MEMORANDUM Date: July 21, 1969

TO : Mr. Lawrence E. Harrison, Director, USAID/Costa Rica

FROM : Judith Tendler

SUBJECT: AGRICULTURAL SECTOR LOAN FOR COSTA RICA

During the month of June 1969, I interviewed various Costa Ricans involved in the agriculture sector to find out, as you requested in your June 3 memo to me, how they view trends in the sector, how much of a consensus there is for change, for what changes does a substantial consensus exist and over what changes is there substantial disagreement, and how they think A.I.D. resources could be used to meet agricultural needs and facilitate the consensus building process. I met with the following persons:

Oscar Collado, Director of Rural Credit Dept., Banco Nacional de Costa Rica
Richard Hislop, President of Fertica, Costa Rica
Rodolfo Cortes, Mayor of Turrialba
Enrique Uribe, General Manager of Mas X Menos
Eduardo Lizano, Facultad de Economía, Universidad de Costa Rica
Carlos Quinta Ruiz and Carlos Carter Villegas of ITCO
Bolivar Salas Castillo, Manager of Financiera de America
Jorge Campabadal, Vice President, Bank of America
Jorge Sanchez Mendez, General Director of Economic and Commercial Integration, Ministry of Industry and Commerce
Alberto Gonzalez, Agroindustrias TORO, S.A.
Rogelio Aguilar, City Councilman
Rudy Venegas, Consejo Nacional de Producción
Claudio Volio, General Manager, Banco Anglo
Claudio González, Facultad de Economía, Universidad de Costa Rica
Carlos Saenz Pacheco, Facultad de Economía, Universidad de Costa Rica
José Manuel Salazar Navarette, Dean, Facultad de Economía Universidad de Costa Rica
Robert Hunter and Robert Vogel, Associated Colleges of the Midwest

Armando Echevarria, Director, Cooperative Department, Banco Nacional de Costa Rica
José Raventos
Alvaro Cordero, Dean, Faculty of Agronomy, University of Costa Rica

In addition, I made the following field trips:

to Limon, Edwin Gonzalez, Director, Regional Center of Ministry of Agriculture, Limon Province
to Guanacaste, Geraldo Brenes, Regional Agent, Fertica
to pineapple plantation in Buenos Aires, Rodolfo Acosta, Agronomist, Fertica
to Trinidad in San Carlos Valley, Alfredo Ruiz, ITCO
to Mercado Borbon, Luis Alberto Mora, Mas X Menos
to San Antonio de Belen, Jose Manuel Vargas, Deputy Director of Rural Credit Dept., Banco Nacional de Costa Rica

The following impressions may well be distorted by the fleeting nature of my contact with the persons interviewed, and should probably be checked against the impressions of those who have a more continuous experience with the agricultural sector.

In only a few cases did I find a sense of urgency about questions of agriculture--whether they concerned the declining rate of increase of food production, the low yields of Costa Rican agriculture, the problem of squatter families, or the increasing competition in agricultural products from other CACM countries. I encountered no controversy, no acrimonious debate. The most common themes as to what money should be spent on were quite unspecific and not unusual: (1) more credit (2) more technical assistance (3) a more pervasive extension service with better salaries and more vehicles. There were several complaints, mostly from bank officers, about the credit ceilings imposed by the Central Bank.*

* The BNCR said that on the basis of their current demand and savings deposits, they could increase their loan portfolio by ¢ 50 million (10% of the current portfolio) if it weren't for the Central Bank ceiling. The growth of demand deposits in recent years, they said, had been impressive.

I heard almost no complaints from farmers or officials about the marketing problem, the "intermediary problem," or the Consejo de Producción, although many complained about price fluctuations in fruits and vegetables. The ITCO effort at land colonization was generally criticized, because of the politication of the Institute and the lack of adequate financial foresight. The concern for the landless rural poor and the small farmer that generated the founding of ITCO seemed to have receded with that era.

Even the more thoughtful Costa Ricans with whom I discussed agricultural problems had not formulated conceptions of what was particular to their country in terms of agricultural problems and opportunities, in contrast to those phenomena which were general to most developing countries. I found no institutional focus of concern about the agricultural sector or center of ideas and experimentation. Técnicos didn't seem to be thinking about agriculture on a sector level as a group of problems that could be attacked in several ways. Agricultural policy-making, in turn, seemed to be a series of discrete decisions reflecting various interest-group pressures--a rather frequent phenomenon in the agricultural sector of many countries. The general lack of concern about the sector is probably related to a certain extent to the country's impressive performance in traditional agricultural exports during the last few years.

Because my interviews yielded little new information outside that available to A.I.D. about the questions you asked, and few new ideas, I have not attempted to present a comprehensive report here, but have concentrated on four areas which seemed worthy of some exploration and further attention on the part of the Mission. I regret that the time allotted to this assignment did not allow me to investigate further many of the points that are raised here. I hope that they will be considered as doubts raised, and that curiosity about them will provoke further investigation. The discussion incorporates most of the factual information I learned from interviewing. I proceed on the basic assumption of Mission agricultural analysis and interest: that an A.I.D. project should attempt to attack the twin problems of the low agricultural productivity which characterizes most Costa Rican farms and the particularly urgent plight of the small farmer.

I

Many students of Costa Rica's agriculture have expressed considerable concern over the percentage of total agricultural credit that goes toward the production of coffee. This undue incentive to coffee production, it is believed, threatens the economy with excess supply in relation to fixed international quotas, limits the responsiveness of the agricultural economy to favorable price and cost incentives in other products, and tends to perpetuate the political and financial dominance of the coffee interests in the Costa Rican economy.

The concern over this concentration of credit tends to overshadow an important characteristic of the coffee-credit economy related to small-and medium-size farm production. That is, though concentration of total agricultural credit on coffee may have locked the economy into this crop to an undesirable degree, this concentration has at the same time resulted in an unusual system of guaranteed credit and purchase to the small and medium, as well as large farmer. The guaranteed access of the smaller farmer to the coffee credit and marketing system--along with the suitability of Costa Rican terrain to small and medium-size production units for this major export crop--has probably made a significant contribution to the fact that the inequality of land distribution in Costa Rica, while still significant, is nonetheless considerably less than in other Central and South American countries.

Costa Rica's coffee quota is distributed among the country's 127 processors, rather than among the producers or exporters. Credit for purchase of this coffee is allocated accordingly among the same processors, who, in turn, advance it for the harvest to their various producer-suppliers. The processor must buy from the growers at a price fixed by the Government Coffee Office.

Although this system may create some monopsony power* on the part of the processor over his suppliers, it nevertheless decentralizes the banking function in an important way, disseminating it throughout the coffee-producing areas. The lender-borrower relation is less distant and formal than it is for other types of credit, and the lender-processor, by nature of his business, is well acquainted with the producers of the region. The processor, as credit intermediary to the banking system, serves the important role of channeling credit to the smaller farmer;

* Monopsony and oligopsony refer to the case where there is a single or few buyers of an intermediate or final good, in contrast to monopoly and oligopoly, where there is a single or few sellers of an intermediate or final good. In both cases, the fewness of the buyers or sellers endows them with a power over their sellers or buyers that they otherwise would not have.

Although one couldn't characterize the Costa Rican processing industry as monopsonistic--since there are 127 processors--the individual processor-grower relationship most likely reflects features of monopsony. This would be especially true of the small farmer, who may not have the transport services to switch his business from one processing plant to another. Clearly, the fixed price set by the Coffee Office probably limits exploitation by the processor of his monopsony power in the area of price, but there are no doubt other areas in which such exploitation can occur. This is particularly true because of the tendency of the crop to be on the verge of excess supply, which endows the processor with the power to ration the "scarce" quota.

this is something that the banking system would find it much more difficult to do, given its normal lack of interest in small-farmer transactions, and given its lack of a familiarity with the small farmer which frequently can serve as a basis for judgment of creditworthiness in lieu of more conventional guaranties. All this is important in providing to the smaller farmer an unusually secure credit, marketing and price position in a sophisticated market.

I cite this example of the coffee-creidt operation not to contradict the argument against the distorting allocative effects of the coffee credit concentration in the Costa Rican economy, and not to overlook the undoubtable abuses of monopsony power that it allows, but rather to illustrate the strong production-incentive effects that a guaranteed credit and market system can have on small and medium-sized farming. Indeed, given the absence of such security for the small farmer in other crops, the best way to encourage these farmers to plant other crops might be to recommend first that they plant coffee. By sowing a part of their land in coffee and the rest in a crop that may offer higher returns* but at a greater risk, the farmer insures himself through coffee against the risk of complete loss, while at the same time being able to pursue the more risk-laden chance of higher returns. The guarantees of the coffee-production system could provide the cushioning to the small farmer that are taken care of for the large farmer by the diversification of his investments, his access to the banking system, and/or reserves of capital.

Just such a division of cropping between coffee and another product seems to be taking place in the ITCO colony of Trinidad in the San Carlos Valley where settlers are planting coffee and plantains. They plant coffee, they say, because their credit and sales are guaranteed; they undertook the cultivation of plantain upon learning that Standard Fruit would buy their production--though not on a guaranteed basis and not at a fixed price--for export to the United States. The resulting complementarity of the two operations is illustrated by the fact that the growers decided to form a marketing cooperative so as to obtain a better price for their plantains; with the savings, they bought a coffee-processing plant. (Because of the low altitude of the region, the colonists plant the lower quality Brazilian-type coffee rather than the higher quality variety which Costa Rica exports; thus they sell their coffee on the domestic market only, where prices are lower than those for export.)

* According to John L. Bieber's study, "An Economic Analysis of Diversification of Coffee Producing Areas, Costa Rica," coffee generally, often by an ample margin, returns more than other crops. Vegetables and some fruits are the only significantly more attractive alternatives but, of course, confront far more difficult production and marketing problems.

The case of coffee suggests that it might be important to select particular crops for emphasis not only according to an evaluation of their costs and market perspectives--as, for example, is the basis for the current interest among some technicians encouraging the financing and planting of cocoa by the small farmers of Limon Province --but also with reference to workable institutional settings for production and marketing. (The obvious corollary is the importance of creating such institutional settings for crops which are potentially profitable and one to be emphasized.) That is, for the small and medium-size farmer, neither the economy nor his own "firm" can provide access to credit or to the market, nor financial cushioning against possible failure--all such attributes being an inherent part of the economic rationale which assumes that the firm will and should respond to certain price and cost incentives. Hence the small farmer in Costa Rica will respond to production incentives only when these scarce attributes are somehow inherent in the technical and institutional character of a certain crop--as in the case of coffee--given the fact that neither the economy nor the farmer's own productive situation makes them available.

In order to make economically rational to the small farmer the planting of new crops, or productivity improvements, it may be necessary to recommend crop combinations which together provide an adequate context of security and possibilities of gain. The coffee-plantain combination is such a case, where two crops are simultaneously planted in space. One could also think of favorable combinations in time; for example, the cigarette manufacturing companies of Costa Rica provide fertilizer on favorable terms to their tobacco grower-suppliers. After the harvest, there is enough time left in the year to harvest another type of crop; hence the farmers again use the fertilizer-improved land to grow other annual crops which they sell directly on the market. As in the coffee-plantain case, this is a combination of assured sales, credit, etc., in one crop (along with the possibility of the disadvantage of selling to a monopsonist) and risk-taking with the possibility of high gains in the other crop. The coffee and tobacco cases allow the farmer to spread the benefits accruing from his dependence on the monopsonist to his "independent" crop. In this way, he becomes less victim of the financially injurious power that the monopsonist may hold over him (buying for low prices, giving credit and supplies at high prices), while at the same time utilizing the monopsonist-supplied benefits to further the production of an "independent" crop.

The current Costa Rican boom in banana-planting, stimulated by the fixed-price ten-year purchase contracts offered by the large foreign exporting companies, is different in an important way from the cofee and tobacco cases described above. Bananas, unlike tobacco, are not annual crops that can be followed with other plantings. Moreover, unlike coffee, bananas are best planted on a large scale, which causes simultaneous planting of other crops to be unatrractive. Thus bananas are a case of new production being stimulated by guaranteed sales, credit,

and supplies with complete dependence on the monopsonistic buyer and no opportunity or lure to escape it. In short, the monopsony of buying in bananas--in contrast to that in tobacco or coffee--has not been conducive to simultaneous experimentation in other crops, because of the character of the very crop involved.

It is the above type of crop characterization that should be taken into account, as well as costs in prices, in the selection of crops for recommended innovations or massive credit programs. In order to achieve certain macroeconomic results--namely, an increase in the economy's food production--the decisions made as to which crops to promote, how, and with what kind of monetary incentives must be based on a microeconomic rationality comprised of the combination of prices, costs, and guarantees which will stimulate the farmer to increase his production.

Some of these desirable crop attributes are not inherent in the nature of the production process itself, but have emerged as government policy with respect to a particular crop. For example, it is inherent in the production process of high quality coffee in Costa Rica that it is economic to produce on a small scale and process on a larger scale, which naturally tends toward competition and small production units in production, and monopsony or oligopsony in processing; on the other hand, national and international politics have determined that coffee be bought in fixed quantities at fixed prices, and hence credit is almost naturally allocated accordingly.

The policy-determined type of crop "characteristic" does not, of course, have to be taken as a "given" in trying to arrive at a unified agricultural sector strategy. But agricultural interest groups are quite strong in determining such policy decisions--witness our own country. Costa Rica is a much less diversified economy than that of the U.S., and a much smaller country, with a correspondingly smaller array of counterforces that will react against the pressures on agricultural policy by any one interest group. Given the strength of these favored agricultural interest groups, and the absence of major political controversy on such issues, it is probably not feasible to expect that an A.I.D. loan could be a strong enough political counterforce to government decisions to subsidize certain growers at high prices--e.g., the rice growers.

A.I.D., of course, can stand ready to back a program based on policies that attempt to introduce rationality and innovation into the agricultural price and credit picture. Barring this, however, the outlook may not be that hopeless. The above discussion of coffee is meant to suggest that one can "exploit" the "irrationalities" in agricultural policy for the benefit of encouraging the type of production changes that may be considered desirable; that is, one can let the farmer fall back on the overprotected crops for the financial protection that is basic to his willingness to plant other crops.

The case of rice, by the way, may be less applicable than is coffee. That is, it probably can be shown that the support price for rice is much greater in relation to costs than the support price for coffee. Moreover, rice is less economic in small-to-medium-scale production units than is coffee. Finally, credit may be more guaranteed for the coffee grower than for the rice grower. Hence, coffee is more suited as a small farmer "base of operations" for other crops in that the support price is not so high as to make other crops totally unattractive (as may be the case for rice), the credit is more assured than for rice (which makes the planting of other crops less risky), and the economies of scale in coffee-planting do not make concentration on coffee only as attractive as it would be in rice (thus making it desirable to plant other crops).

All this is to say that we should try to incorporate the lessons of the overprotected crops in our decisions as to how food production can be increased in Costa Rica. The cases of rice and sugar, for example, are excellent "lab experiments" in successful production promotion. We should look at them carefully, asking questions such as: how were the generous price incentives transmitted to the producer? what type of producer responded and was able to benefit from the price supports? was such an extreme incentive necessary to generate decisions to produce, even on the part of the most efficient growers who now could manage with a lower support price (i.e., is the initiation of production of these crops in some way an indivisible or lumpy financial undertaking that will not be forthcoming without an abnormally high initial support price)? were there other elements aside from price that allowed access to this favored market only to certain producers (e.g., limited credit)? did this price-supported production expansion cause any significant changes in the economic, social, and institutional conditions of the region? In short, what were the lessons for us of this experience in transmitting production incentives through the price system--regardless of how inefficient the incentive may now seem to be--and can any of these lessons be applied in our program?

We do not have to limit ourselves to "using" the overprotected crops as a basis for stimulating production of other food crops. We should also consider a system of assurances that, although not as extreme and inefficient as the prevailing agricultural subsidies, would try to copy the effects that this overprotection has in promoting production. There are various programs in operation today in Latin America which in one way or another recognize the importance of the guarantee against risk as a basis for inducing farmers to increase or change their production. The Mexican government, for example, sponsored the establishment of a crop-credit insurance system, now a self-supporting private sector operation; the farmer pays a small premium attached to the interest payments on his credit which covers the insurance of his credit against climatic and other risks.

Because the Mexican system provides insurance on the credit rather than on the harvest, such a program might well exclude the small farmer, in that it would be automatically limited to those who have access to credit. At the same time, however, the existence of such insurance might induce the banking system to be less conservative in considering credit applications, since the insurance would cover a substantial part of the risk of default. This would depend on whether the total supply of agricultural credit is scarce, as it seems to be in Costa Rica; in this case the credit would be rationed out to the most well-to-do, no matter how much the risk of default is diminished by such an insurance scheme. The scarcity of credit supply in Costa Rica and its relative cheapness will cause it to be rationed according to "black market" prices--e.g., the borrower agrees to hold higher balances at the lending bank, the borrower does a personal favor for the lender, etc.

It may be, then, that the Mexican type of insurance scheme would not get at the problem of changing and expanding food production in Costa Rica, in that it simply lowers the financial risks for the operations of the current beneficiaries of the existing credit system. Moreover, such insurance would be neutral with respect to inducements to change and expansion, even among large farmers, since it is usually available only for protection against unpredictable natural events like drought.

Even if such a scheme were accessible to the small farmer, it might fail to touch key areas of risk which are significant obstacles in preventing him from producing commercially, planting newly profitable crops, and improving his production techniques--that is, the risk of not being able to market or process his product at a sufficient return. On the other hand, although a credit or crop insurance system makes sense for a limited and definable set of risks--like floods, volcanoes and droughts--it may be unrealistic to think of a system that would cover additional risks such as those mentioned above, since it would then have to be defined so as to cover almost all loss. The scheme might well end up supporting heavily the inefficient producer, and would act at the same time as a disincentive to the improvement of production techniques. An alternative might be to limit such a scheme to certain crops and a certain size of producer; but this might be impractical if actuarial considerations required that the insurance program apply to the general bank credit system.

In order to limit the risks to the small farmer of innovation and improvement, it might be more efficient to subsidize directly the affected crops and/or producers. Although this approach is not as attractive as a self-paying insurance scheme in terms of public finance, it would on the other hand aim more directly at the target that the strategy is devised to hit. That is, instead of trying to protect the small farmer by insuring him against natural disaster, one should devise a scheme whereby the very risk-taking elements of the desired productive behavior are insured against.

Fertica uses such an approach to promote the sale of fertilizer in Costa Rica. The company makes the following offer to the non-fertilizer-using farmer: they will finance the entire cost of fertilizing a crop, to be undertaken with their close supervision, and the farmer will repay the costs of fertilization only when and if the return from his increased yield is at least equal to the extra costs. This arrangement makes innovation completely costless to the farmer.

The company at first would get the farmer's permission to take over an acre of his farm for a demonstration fertilized planting; but it was discovered that neighboring farmers, as well as the experimented-upon farmer, were suspicious of a "demonstration acre"--believing that the company had surreptitiously snuck in more fertilizer than it charged for, or a different kind of seed. Thus the company changed its promotion strategy, and now tries to find the most innovative farmer in a region and convince him to apply fertilizer to his whole crop, offering the same financing guarantee. It was found that the credibility to the neighboring farmer went up considerably with this type of demonstration. Fertica is now engaged in such a program for fertilization of grazing lands in Guanacaste; the results, they say, produce a tripling of the number of head of cattle that can be grazed on an acre of natural pasture.

In its fertilizer promotion work, Fertica does not work with farmers who have less than 200 manzanas, because, they say, it doesn't pay. If it takes this kind of combination of credit and risk guarantees to induce the larger more innovative farmers to innovate, one can understand what a difficult and costly task it is to induce productivity increases and other changes out of the small-and medium-size farmers. The small-farmer lending program of the Juntas Rurales of the BNCR (A.I.D. financed) does not resort to any such innovation-guarantee approach. This leads one to suspect that the program may have resulted in the stabilization of inefficient, non-innovative farm practices on the part of the small percent of the rural population assisted with this credit, notwithstanding the exceptional "star"cases. (The BNCR estimates that its Juntas Rurales credit reaches 15-25% of the farm families in Costa Rica.)

As part of any attempt to devise a feasible guarantee system, some evaluative work should be done on the "success stories" of the Juntas Rurales, to see what particular combination of credit, technical assistance, etc., calls forth the kind of economic behavior that we are interested in. In determining the proportion of A.I.D. agricultural sector funds to be spent on technical assistance, marketing, credit, education, etc., it is paramount to find out what combination of these services supplied at the individual farmer level is most effective.

Unlike loan projects which provide for the creation of infrastructural services like power, roads, and education, the proposed

project must be designed so as to induce a certain type of productive behavior. Even if a road is poorly built, or even if a power plant turns out to be more costly than it need be, it will still represent an addition to the country's capital stock, which will almost automatically be used and give rise to increases in production. In the case of an agricultural project like this, however, there is no certainty that the money spent will automatically give rise to an increase in wealth. The very design of the project is crucial in determining whether it will be "used" or not, and whether it will give rise to a positive or zero contribution to the country's wealth. That it why it is important to find out what combination of agricultural services the individual farmer is responsive to, as well as determining the kind of agricultural production and land tenancy pattern that is economically desirable for the country.

As an example of the above, there is some evidence from the Juntas Rurales program, as well as from the experience of other institutions like the Banco Anglo, that the acquisition or remodeling of the small farmer's house, financed as part of a broader line of agricultural credit, has an important effect on increasing his productivity and changing his acquisitive attitudes. In such cases, the farmer often had to be persuaded by the bank that such an investment was important.

Another such example is the promotional practice of fertilizer companies in Costa Rica, who allow small farmers to use part of the fertilizer credit they obtain for the purchase of consumer durables, or for simple daily expenses. The bank grants a credit for fertilizer purchase to the farmer in the form of notes which he can exchange only for fertilizer. The fertilizer companies, in order to compete for customers, are willing to exchange a certain part of these bank notes for cash rather than fertilizer.

Fertica claims that it does not resort to this tactic because it subverts the concept of granting credit to the farmer to improve his productivity. It could turn out, however, that some combination of production and consumption credit is more an incentive to increased productivity than production credit only. There is some evidence that the acquisition of consumer durables by traditional farmers is an important part of their transformation to more acquisitive, market-seeking, and innovating types.

All our projects in the field of agriculture should be designed to feed us regularly information that will provide clues to the processes of change. In agricultural credit loans, especially, normal bank requirements of written reporting about every client represent a built-in system for continuous transmission of information that should be put together and evaluated by us from time to time. Because our insight into the process of agricultural change and growth is so limited, and because these processes are often quite specific to the region or

country involved, we must consider the information-producing value of these projects just as important as their wealth-creating potential.

For example, our financial participation in the Turrialba diversification project is worthwhile not only if the new products are grown and marketed successfully, but more important, if we are left with a complete accounting of the combination of financial incentives and guarantees that convinced the farmers to innovate, and a precise account of the costs they incurred in relation to the opportunity costs of the land and capital they committed. With this kind of feedback, we would know not only how one particular set of diversification crops fared, but the country would have some indications as to how to induce such productivity changes in other areas, among other farmers, and with other crops.

II

One fins a widespread feeling among Costa Rican officials and técnicos that the absence of intelligent government activity in the agricultural sector is due to the weakness of the Ministry of Agriculture. Salaries of ingenieros agrónomos are 10-20% lower than engineers' salaries in other government sectors, not to mention the private sector, where one cannot expect that government salaries could compete. In a profession where residence and travel in the field is essential to performance effectiveness, honorarium are low and "hardship differentials" virtually do not exist; vehicles are often in short supply. The agronomists of the Agriculture Ministry, it is said, leave their offices promptly at 5:30 p.m., and don't like to spend time in the field.

Costa Rica is not unusual in having a weak agriculture ministry. Most countries do, regardless of the productivity of their agricultural sector. But two factors make it seem worthwhile to concentrate some part of this project on improving the quality of the Agriculture Ministry. First of all, though one always hears complaints about the ineffectiveness of the Ministry, one never hears complaints that it is politicized--a comment often heard about ITCO, the land reform institute. Hence, there is the "neutral" advantage of being able to work with an institution which, though not good in the technical sense, is not bad in the political sense. (ITCO has had the misfortune of being both not good and bad.)

The second, more important, factor that makes it important to concentrate project attention on the Ministry of Agriculture is the lack of concern, thinking, and proposing about agricultural problems which prevails in the country. One senses that Costa Rica's agricultural problems are as much a result of the absence of a group of people or an institution which is worrying about them and trying out ideas, as they are a result of the lack of credit, technical assistance,

or marketing facilities. Hence it seems quite important that the proposed project attack the absence of "busyness" in official agricultural circles by helping to attract interested qualified technicians to that sector. Again, because the effectiveness of agricultural services is so much a function of the ongoing interest and dynamism of the technicians who run them, the country's agricultural problems can be attacked to a considerable extent by investing in the technicians who are responsible for inducing the private agricultural sector to invest in productivity.

I would like to suggest that the Mission consider offering, as a part of the proposed project, salary complementation to Ministry of Agriculture agronomists. This complementation would be designed to attract competent agronomists, while at the same time not subverting government-wide civil service procedures or setting off a wave of similar demands from other government employees. A substantial "hardship differential" for field residence or travel would probably be the easiest way of working within civil service norms, and would also deal with the problem of getting people to spend time in the field. I would suggest that this salary complementation be maintained during the implementation period of the project--perhaps four or five years. The government could covenant in the loan agreement to pick up this cost at the end of the period. (The American technician's common observation that Latin technicians "don't like to get their hands dirty in the field" is probably in part related to the fact that Latin government technicians, in striking contrast to their American colleagues, receive very little financial inducement to work in the field.

This type of systematic salary complementation has rarely been looked upon with favor by A.I.D., because of our disinclination toward providing budget support for current expenses, and because of the feeling that this type of support should be provided by the borrowing government itself, as a demonstration of its commitment to the project. This reasoning is valid in some cases, but doesn't quite apply here. When a power or road project needs to be built, for example, the problem is a lack of capital and the incapability of the tax system to yield that capital, which the lending agency attempts to supply. In an agricultural project such as this one, the problem is to a considerable extent the lack of public commitment and interest, not a lack of capital. (There is almost always intense public commitment, in contrast, to road and power projects.) If the government were already able to attract the talent that the agricultural sector needs--that is, if it were willing to pay adequate salaries--then much of the agriculture problem wouldn't exist, and competent MAG technicians would be deluging A.I.D. with detailed requests for financing their ideas.

When we contemplate financing a government infrastructure project, we don't require that the borrower make a substantial contribution for

the input that is in scarcest supply--capital. Equally, in a project such as this, one should also finance the type of expenditure that is in scarce supply. In sum, if a sector's problems are related to a lack of funds for current rather than capital costs, then that is the area where loan financing should be applied.

One of the main arguments against such an idea is that current costs, because of their ongoing nature, cannot be "created" and taken over by a limited-period A.I.D. loan because the program they are supporting will be left high and dry when the loan runs out. Capital costs, on the other hand, are one-shot injections of financing which add significantly to the country's supply of services and at the same time may not cause significant increases in a sector's operating budget. Yet the problem we are dealing with here is the lack of interest of a country in grappling with its agricultural problems and a corresponding unwillingness to commit public revenues to that task. What could be a better way of creating such a commitment than by giving a talented group of technicians a well-paid chance to get involved with the country's agricultural problems, and then suddenly threatening to cut back their salaries when the end of the loan period approaches? At the end of such a period, the question of increased budget for MAG agronomists would no longer be one of a salary increase, but rather, of preventing salary decrease. Such a decrease would be more difficult for the government to allow than it would be to deny a salary increase. Conversely, mobilizing political support to prevent a salary decrease would be considerably easier than gathering such support for an increase.

To require a salary increase for MAG technicians as condition to our proposed loan, or to hope that it would come about as an expression of the government's commitment to resolve the problem, is almost tantamount to posing as a loan precondition a resolution of the problem that the project itself is supposed to attack. By a massive program of salary complementation, one builds up political support for, as well as strong evidence of the value of, an increased commitment of resources to the agricultural sector. Moreover, such an approach avoids the difficult problems occasioned by salary increases in one sector of government which set off a chain of claims for such increases by other sectors. If MAG agronomist increases are granted by the government itself, this makes things politically difficult for a government which wants to resist demands for overall salary increases. An increase paid for and occasioned by a special foreign-financed project would be easier to justify and "contain" as a special case.

There is one more reason for proposing such an approach. Serious concern about the agricultural sector does not exist in Costa Rica. There are no ardent advocates of certain policies, and no passionate critics--outside the familiar array of interest groups appealing for government subsidies and favors. One feels that the stagnation in the agricultural sector is not so much a result of the lack of known approaches, but rather of the lack of avid proponents of such approaches. The

proposed project, therefore, should be just as much concerned with creating an atmosphere of ferment and action as it is with the evaluation of any series of solutions proposed by A.I.D. or Costa Rican technicians. It would be hoped that a salary complementation program could contribute to such a goal.

One more suggestion may be relevant to the absence of concern about the country's agricultural economy. I would propose that we encourage with our financial support those university field research projects in agricultural economics and sociology which involve extensive employment of Costa Rican students for field interviewing--even in cases where the projects are of doubtful academic value. I saw a small example of the concern and interest that can be generated in such problems when talking with the young UCR professors who have at one point or another been involved in such studies.

The Peace Corps is a more obvious example of the creation of social consciousness among a group of people through vigorous field experience. In one sense, the Peace Corps is a variation on American "imperialism," in that the U.S. "exploits" the underdeveloped countries as a setting for sensitizing its youth to social problems. The benefits of the awakened interest, concern, and rage at social injustice of this youth accrue to the country they return to--the United States. Think of how much greater the benefits would be if such socially awakened youth returned to live in Costa Rica, where the country is smaller, the elite is thinner, the spread of social and economic problems is broader, and the supply of concerned, involved technicians is infinitely smaller. Although the Peace Corps approach would probably not be attractive to young Costa Ricans, there are other ways of attempting to bring about the same kind of socialization process, such as the involvement of university students in extensive field research.

III

I often heard Costa Ricans say that their country was being hurt by the Common Market because of the higher cost of their labor in the agricultural sector as well as generally, and that this was contributing to the stagnation in the agricultural sector. Yet one rarely hears Costa Ricans talk about the unique comparative advantage they have in educated labor in the Common Market--nor does one see policy proposals based on the attempt to utilize to greater capacity the long-term investment that the country has made in human capital. It is true that Costa Rica has a rapidly growing population, and that corresponding demands are made on the economy to generate thousands of new jobs each year. At the same time, however, the country could also look upon its investment in education as providing it with an opportunity to win the market in skill-intensive products--whether they be agricultural or not. Many

North Americans, for example, were surprised to learn from a study by Vanek that America's exports are labor-intensive rather than capital or natural-resource-intensive, in comparison, for example, to Japan's. This labor-intensity was characterized by a high degree of skilled labor.

I would like to see the agricultural problem approached to some extent through the country's investment in education--an achievement for which Costa Rica is unique among developing countries. Given the national commitment to a large government budget share for the educational sector, and given the Costa Ricans' view of themselves as a people deeply committed to a democratic system, it might be more effective and less costly to disseminate some of the incentives to innovation and increased productivity through the country's broadly reaching infrastructure of educational services. These services penetrate the Costa Rican countryside much more than the extension arm of the Ministry of Agriculture.

One might subsidize, for example, small-farmer parents for keeping their children in school through the high school years. The subsidy could take the form of fertilizers, improved seeds, etc., which the children would be taught to use in a lab "agronomy class." The teaching of such methods at school is already taking place at the agropecuario high school in Liberia which owns 200 manzanas of land for student experimental plots. The government has recently endorsed a variation on this concept for the whole school system by establishing the huerta familiar program. Because of the widespread respect for education in Costa Rica, the parents are inclined to be responsive to the agricultural advice that the teenage children bring from school--especially when it is accompanied with supplies of fertilizer and improved seed.

This approach could constitute a technical assistance program to the small- and medium-size farmer that would circumvent to some extent the diseconomies--as encountered by Fertica, for example--of dealing with the small farmer. The program economizes on extension agents by using the children as conduits of information and advice. The subsidy incentive would increase the percentage of children receiving a high school education, thus building on the country's investment in primary education services. Such a program might also help alleviate future unemployment problems, as well as population pressure on the land, by enabling these farm children to enter the skilled and semi-skilled labor market, or by giving them the opportunity to qualify for further technical education (perhaps paid for out of the increased return from the family farm, due to use of the subsidized improved inputs). The inducement of further education possibilities might even be presented to the child as part of the home agronomy program. If he were to succeed in helping his parents to increase their productivity, the inducement could say, they might have enough money to allow him to pursue his education.

This kind of incentive system would take advantage of the widespread conviction in Costa Rica that education is important. The possibility of further education made vivid by such a program, and the child nagging his parents about this possibility, might have an important effect in introducing acquisitive desires into the homes of traditional semi-subsistence farmers. In short, one might be able to substitute the prospect of higher education in Costa Rica for the proverbial television set as a way of introducing the "demonstration effect" and its resulting attitudinal changes about productivity into Costa Rican small-farmer homes.

The key to such a program's effectiveness is the ability to make it economically more attractive for the small farmer to keep his child in school--because of the returns in fertilizer, improved seed; etc.--than to keep him working at home. The subsidized availability of farm supplies changes the economics of the farmer's use of land, labor and capital. The opportunity cost of his children's labor suddenly moves from zero to a positive sum, representing the value of the foregone subsidy; correspondingly, the cost of capital, land and supplies, in relation to family labor, goes down. At the same time that farmer is receiving free supplies, their cost on the commercial market in relation to family labor also becomes relatively less, because of the new opportunity cost of family labor; hence these inputs, including machinery, becomes a little more attractive as substitutes for family labor, or as complements to a more skilled labor. This is the kind of process of change which--given other favorable conditions such as access to credit, readily available markets, etc.--could lead to the kind of productivity improvements that we would like to see in the agricultural sector. (It is assumed that the amount of the individual subsidy would be calculated so as to change these relative price relationships enough to bring about the desired changes in production technique.)

The attractiveness of such an approach is that it might be able to achieve an improvement in farm productivity and the condition of the small farmer, while at the same time promoting an alleviation of future population pressure on the land. This alleviation would take place not by releasing the farmers' children into the unemployable urban masses, but by encouraging and facilitating their entry into the country's supply of skilled labor--which is still relatively scarce.

The danger of such a program is that the education system would not be able to cope with the resulting increased demands for education. This outcome, however, might be desirable. That is, Costa Rica is much more accustomed to committing large amounts of resources to education than to agriculture, and the quality and quantity of its educational services are a matter of national pride. A threat to the country's achievement in education is much more compelling and disturbing to this sense of national pride than is the historical fact that agriculture has been stagnating and that the small farmer is doing poorly.

To deflect a portion of the agricultural sector's needs onto the education sector is to increase the probability that things will get done. The educational problem that might result from the increased demand arising out of the proposed program would be more definable and familiar than the problems existing today in agriculture. Solutions and approaches--the building of more schools, the introduction of technical programs, the employing of more teachers--are not as difficult to come by as they are in agriculture, where it is not only much more difficult to know what the solutions are, to agree on them and to obtain political support for them, but where it is difficult to agree upon exactly where the problem in itself lies. The winning of approval from the public or from international lending institutions for increased funding is easier in education, where the future results are simply described: more schools, more teachers, more educated populace--in contrast to a commitment of resources to agriculture, where no one is quite sure what the results will be!

Clearly, the proposed program would not necessarily have the comprehensive chain effect traced out above. It might produce results only with a small proportion of the families affected. Nevertheless, if considerable technical assistance and changes in productive mentality are a necessary condition of agricultural development, this is just as feasible an approach as any other--given the large amount of people to be covered and the small size of their holdings, and given the ever-present opportunity to capitalize on the Costa Rican commitment to education.

IV

One of Costa Rica's major agricultural problems is the existence of 10,000 to 20,000 families who do not have title to the land they farm. These precaristas, occupying private or state-owned land, are not being threatened with eviction in the majority of cases, and may have been farming their plots for several years. But because they do not have title to the land, they are denied access to credit; if they still manage to do well, they are nevertheless disinclined to improve the land or use other productive inputs because of their insecurity about title.

The land reform agency, ITCO, was created in 1962 with the intention of dealing with the problem of the precaristas, and, more broadly, of promoting the settlement of unoccupied lands by those small farmers with insufficient land, and by agricultural laborers with no land. The failures and weaknesses of the ITCO program are well known; I would like to mention some less widely commented-upon aspects of ITCO's work.

There are two ITCO colonies which were less problem-ridden than the others--Trinidad, in the San Carlos Valley, and Pejibaye, a marketing cooperative of small coffee farmers in the Meseta Central. I visited Trinidad, but had no contact with Pejibaye, outside my conversations with ITCO officials. In trying to understand why these two colonies were more successful than the others, one encounters some salient features which are common to them, and which distinguish them from the other projects. Both colonies were exceptions to the typical ITCO colony in that infrastructure, mainly in the form of roads, already existed; in that the colonists had already selected--that is, invaded--the land they were to settle, and had therefore worked together in some rudimentary organization; in that they grew a traditional crop to start out with--coffee--which already had an accessible marketing structure in the region; and in that there was an immediate income-earning opportunity at hand to bridge the time between the occupation and clearing of the land, and the earning of income for it.

The 40 original Trinidad colonists were taken by ITCO from jail, where they had been placed--immediately before the creation of ITCO--for invading an absentee and uncultivated landholding of 2000 hectares in the San Carlos Valley. (The local congressman had encouraged them to invade the area, it is said, telling them there was some land belonging to the municipality to which they had a right; although available municipal land did exist, its extension was much smaller than what the colonists wanted, and no one quite knew where it began and ended.) ITCO expropriated the landholding, and parcelled the land into 10-hectare plots, selecting the remaining 160 colonists from applications made in response to newspaper and radio announcements.

The Trinidad landholding bordered the only road that leads out of the Valley, through Ciudad Quesada. Just as important, there was a sawmill in the region. When clearing their new land, the colonists thus sold the logs to the nearby sawmill; they also kept some logs for themselves, taking them to the sawmill to be cut into lumber for their houses. Aside from the traditional food crops, they planted coffee for commercial sale. ITCO, in sum, moved in only after a process of "natural selection" had determined who the colonizers would be--at least the original ones--and what land they wanted to "colonize." One assumes that the initial pre-ITCO success of these colonization ventures is due to the very features described above--the existence of a key element of infrastructure, the opportunity to earn income in the settlement phase, and the existence of a traditional "starting" crop, whose patterns of production, credit and marketing were known and accessible.

An interesting aspect of the colony's success is the peculiar nature of the lumber income-earning opportunity which was of the type that would rapidly vanish soon after it was exploited. A contrasting case immediately comes to mind--the ITCO colony of Cariari near Guápiles,

intended to bring in settlers to plant and harvest bananas cooperatively. The interim income-earning opportunity--according to the ITCO planners and the BNCR Coop manager--would be the rapidly expanding employment availabilities on nearby private banana plantations. Because of the boom in "independent" banana cultivation and the corresponding get-rich-quick mentality, because of the difficulty and dangerousness of the work required for banana harvesting, and because of the history of unionism on the banana plantations of Standard and United Fruit, banana worker wages are relatively high in the new banana areas--going up to 2000 colones (US$ 286) a month for specialized workers. The Cariari colonists found their "interim" employment quite remunerative, and when it came time to contribute their share of work to the common preparation of the land, they didn't want to give up their time and wages*.

The Coop still hasn't settled the work issue, but it may turn out that ITCO, at great cost, will end up having brought together its Cariari colonists with private plantation owners looking for labor--something these employers have been willing to do at their own expense. The preferences revealed by the colonists in this case may indicate that the desire to have one's own plot of land may not be as strong a social phenomenon in Costa Rica as it is sometimes said to be, and that the lack of employment opportunities may be more an explanation of the "desire for land" than are natural peasant proclivities toward small landholding. At any rate, the Cariari experience shows that there is a reasonable wage at which the Costa Rican rural laborer or small landholder will give up his interest in landholding.

Cariari gave rise to another benefit for the private banana developers of the region. For many of its projects, ITCO selected land in areas where there was no basic infrastructure, frequently because there were no public lands left bordering the existing road network in areas where agricultural development seemed promising. The Institute did not expect to have to provide the infrastructure, because it believed that the general political consensus surrounding its creation represented a commitment by the government to channel revenues through relevant government ministries for the necessary infrastructure

* W. Arthur Lewis also emphasizes the importance of a temporary income-earning arrangement during the settlement period. He cites an example from Indonesia, which, like lumber in Trinidad, was successful, but not to the point of luring the colonists away from their original purpose. In this settlement scheme, the recruits were transported to the region just before harvest time. They were lodged with established settlers and earned wages by helping with the harvest. The money earned, the period of acclimitization, and the experience gained, all proved invaluable when the recruit started his own farm.

investments. There were no specific budgetary appropriations for these works, but ITCO was counting on the ministries' "promised cooperation." When the time came to ask for help in opening the necessary roads, the Ministry of Transport responded that its budget was locked into certain projects by its contract with the World Bank for financing the Plan Vial. Response from the other ministries was similar, except in the case of the Ministry of Education, which generally cooperated in providing teachers for new schools in the ITCO colonies.

As a result of this unexpected absence of support, ITCO set out to provide the basic infrastructure that it was never intended to do. In the case of Cariari, the colony would have been completely isolated from road communication unless a 15-kilometer stretch of road were built. ITCO financed and built the road; as soon as it was opened, the area alongside it was rapidly developed by private banana investors. Although this turn of events may well have a positive effect on the country's growth, the ITCO investment was unfortunately inefficient. It was financed out of scarce colonization funds which were specific to that purpose, despite the fact that the road's benefits would accrue in great part to the private developers who would inevitably gravitate to it, given the rapid expansion that the region was undergoing. The private developers could almost certainly have been made to finance at least partially the road's construction without dampening their investment plans--given the high returns to be had from the banana investment, and given the fact that those who invested in banana plantations in the Guápiles region were some of the most wealthy men of the country. Or, at least, the presence of a wide range of beneficiaries of the road outside the colonists should have placed the decision to build the road within the allocative framework of the Ministry of Transport. Indeed, if the private developers had championed the investment at the Ministry of Transport--instead of only ITCO--the Ministry would probably have been more easily convinced to "deviate" from the World Bank plan.

The Cariari experience suggests an approach to the typical "infrastructure" dilemma of government settlement agencies: where there is already existing infrastructure, there are no available lands; where there are unoccupied lands, the colonization agency has to finance costly infrastructure investments, as in the case of roads, which often redound to the benefit of non-colonists with capital, who are not taxed in any way for this public investment. The problem is not whether or not the road should have been built--if it was so popular, then it was a good public investment--but rather, of avoiding that an agency specialized in subsidizing the development of the rural poor squander its scarce funds on capital-using infrastructure, the benefits of which go far beyond the subjects of the subsidy. To put it more positively, the Cariari road is a perfect example of the opportunity that such subsidy programs have of coping with their

revenue problems by planning infrastructure investments that can be used by and are attractive to the rich. In short, ITCO didn't exploit the fact that the infrastructure it so badly needed would be a public good.

Several approaches for such exploitation could be suggested. For example, when the national banking system decided to provide financing for banana development on such generous terms (100% financing and five-year amortization periods are very rare), it might have charged for this generosity by requiring the borrower to take his loan in an amount 10% more than the cost of the project. This 10% would go into a fund for the building of a road in the region, the location of the road being determined by the Ministry of Transport, which would normally take into account the needs of the government colonies, as well as of the private developers. (A similar scheme is used by the Cooperative Bank in Ecuador, although for other purposes. The bank requires that borrowers take a loan for 110% of their needs; the extra 10% is for purposes of increasing the bank's capitalization.)

Other such mechanisms could be devised. In a rapidly expanding frontier area like Guápiles, for example, the government could facilitate its colonization programs for the landless by luring private developers already investing in the region into the areas a little removed from the existing road network with promises of infrastructure and/or financing. Again, as part of the financing for their individual projects, the private developers would be forced to contribute to the investment in infrastructure such as roads. Note that, according to this idea, the investor is not required to put up current capital for the infrastructure project, but would commit himself to make future payments on that project, included in his loan amortization payments. Since the expected return on the investor's banana investment is high, then he discounts at a high rate any costs that he will incur in the future; for the same reason, he would place high value on any capital outlay he would have to make today. Hence this form of charging him for the infrastructure project is a form of forced saving for public investment by the rich that is much less likely to be opposed than a direct charge.

The economic logic behind these suggestions is that some of the scarce resources for development can be appropriated from the investor at the very moment when he is willing to pay more for his investment than he has to--that is, at the moment when a "boom" atmosphere exists. In economic terms, the government should take advantage of the opportunity to appropriate, as a source of financing for infrastructure projects that are essential for neighboring colonization schemes, the "consumer surplus"--the difference between what one is willing to pay and what one has to pay--of the boom investor as a consumer of investment funds.

The presence of growing independent economic activity in an area chosen for government colonization would provide the external economies that help to make the investment in capital-intensive infrastructure projects a more economic proposition. In addition, the presence of a broader context of economic activity would bring about the external economies that generate essential private sector services such as supplies of farm inputs, marketing services and trucking services--all quite important for the survival of a new settlement. In other words, even if the private activities that were to expand alongside a government colonization area were not made to finance part of the necessary infrastructure investment, they would still make the colonization attempt much easier going. Their very presence would push the area closer to the threshhold beyond which it would be economically attractive for the private as well as the public sector to supply essential inputs and services.

Why not achieve this world of external economies more simply, by promoting colonization in already-developed areas? (It is no accident that the two successful ITCO colonies are on expropriated private lands, in contrast to the more common case of ITCO colonization on public lands.) As mentioned before, one immediately runs into the problem of an absence of available state lands in such areas, and the necessity of undertaking a program of expropriation of private lands, with all the political and legal difficulties that this entails. Expropriation requires a major political commitment to it based on a widespread consensus that there are acute social and economic problems in the country and that land distribution is one of their major causes. Such a consensus has never existed in Costa Rica--the way it has, at one time or another, in Bolivia, Ecuador and Peru--with some reason, for the land problem in Costa Rica has never reached the crippling proportions that it has in those countries. Indeed, in comparison to those countries, Costa Rica seems to be endowed with a relatively manageable land problem; that the country's first national approach to it was couched in a philosophy of expropriation may have turned out to be an unfortunate case of overkill.

An agricultural program based on expropriation is politically like an indivisible capital project where one has to make a large initial investment, no matter how small the needed output is; for expropriation, one needs a massive political commitment, no matter how few the number of expropriated properties is desired. In short, given the nature of the land problem in Costa Rica, expropriation may require too massive a political investment to make the returns worthwhile, or realizable. The schemes proposed above would have the same objective as expropriation--increasing food production and providing land for those who are able to farm it--without posing the high political barriers to achievement. Indeed, by offering, as part of a settlement scheme for the small farmer, financial incentives

to the large farmer, one garners political support for a program from the very forces who would feel threatened by and contrary to a policy of land expropriation.

The opportunity for such a combined approach now exists in the rapidly developing areas of northern Limón province. The essential element of such an opportunity is that on the one hand there are still unoccupied public lands at the periphery of or right beyond the settlement frontier, and at the same time there is an already existing private development impetus. This impetus can be "exploited" for its external economies by a government-promoted settlement program, and can be "bribed" with financing to contribute forced savings to, and to put its weight behind, the expensive infrastructure projects necessary to make the program work.

The possible difficulty of this type of approach is that it depends on opportunities that arise in time, not in space. It depends not on the government's perception of agricultural possibilities in certain unoccupied areas, but rather, on quick action following the perception of an independent development thrust onto which a government settlement effort can be hitched. The considerable financing for banana investment authorized by a Congressional "Banana Law" and made available by the Costa Rican national banking system shows that the government can perceive and respond in time to up-and-coming private frontier developments.

Costa Rica is somewhat unique in presenting an opportunity to put rich and poor together in the same program, and in this way utilize the country's "comparative advantage" in political and social development. Class disparities and social antagonisms are gentle enough, in comparison to other Latin American countries, to allow the bringing together of two contrasting classes in one program. This type of program could appeal strongly to the Costa Ricans' stereotype of themselves as a democratic people who always took care of their poor--a special type of national pride which leads them to support "good" causes that don't imply serious sacrifices on the part of the well-to-do. The Costa Ricans like to be identified with social justice; they would be likely to support quite strongly a "social justice" program that would involve no personal sacrifice or threat to their holdings, and also might be intertwined with the promotion of their own enrichment.

Another aspect of Costa Rica that makes such an approach desirable is that it is a small country with a high degree of literacy and communication, and a remarkably mobile rural population, quite responsive to information about employment and land opportunities. (Some of the Trinidad colonists who originally lived in Alajuela and Cartago made their decision to apply for a plot of land in Trinidad and move their family there after "hearing about it on the radio.") As a

result of this widespread rural mobility, as well as a history of legislation that encouraged it,* spontaneous colonization has been a common phenomenon. The statistics on the growth of population living outside the Meseta Central illustrate the historical mobility of the country's rural inhabitants. In 1916 the percentage living outside the Meseta was 18%; in 1963, it was near 50%.

Most of Costa Rica's subsistence agriculture takes place in the recently settled areas outside the Meseta. These farmers, as pointed out by Carlos Saenz,** are not the classic traditional peasants, highly resistant to change. Many of them left the Meseta in an attempt to better themselves, and those who succeeded were not able to do so through mere transplantation of traditional techniques, since the climate and soils of the lowlands are different from the Meseta. Many came from jobs as laborers on commercial farms in the Meseta, and thus have been exposed to modern farming methods. The primitive techniques they now use can be seen as a reversion rather than a continuation of past tradition.

The crucial element from the point of view of change is that a good part of these farmers perceive their primitive condition and techniques as temporary phenomena, rather than as part of an inviolable and proven peasant past. They often have definite expectations of improving their lot. The fact that their subsistence condition is viewed by

* In the 1930's, when the steadily declining wages in the coffee sector produced social unrest and public concern, a decree was issued giving the right to every male adult over 20 to claim 20 hectares of the public domain (unless he already had 20 or more hectares.) Subsequent laws raised the amount of land to be claimed to 100 hectares (300 for livestock). Another law was later passed giving squatters on private lands the right to buy that land if their occupation had not been contested by the owner during the first year--a right that was applicable not as infrequently as one might think, given the fact that the law was retroactive, and that many absentee owners were not aware of squatters on their land. Another law gave squatters the right to acquire, without payment, title to any land that they had occupied and farmed for ten years. Though these laws allowed considerable abuse on the part of land-aggrandizing investors, and though the implementation legislation and services made it difficult for many poor squatters to actually gain title, the legislation nevertheless had an important effect in stimulating rural migration from the densely populated Meseta Central.

** Population Growth, Economic Progress, and Opportunities on the Land: The Case of Costa Rica. Ph.D. dissertation, University of Wisconsin; 1969. The discussion in this paragraph is a paraphrase of Saenz' presentation.

them as temporary necessity and not tradition represents valuable "capital" for a developing country trying to induce productive changes in its subsistence population.

When the rural population demonstrates this kind of responsiveness, and generates its own decisions and actions about moving and where to move, the job of an ITCO-type entity seems much more approachable than in the case of a country with a great mass of downtrodden and stationary rural poor.

The sequence of development being suggested above would not necessarily have to follow the same order--i.e., a government colonization program following close behind a private development expansion, in order to reap and charge for the consequent external economies. Just as effective, an ITCO-type entity could hitch itself to an infrastructure project already in construction--for example, a new road which is planned to connect two already developed points and passes through regions that are less inhabited. The settlement agency could lay out parcels of land alongside the right-of-way, and provide services such as subsidized land titling, technical assistance, credit, a machine pool for clearing and sowing (perhaps the roadbuilding machinery could be utilized for such purposes on weekends when it is idle, at a rental charge from the contractor). The new settlers could find temporary employment opportunities in the road construction crews. In many cases, such a program would contribute to "squatter prevention," for much spontaneous colonization takes place willynilly when new roads are being built; at the same time this approach would take advantage of squatter initiatives to move and establish themselves in new places. One such case in Costa Rica, which later gave rise to problems of disputed title claims and squalid subsistence conditions, was the building of the southern stretch of the Pan American highway, when many migrants flocked unassisted to the construction are to squat on adjacent public lands.

This type of roadbuilding-land settlement program would have to be coordinated with the Ministry of Transport during the planning phase of the road, for the independent squatter and private development movements are likely to start as soon as the project's existence is publicly known. In fact, it might be desirable for international lending agencies to condition their financing for road projects in certain cases to the simultaneous programming and budgeting for this kind of complementary land program. The highway sector is singularly endowed with magnetism for attracting political support and funds for its capital investments. The agricultural sector is not only much less politically compelling, but its needs for current expenses in relation to capital expenses are much higher than in highway transport. Hence the sector in itself is politically unattractive compared to highway transport, and in addition, the type of expenses (current) for which it needs revenue increases are more difficult to gain public support for,

in relation to the capital funding needed for big development projects. The forced coordination of subsidized land settlement with a big highway construction project would harness some of the great power of such projects for mobilizing financing and public sympathy.

This project approach to land settlement might work better than the comprehensive program approach attempted by ITCO. In the former case, the technical difficulties of such work would not have to be dealt with on several fronts at once. Moreover, such an approach would give the chance to apply the lessons of one experience to another in a sequential way. Finally, the project approach--determined as it is by the location of the road--would help insulate the land program from political pressures to satisfy the claims of various regions and persons. A current road-in-process for which such an approach might be tried is the Limon Highway, since it will pass through a region which is expected to undergo a major development expansion with the road's completion.

One more possible way of combining private agricultural development with a subsidized government scheme is the taking advantage of infrastructure which the private developers find it profitable enough to build themselves. This type of case occurs only when the private developers' operations are big enough and the returns high enough--and where publicly supplied infrastructure does not exist and will not be forthcoming--to make the private provision of such infrastructure necessary and worthwhile. In Costa Rica, the banana and African palm oil plantations of United and Standard Fruit are a perfect example. During the country's first banana expansion, before the onset of Panama disease, the directing of private infrastructure projects to public benefit was not as thinkable as it is today, because of the isolation of the areas of cultivation from the centers of population. In between the banana boom of the early century and that taking place in the same area today, years of spontaneous colonization have occurred, contributing to the increase in lowland population mentioned above, from 15% to 50% of total population. Hence the country has something to gain today from attempting to harmonize the private infrastructure interests of the two big banana companies with the public interest.

Thr above discussion attempts to show that the problem of the small farmer can be looked at in various ways, and that the ITCO experience has provided valuable information on how to approach it. The unfortunate thing about ITCO is that not only was it discredited in the public eye, but, as often has been the case with agrarian reform agencies, so was the whole problem of the landless rural poor. The failure of this first grand attempt seemed to make the public believe that no solution was feasible, and that those concerned with such problems would always be politically corrupt. As a result, the lessons to be learned from the ITCO experience have not been aired, nor is the experience being talked about as a starting point from which to strike out with further steps. ITCO and the

Bataan project (the most conspicuous failure of the Institute) are almost synonimous in the public mind, yet few persons outside ITCO are familiar with Trinidad or Pejibaye.

Ironically enough, the only serious evaluation of the colonization experience and resulting changes in thinking have taken place in ITCO itself. For example, the Institute studied the desertion phenomenon at its colonies, and found that those colonists who gave up and left were usually from geographically and topographically different regions where the farming practices with which they were familiar were not applicable. Moreover, ITCO technicians now say that their counting upon other government ministries for infrastructure investments was politically naïve, and that they themselves were culpable of a lack of foresight and planning about credit needs and income-earning needs during the initial land-clearing and cultivation periods. More generally, they felt that experience has shown that planned colonization projects were too much and too costly for them to handle, and that they ought to concentrate their efforts at the frontiers of spontaneous colonization, offering assistance, credit, and land titling help to those families who have occupied public lands on their own.

Although ITCO seems to perceive the value of working with spontaneous colonists, it has at the same time a certain disinterest because of the "disorderly" way in which they have settled, a pattern which is usually irrevocable by the time the helping agency comes to give a hand. The extra cost of serving such a community with land titling, infrastructure and social services, however, due to its arrangement in a non-optimal way, should be compared to the only other alternative, which is a colonization program that starts from the beginning--precisely the kind of program that ITCO embarked upon and failed at so miserably.

It may be that the assisting of spontaneous colonization is too much of a comedown for an organization that started out with the power to expropriate the great landholders of the country and dole out parcels of the expropriated land to a thankful rural poor. In comparison, assistance for land titling, supervised credit, etc., probably seems of lilliputian significance. Yet such activity could have tremendous marginal return, given the considerable investment represented by the sum of thousands of individual farmer actions in moving and setting up new squatter farms.

Although ITCO has funds for land titling, it does not seem too interested in this program and still talks of the possibilities and power of a new agrarian reform law and a new issue of ITCO bonds with which to buy expropriated lands. Perhaps the Institute would best be passed over as the implementing entity for a scaled-down rural program, because of its lack of interest in working with spontaneous colonization after having tasted the power of expropriation,

and because popular support for such a program might be difficult to generate because of the profound public distrust of the Institute.

One more point about the ITCO strategy which should be taken into account in devising attempts to deal with the rural problem. The Institute sometimes has pursued policies demonstrating a certain neglect of economic considerations, even when it could have marshalled these consideration in its favor. A major example is the case of land-plot size in its colonies, and what happened when colonists wanted to increase their holdings, or give up and leave. Several such cases came up when I visited Trinidad. The ITCO official explained to me that the Institute does not like to allow its colonists to increase their holdings, because it goes against their raison d'etre, which is to supply a parcel of land for as many as possible, rather than to allow the aggrandizement of several parcels by a few. ITCO was also against increasing colonist landholdings because, they say, peasants tend to farm land extensively, when they should learn to work their plots intensively. The Institute discourages colonists who feel they can't make a go of it from giving up and selling their land, by posing difficult requirements for the transfer of land. The cases I saw at Trinidad of those who wanted to acquire more than their 10-hectare plot were farmers who had done well on their small plots, and were able and anxious to invest in more production. They proposed acquisition of adjacent plots through trading deals they had agreed upon with colonist neighbors or with those who wanted to leave the colony.

ITCO may be defeating its own purpose by following such a policy. The colonist who has worked himself up from no land to a thriving 10-hectare plot with enough savings to invest in more production should be considered an ITCO success. He has proven himself capable of economic enterprise and, more important, has demonstranted the value and importance of a program like ITCO's. Such a colonist is not far enough advanced, however, to expand his activity by buying lands elsewhere; he still has his fourteen children, and lives in a crude one-room house on his plot. To deny him the opportunity to climb further is reminiscent of those American welfare programs which discourage the welfare recipient from moving ahead by cutting off his support completely when he takes a small step forward. ITCO's forcing of the unsuccessful colonist to stay on his land seems also to represent a kind of punitive pursuit of social justice goals. The failures of some and the successes of others are natural to the workings of economic growth; to stultify the process is to forego the benefits of that growth and to condemn the successful ITCO colonists to a lifetime of successful marginality.

The point of the ITCO program is that every man has a right to earn a living. Once the social decision has been made to subsidize those who do not have access to the opportunity, a separate economic

decision must be made about the type of living that is most feasible in a given economic and social setting. If ITCO were to have an integrated social focus, it would give technical assistance and training to those who were failures at farming toward qualifying themselves for jobs in other sectors. (Something like this already happens on a small scale and in an informal paternalistic way, when colonists ask ITCO officials to help get jobs for their children in San José as domestics, office clerks, etc.).

ITCO would probably do well in allowing a certain amount of colonist land accumulation, setting an upper limit beyond which the successful colonist is likely to be able to acquire lands on his own outside the colony. At this point, he might even want to sell his own parcel to another up-and-coming colonist. As far as the colonist's tendency to farm extensively, the Institute could verify if that were the case, and if so, provide assistance to help him farm intensively. At any rate, it seems that the one-man/one-10-hectare-plot criterion could be abrogated to great advantage, if accompanied by proper safeguards against abuse.