiated.

Training should be initiated in agribusiness and the number of undergraduates in agronomy should be reduced. Thought should be given to reducing or eliminating undergraduate training at UNA and providing expanded graduate training opportunities for students from other universities.

AGROINDUSTRY

Throughout this report we have attempted to recognize the interrelationship between production agriculture and what Peruvians call "agroindustry". The latter term refers to the composite of agribusiness entities which provide processing, transportation, and marketing services to products as they move from the farm to the consumer. We have emphasized the importance of a healthy, competitive agroindustrial sector. Fortunately, the Peruvian Government has also recognized its importance and has taken impressive steps to stimulate agroindustrial development. This is particularly true of the non-coastal areas where agroindustries are badly needed, but are now only embryonic in development, growth and sophistication. (There are exceptions, of course, and we saw some fine agroindustries in both the sierra and selva. But these are still few and far between.) It just does not make good economic sense to transport large quantities of agricultural raw materials from the sierra and selva to the coast for processing, and then re-transport a portion of the finished goods from the coast back to the sierra and selva for consumption. Some of that will inevitably occur, and some may even be economically feasible, but today this process is slow, costly, and terribly wasteful.

The Peruvian Government has responded to this need by providing a myriad of tax incentives for agroindustrial development, particularly in the selva. These are incorporated in the Agricultural Promotion Law of 1980, a most creative piece of legislation. The incentives are meaningful and far reaching, and they should pay major investment dividends for Peru as a nation.

A second government response has been through the creation of PRIDI, a program under which promoters will be encouraged to make agroindustrial investments in certain designated areas of the country, with part of the properties ultimately to be sold to producers. It is assumed that the final buyers will be contract growers for the plant that has been constructed. Presumably the plant would then be operated and managed by the growers either as a stock company or as cooperative.

We believe that PRIDI is sound in concept but that it has some of the same bureaucratic shortcomings as the marketing program, PROCOMPRA, which we discussed earlier. Both programs are more elaborate, complicated, and costly than should be necessary in this stage of Peru's agricultural development progress. Our counsel is to keep programs such as this simple, flexible, and with a very low administrative budget. This will prevent creation of a bureaucracy that has a vested interest in continuing the programs forever.

The Agricultural Promotion Law provides such attractive investment opportunities that PRIDI may not be necessary. We believe that agroinstry investment will take place in the outlying regions of Peru, and we are especially attracted to the potential of the upper selva. Once the Carretera Marginal is completed, side roads should evolve, and this area should demonstrate tremendous economic growth.

Agroindustrial expansion is not, however, automatic. It will require the personal attention of high level government officials, including Minister Ericsson, the leadership of appropriate financial institutions, and even President Belaunde himself. The challenge is to convince Peruvians (individuals and institutions) who now live comfortably on the coast to place their venture capital in the sierra and the selva rather than in safer places in Lima, Switzerland, or elsewhere. The Peruvian Government must do some creative thinking as to how this challange can best be met. One way, for example, would be to hold some one-day seminars "on site" in the selva. A selected group of potential investors could be invited to attend, observe the investment potential, learn of the incentives and advantages that are available, etc. The investors could even be transported to the seminar by government aircraft.

Another way is for the government to provide demonstration projects on a commercial scale, such as was done with palm oil in the upper selva. A governmental investment of this magnitude in order to "show the way" for private industry should not ordinarily be necessary. But at times this may be the only way to entice private sector interest. The palm oil project achieved that objective, so it may be worth repeating for a limited number of other products in other locations.

Similar attention should be given potential foreign investors, for Peru is operating in a competitive environment for foreign capital. Nearly all developing nations are today seeking to entice foreign capital to their shores, and Peru will have to build a more persuasive case than the others. This too may require some of the time and personal attention of President Belaunde and other high level Peruvian officials during their foreign travels.

Tax incentives and promotional programs such as PRIDI will help, but agroindustrial development requires more than that today.

Institutional Constraints on Agroindustrial Investment

The process of incorporating a new Peruvian company has improved in the last few years. It is now no more cumbersome to incorporate a firm in Peru than in the United States, with one exception. Peru maintains an archaic system of requiring hand-inscribed public documents. This delays what is otherwise a relatively smooth process. .

A corporation doing business in Peru can be 100% foreign owned, but as such, it is subject to a limit on the number and duration of expatriate employees. Neither can it enjoy some of the subsidy benefits under the Andean Pact. Land in developed industrial parks can be purchased and sites for agroindustry projects can be obtained in specified rural areas.

When a new agroindustry is formed it is assigned a priority class. This classification has a substantial impact on tax treatment and the availability of financing.

First priority is for steel, cement, paper, petroleum, and energy projects. Food processing, construction, consumer goods, and wood products projects are assigned the next priority. This qualifies the enterprises for special tax incentives and makes available foreign exchange so that imported capital goods can be brought into the country.

A newly formed company exporting non-traditional goods is entitled to a cash rebate of 20% of the value of the shipment plus another 10% bonus which it shares equally with the city of domicile. The city rebates 3% to the national government for trade promotion activities. Hence, the net rebate to the company is 25% of the value of its exports, a most attractive situation.

Jurisdictional issues can, however, prove to be a constraint on investment opportunities. For example, the government has placed certain industries under the Ministry of Agriculture. But when these same industries are located in an urban area, the Ministry of Industry has jurisdiction. There are somewhat dissimilar objectives in the two ministries relating to control and administration of agroindustry, and these sometimes come into conflict. Consequently, it would be desirable to place all segments of the country's food and fiber system under a common policy administered by one ministry. For both domestic and foreign investors, this would reduce the bureaucratic confusion which exists today.

Banks should also be encouraged to participate with one another in agroindustry loans and/or sell corporate drafts that have been "accepted" by banks to each other or to the investing private sector. Selling off or syndicating a large loan reduces the originating bank's exposure. Selling acceptances restores the selling bank's liquidity.

Foreign Exchange Rate Policy

The exchange rate of the Sol is a major factor in determining agribusiness incentives because of the relative competitive importance of foreign trade. The government has announced a policy of continued mini-devaluations which would avoid any further overvaluing of the Sol. Maintenance of the relative purchasing power of the Sol is a key element in maintaining the efficiency of a free market pricing system and in encouraging new agroindustrial investment.

CONCLUSION

There is much to be done if Peru is to have a truly viable, competitive, and prosperous agricultural sector. It will not be easy, and it will not occur overnight, no matter how strong or effective Peruvian leadership may be. Patience will be required on the part of both Peruvian farmers and consumers. But the potential is there; future progress is a matter of execution.

Hard decisions will be required. We have made a multitude of recommendations, many of which will be politically difficult to implement, administratively difficult, or both. Nevertheless, we are optimistic, for we are impressed with the quality of political leadership which prevails in Peru today and the positive attitude which pervades the entire agricultural sector.

As members of the Reagan task force, we hope our comments are constructive, practical, and useful. We wish our Peruvian friends every success as they tackle this enormous but exciting agricultural development challenge.

THE U.S. PRESIDENTIAL AGRICULTURAL
TASK FORCE TO PERU

Dr. Clayton Yeutter
Frank R. Light
Walter W. Minger
Dr. John A. Pino
Robert L. Ross
James H. Starkey

Dr. Fred Mann (staff support)

APPENDIX A

THE WHITE HOUSE
Washington

April 6, 1982

Dear Mr. President:

I am extremely pleased that you have invited a Presidential Agricultural Task Force to your country, and that Clayton Yeutter, as head of the Task Force to Peru, is able to deliver this letter to you firsthand. As you know, I initiated these task forces after my discussions at Cancun which drew attention to the need for improved domestic policies and programs to stimulate agricultural production.

The scope of work developed jointly by United States' and Peruvian professionals emphasizes clearly the need to develop strong private sector and technology responses to urgent food needs. Mr. Yeutter has extensive private sector experience at the highest levels. He complements that experience with considerable background in both the public and university sectors and is, therefore, uniquely qualified to lead an effort which will require the closest coordination and inter-action among all three sectors. The remaining members of the team also possess the highest possible credentials in their respective fields of expertise, including the development of agricultural research policy and strategy.

I am particularly pleased that Peru, having returned to democratic government in June 1980, will receive the first task force being sent from the United States following the discussions at Cancun. I look forward to the results of this joint effort, and wish you and your country every success in the future.

With warm personal regards.

Sincerely,

/s/ Ronald Reagan

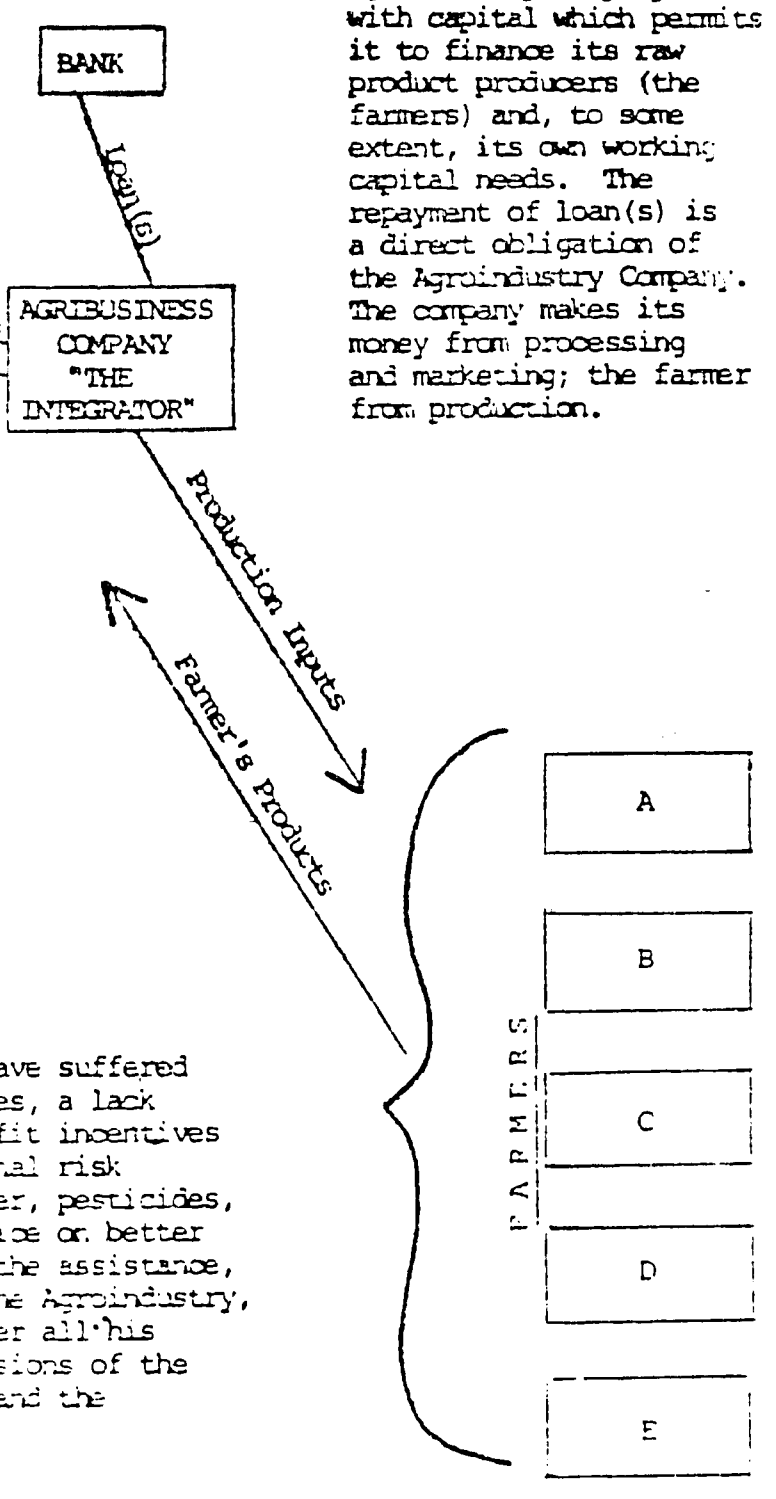
His Excellency
Fernando Belaunde Terry
President of the Republic of Peru
Lima

APPENDIX B

A "LINKED CREDIT" SCHEME

The Agroindustry Company is a proprietary entity involved in providing inputs to farmers such as seeds, fertilizers, pesticides, breeding stock, animal feeds, animal pharmaceuticals, living supplies and possibly some temporary cash income. It could also provide technical assistance and added value to the farmer's raw product through processing, transportation, and marketing. This entity must have a good operating history, an adequate staff of technically competent people, and access to good markets for its partly processed or finished products. It would provide growers with either cash or in-kind inputs needed to produce the raw product and the necessary production advice to improve the farmer's chances of growing an acceptable product with adequate yields. Prices paid for the farmer's raw product must reflect an attempt to stimulate production through profit incentives. The company should have a market presence which requires the farmer's production to enhance its marketing efforts.

The Bank provides the Agroindustry Company with capital which permits it to finance its raw product producers (the farmers) and, to some extent, its own working capital needs. The repayment of loan(s) is a direct obligation of the Agroindustry Company. The company makes its money from processing and marketing; the farmer from production.



The Farmer is a producer who may have suffered from poor market outlets, low prices, a lack of adequate credit, and meager profit incentives to encourage him to accept additional risk (buying better seed, more fertilizer, pesticides, etc.). He is badly in need of advice on better ways to do things. In return for the assistance, inputs and/or cash received from the Agroindustry, the farmer would contract to deliver all his production to the firm. All provisions of the contract between the agroindustry and the farmer must be strictly observed.

APPENDIX C

AN ARRANGEMENT FOR DEVELOPING PERMANENT TREE PLANTINGS

Under the present system, a land owner can obtain Banco Agrario financing for the development of permanent plantings of tree crops. Banco Agrario will advance development funds as needed and defer payment of principal and interest for up to three years, after which the loan and interest (interest has accrued on a simple interest basis over the three years grace period - a subsidy) payments must be made annually over the next five years or so.

This proposal suggests that an industrialist who has subtantial nonfarm income subject to tax would find it beneficial to advance funds to the farmer to plant the trees. The field operations - land preparation, fertilization, pruning, spraying - all are the responsibility of the farmer. The industrialist can shelter his nonfarm income by investing in trees, trellis, stakes and other additions (above ground) to the land.

The industrialist owns the trees. The farmer continues to own title to the land.

Once the trees come into bearing, the farmer pays the industrialist a fee for the use of the trees during their productive life. This scheme provides quasi-equity to the farmer when he lacks sufficient equity of his own to carry out such an operation.

The industrialist receives his tax shelter and return of capital over time.

The farmer has a higher income enterprise and can expense as normal operating costs the fees paid to the investor.

Apparently in Peru there is no legal prohibition against paying for the use of trees, only for the rental of land. Hence, this should be an acceptable financing alternative for the farmer by which he would use Banco Agrario for normal seasonal financing and other investors (e.g., an industrialist) for his medium to long term needs.

Since the quasi-equity thereby acquired by the farmer requires no cash flow, cash demands usually associated with long term development through borrowing are eliminated during the early stages of orchard development until the trees begin to produce. Not only would there be no requirement to fund the development phase with credit, the interest subsidy presently provided by Banco Agrario also would be eliminated. Limited bank funds are thereby freed for expanding short term lending to others.