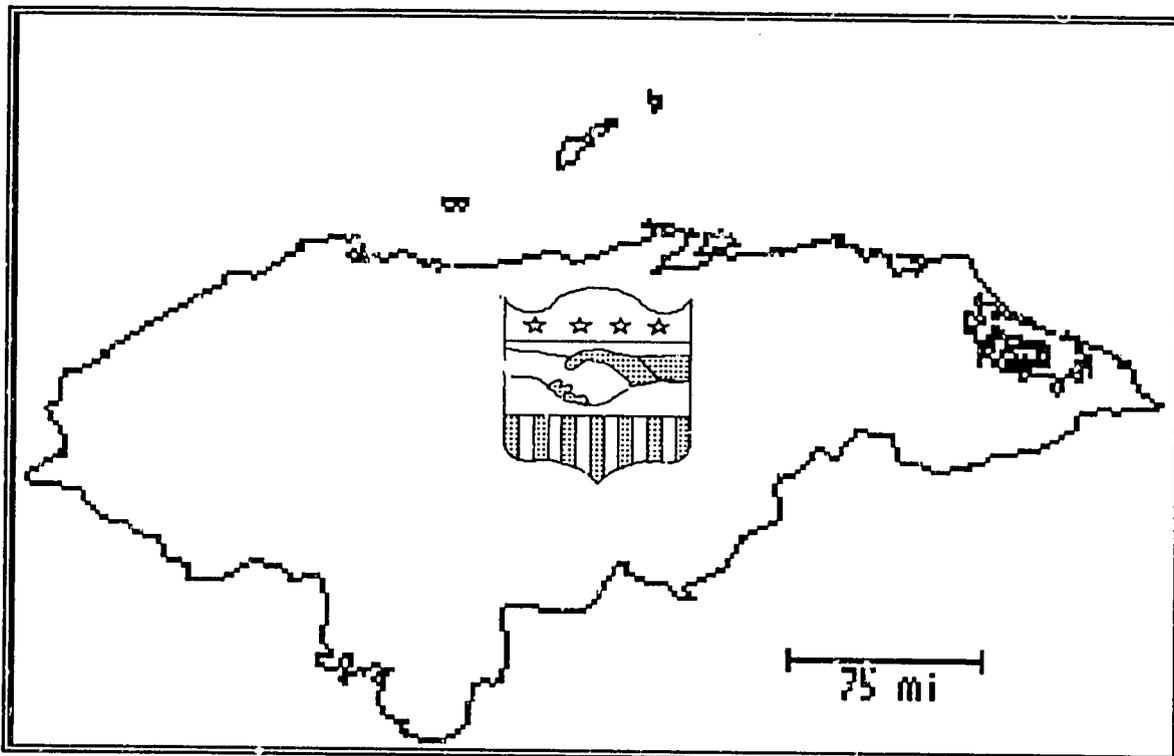


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AGRICULTURAL SECTOR STRATEGY PAPER



USAID HONDURAS
Office of Agriculture and Rural Development
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LIST OF ACRONYMS

ADAI	Ateneo of Agroindustry (Private Consulting Firm)
AID	Agency for International Development
ASAP	Agricultural Sector Adjustment Program (522-0336)
BANADESA	Honduran Agricultural Bank
BANASUPRO	GOH National Basic Products Supplier
CADESCA	Committee to Support the Economic and Social Development of Central America (EEC)
CETRA	Transferable Certificate of Option to Purchase Foreign Exchange for Exports
CODA	GOH Council for Agricultural Development
COHDEFOR	Honduran Forestry Corporation
DA	Development Assistance
ESF	Economic Support Fund
FEPROEXAAH	Honduran Federation for the Promotion of Agricultural Exports
FHIA	Honduran Agricultural Research Foundation
FPX	(Same as FEPROEXAAH)
GDP	Gross Domestic Product
GOH	Government of Honduras
IHCAFE	Honduran Coffee Institute
IHMA	Honduran Agricultural Marketing Institute
INA	National Agrarian Institute
LUPE	Land Use and Productivity Enhancement Project (522-0292)
MRN	Ministry of Natural Resources
PL 480 Title I	Public Law 480, Title I
RAGDPPC	Real Agricultural GDP Per Capita
RPPRH	Real Purchasing Power of Rural Households Per Capita
SECPLAN	Ministry of Planning
SFOS	Small Farmer Organization Strengthening Project (522-0252)
UPSA	MNR's Agricultural Policy Analysis Unit
QR	Quantitative Restrictions

EXECUTIVE SUMMARY

After moderately rapid expansion in the decade of the '70s, the growth rate of the Honduran economy slowed markedly in the decade of the 80s. During the period 1980-89, the real GDP growth rate was only 2.3 percent per year, below the population growth rate of 2.9 percent. The agricultural sector has performed worse than the rest of the productive sectors of the economy, registering real GDP growth rates of 1.8 percent over the period 1980-89. The agricultural sector continues to generate more than 80 percent of total export earnings, representing many times the sector's import requirements.

The agricultural growth rate slowed to less than the population growth rate in this decade. The purchasing power of rural households has been adversely affected by a substantial decline in agricultural prices relative to nonagricultural prices. This is especially unfortunate since the vast majority of the poverty stricken households are rural. As a result of these trends, it appears that current average nutrition levels are slightly below their 1980 levels.

In the overall sense, the major constraints to Honduran economic development appear to be a heritage of statist, paternalistic policies in many areas; inadequate infrastructure development; distorted relative prices of goods and factors of production; a deteriorating natural resource base and inadequate development of human capital, characterized by low literacy rates and malnutrition in large segments of the labor force.

The statist orientation is stifling initiative, creating inefficiencies in production and marketing systems and giving rise to continuing fiscal drains. This problem is particularly evident in the land tenure area. The lack of adequate infrastructure raises the unit cost of the final products and in some cases results in missed market opportunities all together.

Distorted relative prices are encouraging inefficient resource allocations such as: into industry and services rather than agriculture; into products such as sugarcane instead of grains; into imports rather than domestic production activities; into capital flight as opposed to investment at home; into contraband rather than exporting through the banking system. The average economic protection rate for industry has been calculated at 99 percent, while for most agricultural products it is negative or near zero.

With respect to land use, a negative policy environment has contributed to inefficient use of this important resource and has cast a shadow of risk over potential farm investments. The deteriorating resource base is causing a declining level of wood product exports and is jeopardizing the productivity of thousands of small farmers. A significant amount of soil is being lost each year and the siltation of reservoirs and rainy-season landslides which have to be removed from highways contribute to the fiscal drain.

As demonstrated by other country experience, there is probably no factor more important for economic development than an educated, motivated work force. Farmers who can read

extension literature are far more productive than those who cannot. A literate rural labor force more readily learns the requirements of industrial work after migrating to the cities. Many of the agrarian reform cooperatives are severely hampered in the financial and enterprize management areas due to low literacy levels.

In sum, these constraints can be grouped into three major categories, *i.e.*, price structure facing the sector, the resource base, and access to technologies and markets. The diagram

The development strategy for Honduran agriculture sector is oriented toward the relaxation or elimination of the key constraints identified above. Accordingly, it will focus on the following:

- Arrest the decline in real agricultural prices, then begin to increase prices through the coordination of macroeconomic policies changes with reforms in agricultural sector policies.
- Improve the efficiency of utilization of the resource base by:
 - Programs and policies to promote intensification of use of existing agricultural land;
 - Programs and policies to arrest the degradation of the resource base, especially in forest areas;
 - Complementary resource-oriented programs in the areas of irrigation and human capital formation.
- Improve access to markets and technologies for producers, and access to staple foods for consumers. Actions in this area are essential to realize the improved price incentives to farmers and to provide the conditions necessary for increased productivity, as well as to enable low-income, malnourished consumers to improve their positions.

The strategy is designed to simultaneously support the immediate objectives of higher real prices, production and exports, and through these the ultimate objectives of higher rural household purchasing power, improved nutrition, and growth of nonagricultural incomes. The agriculture sector's contribution to this last objective takes the form of providing increasing foreign exchange earnings and generating greater demand multiplier effects for urban goods and services.

Implementation of the strategy involves utilization by the Mission of both program and project assistance instruments. It implies a high degree of emphasis on policy reform with program (ESF and PL-480 Title I) support linked to policy conditionality. In the case of ESF, the disbursement of the dollars will be linked to the implementation of specific policy reforms. In the case of PL-480 Title I, the self-help measures will include specific policy reforms. DA projects and the local currency generated from both the ESF and the PL-480 will be used to implement programs designed to enhance and accelerate sector growth made possible by the reforms. For example, the Rural Roads project will target roads for

those areas with the highest agricultural potential, the Irrigation project will collaborate with the Export Development project to select areas for irrigation projects and the Agricultural Policy project will continue to develop policy issues and monitor the implementation of reforms.

USAID HONDURAS AGRICULTURAL SECTOR STRATEGY PAPER

I. Overview of Performance of the Agricultural Sector

After moderately rapid expansion in the decade of the 70s, the growth rate of the Honduran economy slowed markedly in the decade of the 80s. During the period 1980-89, the real GDP growth rate was only 2.3 percent per year, below the population growth rate of 2.9 percent. This was due in part to a drop in the rate of growth of the export subsector and in part to the inability of the industrial sector to break out of highly protected, inefficient structures.

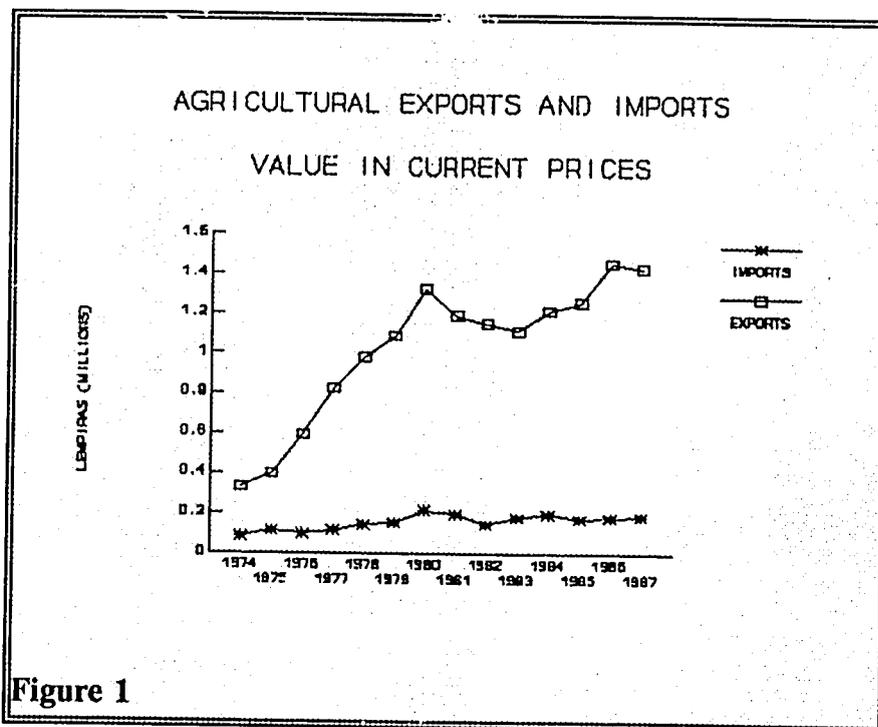
In recent years, the agricultural sector has performed slightly worse than the rest of the economy, registering real GDP growth rates of 1.8 percent over the period 1980-89 (annex Table A.1).

The agriculture sector continues to generate more than 80 percent of total export earnings, representing many times the sector's import requirements as may be seen in Figure 1.

The agricultural growth rate slowed to less than the population growth rate in this decade. The purchasing power of rural households has been adversely affected by a substantial decline in agricultural prices relative to nonagricultural prices. This is especially unfortunate since the vast majority of the poverty stricken households are rural.

These trends in food production have undoubtedly exacerbated the caloric deficit in rural areas which has been estimated at 20 percent. Current average nutrition levels in Honduras are slightly below their 1980 levels (García *et al.*, 1988).

There have been a number of bright spots in the performance of the agricultural sector, offering some promise for the future. First, gross physical output in agriculture has continued to grow more rapidly than sector GDP, suggesting that farmers are indeed



producing more and that the use of modern inputs is intensifying. Second, the growth of nontraditional export production has been very rapid, especially in pineapple (25 percent per year, 1975-86), cantaloupe (23 percent per year, 1975-86) and seafood products (22 percent per year, 1974-87). Third, other products destined for the domestic market have expanded very rapidly over the 1975-86 period: palm oil (19 percent per year), plantain (9 percent), poultry (8 percent) and tomatoes (10 percent). And fourth, corn yields have increase by about 20 percent since 1981 averaging 1.2 tons per hectare.

The agricultural sector growth rate has been pulled down by the declining output of certain commodities in response to unfavorable world market conditions or other special circumstances. This is especially true for cotton, tobacco, sorghum, beans and cassava. Of major concern from the viewpoint of nutrition levels of the poor has been the decline in the production of beans. Physical output levels in 1985 and 1986 were **below the levels of 1970 and 1971**, representing a 66 percent decline in per capita availability of beans, as imports were not significant.

The agricultural sector has been experiencing a process of adjustment and reallocation of production factors in response to economic conditions. As this process continues, it is expected that commodities with declining prospects will "bottom out", while others will continue to expand dynamically. Both macro and sectoral policies have hampered this process. If these policies can be changed, the sector has reasonably bright prospects (as discussed further in Section V.).

The sector has the potential to accelerate the growth rate for the following reasons:

- Studies currently underway show that Honduras has a comparative advantage in the production of many crops, especially coffee, non-traditional exports and to a lesser extent, basic grains.
- Both the macro and sectoral policy environment for agriculture has been particularly unfavorable in the 1980s, so a reversal of key policies could unleash the potential of the sector.
- Likewise, the infrastructure for agricultural development has been very inadequate; poor road system, undeveloped irrigation potential, insufficient investment in drainage, inadequate port and air freight systems, undeveloped rural electrification network, low rates of rural literacy, etc. Improvements in these areas could be expected to contribute greatly to the realization of the sector's potential.

In reviewing the historical performance of the sector, the one factor that stands out most clearly is the continuing contribution of the coffee subsector. During the 1970-87 period, coffee accounted for 37 percent of the growth in the current value of the sector's output, more than double that of any other commodity. Coffee is a labor intensive crop, grown by small landholders (90 percent having less than seven hectares), and grown on land which generally lacks profitable and sustainable alternative uses. Unlike some traditional exports, coffee enjoys reasonable positive international market prospects because Honduran coffee

is highly competitive and can be profitably sold on the nonquota market (even though Honduran coffee sells at a discount from other Central American coffees because of quality).

Land distribution in Honduras is highly unequal. The agrarian reform has only marginally impacted on land distribution and the agrarian reform cooperatives have not been very successful. The cultivatable land constraint is the most important factor limiting sector growth. A corollary factor affecting the land resource is the continuing high rates of soil erosion and the loss of forest and watershed resources. If current trends continue, the forest resource will be exhausted in a generation and soils are being lost at the alarming rate of 10,000 hectares per year. It is clear that coordinated efforts in both forestry and smallholder agriculture will be needed.

II. Sector Objectives and Constraints

A. Agricultural Sector Objectives and the National Economy

The ultimate objective of agricultural sector programs is national economic development. Agriculture is not independent; the sectoral objectives must be consistent with and supportive of national objectives. In the establishment of sector objectives, consideration must be given to the fact that the sector can contribute more in some ways than in others. For example, Honduran agriculture has traditionally been the main source of foreign exchange earnings, accounting for 80 percent of the value of merchandise exports in 1985 and 82 and 83 percent in 1986 and 1987 respectively. Given this demonstrated capacity for exporting and the pressing need to increase foreign exchange earnings, it is entirely appropriate to adopt guiding objectives which stress increased exports from the sector.

The goal of national economic development is not increased foreign exchange earnings or even higher aggregate production levels, but rather the goal is generally some measure of improved material welfare of the population, with emphasis on meeting basic needs such as nutrition, health, housing and education. In Honduras malnutrition is widespread. The incidence of malnutrition as reported in the **National Nutrition Survey** of 1987 was 38 percent using the global measure of weight for age. Other studies indicate that in some areas of the country 70 percent of children under five suffer some degree of malnutrition. Clearly then, improving nutrition levels must be one of the highest national priorities.

Thus, there are two levels of objectives for guiding agricultural programs: the more immediate and measurable goals of increased production and exports; and the indirect, but ultimately more important goal of improving the standard of living of the majority of Hondurans.

The agricultural sector contributes to the ultimate goals in two ways:

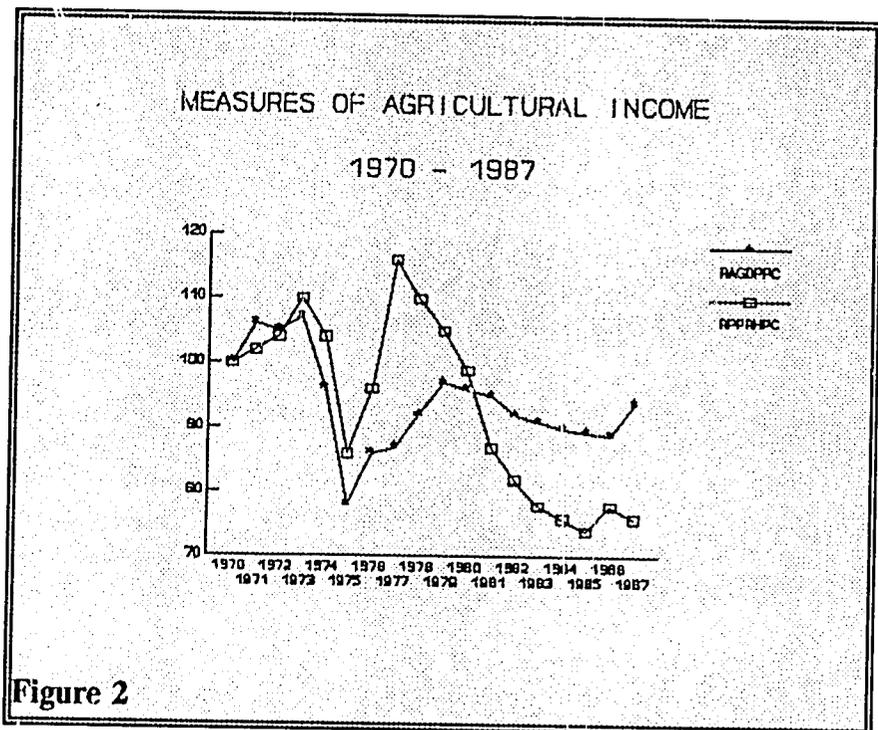
- by raising income and nutrition levels of rural households
 - through higher volumes of production and better prices for agricultural products; and
 - through the creation of more employment; and

- by stimulating industrial production and hence incomes
 - through earning the foreign exchange needed for importing industrial inputs; and
 - through the creation of increased demand for industrial products.

These ambitious goals will be accomplished by a relaxation or elimination of key constraints to sectoral growth which are discussed below. These will include policy changes designed to improve agricultural prices and the efficiency of land use.

Income is not the only determinant of nutrition levels but studies have shown that it is an important one. Even more relevant is the concept of purchasing power, which takes into account the prices of goods that household must purchase. Economic data series tend to emphasize the concept of real income expressed in constant prices of an earlier year (1978 in the present Honduran series). Real income data do not take into account relative price movements. In Honduras, agricultural prices have fallen by about 30 percent relative to nonagricultural prices in this decade.

Therefore, this strategy uses the concept of **real purchasing power** of agricultural households: current household income deflated by an index of nonagricultural prices. If physical agricultural production had not increased during this decade, then real purchasing power of agricultural households would have fallen by the amount of the real price decline, *i.e.* 30 percent. Fortunately, physical production did increase, but not by enough to offset the combined effect of the real price decline and the



population increase. From 1980 to 1987, the total real purchasing power of agricultural households declined by about 10 percent, while in per capita terms the decline was about 27 percent (see Figure 2, where RAGDPPC=Real Agricultural GDP Per Capita and RPPRH=Real Purchasing Power of Rural Households Per Capita). One result of this has been the decrease in average levels of nutrient availability as noted in Section I.

It is worth noting that Honduran farmers are well aware of the trends in relative prices as illustrated by a statement by the president of the Honduran National Federation of Farmers and Ranchers:

"It used to be that with one can of fresh milk we could purchase two rolls of wire; today we need three cans of milk for that. With 18 good young bulls we could buy a good pickup; now we need 50." (Quoted in El Heraldo, October 1, 1988, p. 38)

The decline in real prices has not only affected the material well-being of rural households, but has reduced the incentives to invest in the agricultural sector. In the medium and long term, investment is one of the main determinants of growth in the sector. It is not only the allocation of physical capital which responds to price incentives, but human capital as well. The flight of trained agronomists and other agricultural specialists into nonagricultural occupations accelerates when the sector becomes unprofitable.

As shown in Figure 3, agricultural programs and many economic policies support the immediate goal of increasing real purchasing power of rural households through their effect on real agricultural prices. The relevant policies are both sectoral and macroeconomic. An international consensus has emerged, based on several studies, that an overvalued exchange rate tends to depress agricultural prices relative to nonagricultural prices (e.g. The World Bank's 1986 World Development Report). In Honduras, the exchange rate effect has occurred in this decade. Other policies which are discussed below have also influenced relative prices. Therefore, raising real agricultural price levels is included among the principal direct objectives for the sector.

The three direct objectives, shown in Figure 3 are: a) improving real agricultural prices, b) increasing agricultural production, and c) increasing agricultural exports. The goals are quantified later in this document. The production goal is stated in Lempira value terms in order to include the shift of the sector's output mix toward higher value crops as well as increasing physical production levels.

The structure of the objectives as outlined in Figure 3 is not symmetrical. Improving relative prices (real prices) has been emphasized for the agricultural sector, but not for nonagricultural goods and services. This is because real agricultural prices are at historical lows and most of the poverty and malnutrition are found in rural areas. The average urban household has four times the per capita income of the average rural household and consequently is much better nourished (García *et al.*, 1988). Some 87 percent of rural dwellers fall into the income strata where nutrient availability is less than 1,700 calories per person per day, whereas only four percent of the urban population fall into those strata (*op. cit.*). The positive effect on rural nutrition levels from an increase in incomes brought about by increased food prices will more than offset the negative impact on urban nutrition levels. Nevertheless, for some urban groups - whose numbers are growing - targeted food assistance programs may be required and have been included as an essential part of this strategy.

Another reason for the asymmetry in the structure of objectives is that the multiplier effects caused by increased domestic demand are much greater for additional rural incomes than

THE ROLE OF AGRICULTURAL PROGRAMS IN NATIONAL ECONOMIC DEVELOPMENT

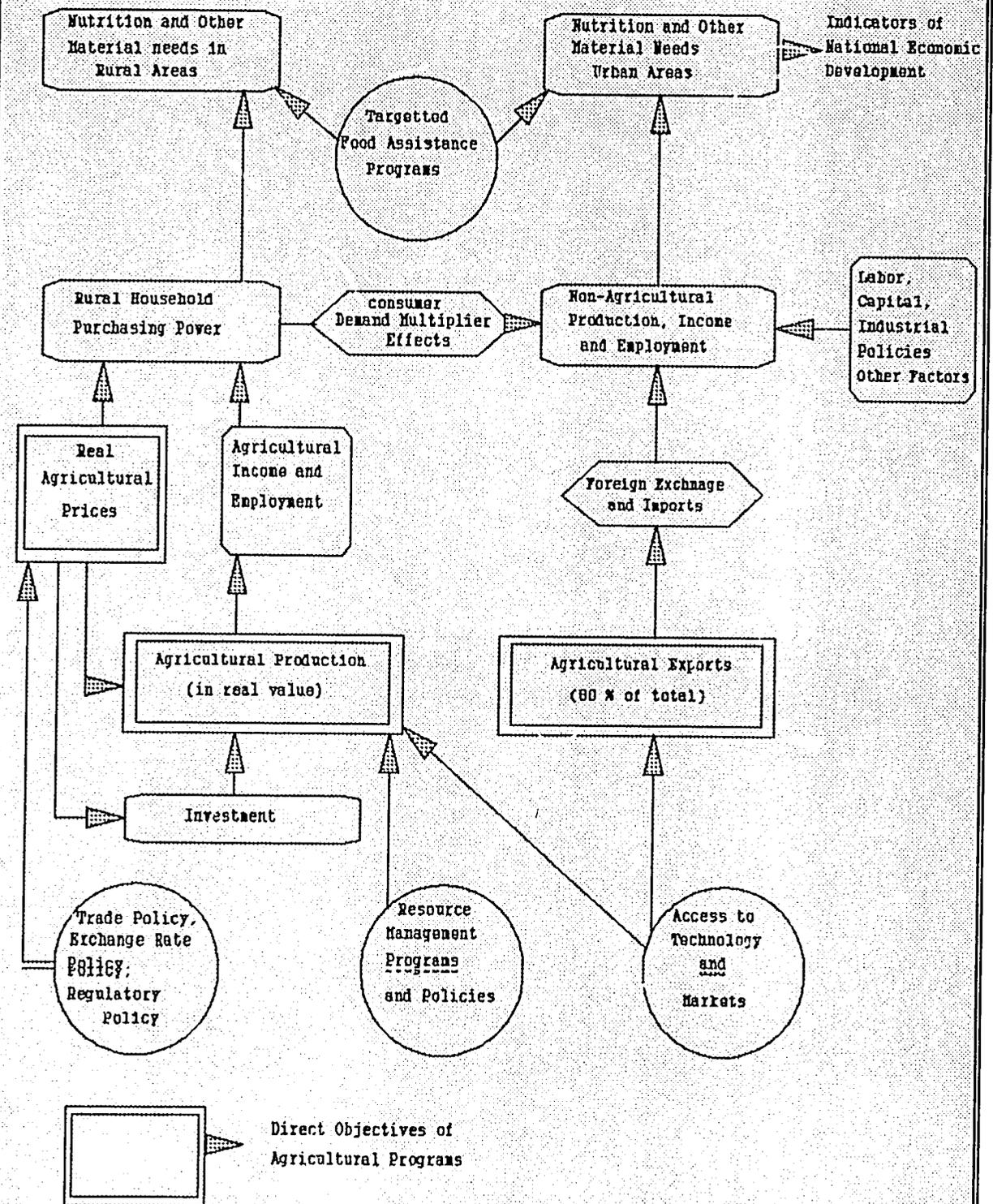


Figure 3

for additional urban incomes. It has been estimated that the marginal propensity to consume food is 52 percent for rural incomes and 35 percent for urban incomes (Source: ADAI). The increased demand for domestic food products is half again as great for each additional Lempira of rural income as for an additional Lempira of urban income.

Although the agricultural sector is the producer of food, its main link to the ultimate goal of better nutrition is through increased incomes and purchasing power. The availability of food is not sufficient if households do not have the income to purchase it. Conversely, if households have sufficient incomes but supplies are short, food can be imported - provided there is foreign exchange. This leads again to the importance of the two intermediate goals of real household purchasing power and foreign exchange earnings.

It is important to note that the objectives of export expansion and nutritional improvement are not in conflict. On the contrary, agricultural export growth promotes improved nutrition by providing more income and employment to low-income farmers. It has been estimated that non-traditional agricultural export crops require five to ten times more labor per hectare than do basic grains. In addition, many export crops are produced in the dry season (under irrigation) while grains are grown as the rotation crop. Hence, increased production of non-traditional export crops represents an important contribution to raising nutritional levels in the country.

It should also be noted that there is a tendency to confuse national food self-sufficiency in basic grains with nutritional sufficiency for low-income families. To the extent that cropping patterns are shifted away from the pattern indicated by comparative advantage, nutritional sufficiency is reduced. Following the cropping patterns indicated by comparative advantage raises incomes and in turn leads to better nutrition. Promoting Honduran exports that are competitive in world markets represents net gains, not only in foreign exchange earnings but also in incomes and nutrition.

In summary, the ultimate objective of agricultural programs and policies is increasing the well-being of the Honduran population, especially in the area of nutrition. This objective can be promoted by increasing household incomes and purchasing power and by generating more foreign exchange. In turn, these intermediate objectives are served by improving the agriculture sector's performance in the areas of production, exports and real prices, following patterns of comparative advantage. These latter are adopted as the immediate objectives for guiding the design of agricultural programs and policies.

B. Principal Constraints to Agricultural Development

In the overall sense, the major constraints to Honduran economic development appear to be a heritage of statist, paternalistic policies in many areas; inadequate infrastructure development; distorted relative prices of goods and factors of production; a deteriorating natural resource base; and inadequate development of human capital, characterized by low literacy rates and malnutrition in large segments of the labor force.

The statist orientation is stifling initiative, creating inefficiencies in the production and marketing systems, and giving rise to continuing fiscal drains. The lack of adequate

infrastructure raises the unit cost of the final products and in some cases results in missed market opportunities all together.

Distorted relative prices are encouraging inefficient resource allocations such as: into industry and services rather than agriculture; into products such as sugarcane instead of grains; into imports rather than domestic production activities; into capital flight as opposed to investment at home; into contraband rather than exporting through the banking system. The average economic protection rate for industry has been calculated at 99 percent, while for most agricultural products it is negative or near zero.

The deteriorating resource base is causing a declining level of wood product exports and is jeopardizing the productivity of thousands of small farmers. A significant amount of soil is being lost each year and the siltation of reservoirs and rainy-season landslides which have to be removed from highways contribute to the fiscal drain.

As demonstrated by the East Asian experience, there is probably no factor more important for economic development than an educated, motivated work force. Farmers who can read extension literature are far more productive than those who cannot. A literate rural labor force more readily learns the requirements of industrial work after migrating to the cities. Many of the agrarian reform cooperatives are severely hampered in the financial and enterprise management areas due to low literacy levels.

In sum, these constraints can be grouped into three major categories, *i.e.*, price structure facing the sector, the resource base, and access to technologies and markets. The diagram in Figure 3 show the general categories of programs (inside the circles) directed at overcoming the constraints. The remainder of this Section reviews the constraints while the programs are discussed in more detail in Sections III and V. It should be noted that the institutional aspects of the sector also impact on growth. Institutional problems are not considered to be a separate constraint, but instead are treated as part of each of the other constraints. Section IV describes the institutional setting of the sector.

1. Price Structures

The issue of price structures has two dimensions: the intersectoral and the intrasectoral. Intersectoral refers to the cited decline in real agricultural prices and intrasectoral refers to inefficiencies within the pricing structure of the sector such as the unduly high price of sugar and the unduly low price of raw milk. Remedying the first problem is largely a matter of macroeconomic policies, while remedying the second is a matter of sectoral policies.

The role of exchange rate policy has been mentioned, but the international commodity prices also play a role in the price movements between agricultural and nonagricultural products. In this decade, real agricultural prices for most commodities have declined in the world market. These declines have been transmitted to the internal economies of almost all developing countries. Exchange rate policy can magnify or diminish the effects of this trend, but it is difficult to reverse it.

Exchange rate policy impacts on the agricultural sector because it is inherently a much more tradeable sector than the rest of the economy taken together (which includes sectors like electricity, housing, water and sewage, etc.). A large number of agricultural products are tradeable internationally and those that are not are usually substitutes, either in consumer demand or in farm production, for products that are tradeable. Hence agricultural products are unusually sensitive to movements in international prices and to movement in exchange rates which translate those prices into domestic currency units. This holds true even if some principal products are not traded in a given year. In Honduras, the exchange rate is clearly overvalued and that has worked against agricultural incentives.

Another factor contributing to the behavior of intersectoral relative prices is the prevailing levels of economic protection among sectors. As mentioned earlier, industrial protection rates were estimated in 1986 at 99 percent on average. Agricultural protection rates were estimated to be strongly negative in meat processing and strongly positive in sugar milling (Source: J. Berlinsky study). Had those protection rates moved to more nearly uniform levels, the decline in real agricultural prices would have been significantly moderated. Trade and tariff policies must be significantly revised so as to move intersectoral protection rates toward parity. This will improve intersectoral relative price relationships from the viewpoint of the agricultural sector.

Exchange rate policy in Honduras has been significantly modified during the past year. There now exist a multiple rate system in which agricultural imports enter at the previous official rate while many industrial imports enter at the parallel rate. Both agricultural and industrial exports receive a weighted average exchange rate between the official and parallel rates through the operation of the CETRA system. The net result is that the average exchange rate applied to agricultural goods, taking into account both imports and exports, is below the average exchange rate for industrial goods. This tends to hold down agricultural prices relative to nonagricultural prices.

The real price trends of this decade are especially important to small farmers. Analysis of the agricultural census of 1974 shows that the average farm in the 0-2 hectare size class plants 1.11 hectares (over both seasons) in basic crops - corn, beans, sorghum and rice. The average farm in the 2-3 hectare group plants 1.91 hectares in these crops. The structural characteristics will not have changed much in the intervening years. Thus the incomes of small farmers are especially sensitive to the prices of basic crops and those farmers are in the population group experiencing the most severe malnutrition.

Grain prices are especially sensitive to world market trends and the exchange rate. Honduras imports some corn and a growing quantity of wheat. The real retail price of wheat flour declined by 41 percent from 1975 to 1985, dragging the real retail and farmgate prices of corn with it (declines of 50 and 28 percent respectively). As a consequence, small and medium-scale farmers have borne the brunt of the relative price movements.

In general, agricultural prices are determined much more by exchange rate and trade policies than by direct price interventions. Studies in Honduras have shown that IHMA's operations do not generally move the farmgate price of corn significantly away from its market determined level. To do so would become too costly. Price regulation by

administrative control can have a greater effect. It is particularly noticeable in the consumer price of sugar (much higher than international levels) and the producer price of raw milk (declining in real terms). Regulated prices that move too far from the market level encourage evasion and black market activities, they can distort resource allocation away from best patterns and they can discourage needed investment in marketing facilities.

Price supports and price controls comprise a sector-level policy instrument, but to be effective they must be coordinated with macroeconomic policies. As an example, with an overvalued exchange rate, it is simply too costly in fiscal terms to effectively support prices through operations of the IHMA type.

2. The Resource Base Constraint

At an aggregate level, expansion of agricultural sector output is determined by two factors - the area of land under cultivation and productivity. Agricultural production growth rates can be disaggregated into these two components - growth in cultivated area and growth in yields per hectare.

The two primary resources in the agricultural sector are land and labor, but of those, land is the scarce resource. There is very little opportunity for expanding the physical agricultural frontier in Honduras, except in areas which would require costly water control infrastructure (the Aguán and Sula valleys) and areas that would require both transportation infrastructure and programs to prevent deforestation (the Patuca River Valley). The contribution of labor as a resource, especially skilled labor, comes in the form of increased yields.

During the period 1970-83, the average annual growth rate of the agricultural sector was 3.7 percent, of which 0.7 points are accounted for by increased cultivated area while 3.0 points are accounted for by increased yields and/or shifts to higher valued crops. Sustaining an annual average increase of 3.0 percent in economic yields (over all crops) is a challenge. Therefore, the strategy in the resource area must focus on increasing productivity, the efficiency of land use and preventing further degradation. Once the economy as a whole is attaining an adequate growth rate, additional investments in the infrastructure required to bring more land under cultivation will be possible.

The productivity component of the strategy is directly related to the price policy issue and to access to technologies and markets which are discussed in other Sections. Improved management of the resource base means shifting land use patterns toward more productive uses. The two principal areas for increasing land use are shifting to those higher value non-traditional crops in which Honduras has a comparative advantage and by intensifying the existing extensive livestock operations. The potential contribution of the high value non-traditionals has already been discussed.

Extensive livestock enterprises occupy substantial portions of the land in Honduras. The Central Bank estimated in August 1988 that 48 percent of the valley lands in Honduras - covering 31 principal valleys - is in pasture. That amounts to a total of 472,000 hectares of which 22 percent is located in southern part of the country and has limited potential for

crops due to the irregularity of rainfall. The remaining 368,000 hectares of pasture are potentially suitable for cropping. Comparing corn and extensive cattle production on a per hectare basis, corn generates twice the foreign exchange earnings or savings, produces several times the income and generates ten times the employment of cattle production. Corn would clearly be a more productive use of the land on a per hectare basis and would contribute much more to the ultimate goal of improving nutrition levels.

From a policy viewpoint, the issue is not displacing livestock operations but rather intensifying them. This goal can be accomplished by greater use of cultivated pastures, greater reliance on feedgrains and silage and by increased use of feedlots. Even intensifying only a small portion of livestock activities could significantly boost growth rates in the sector. Extensive ranching operations tend to maximize returns per ranch rather than returns per hectare. But with land being the scarce resource, the national interest lies in maximizing productivity per hectare. This is a conflict between national and private objectives and the challenge for policy is to structure the environment of economic incentives in such a way that the conflict is reduced or eliminated.

Intensification of the use of arable land is constrained by the following:

- By law, farmers and ranchers have a guarantee of land tenure security (i.e., immunity from invasions by others and expropriation by the state) only if they produce livestock, selected long-cycle crops such as sugarcane, and as of 1st summer, basic grains. Until the law is changed production of other crops such as non-traditionals is risky.
- Renting land is prohibited by existing law, thus inhibiting, in some cases, the transfer of land to more intensive uses.
- The "scarcity value" of land is not transmitted to producers in terms of price because land markets are thin and rental is prohibited.
- Incentives for the intensive use of land such as a land tax are either non-existent or not applied.
- By law, smallholders may not receive title to plots of less than five hectares. In addition, agrarian reform beneficiaries with less than 17 hectares of land receive titles which do not provide full property rights.

The thrust of the agricultural strategy will be to relax these constraints through a variety of policy changes. Land use intensification can lead to increased crop output without reducing the output of livestock production. It is important to note that land use intensification will be conceived and executed in a market context, using policy instruments such as land taxes and improved tenure security regardless of cropping pattern. Attempts to legislate cropping patterns will lead to considerable loss in productivity.

Another aspect of the land use issues arises in the agrarian reform subsector. The amount of land per beneficiary varies substantially from cooperative to cooperative resulting in

many cases in idle land. More uniform administration of the agrarian reform would give more farmers access to land. To date, the reform subsector has not been as efficient as private producers, so it will be important to sector growth to find ways to improve the efficiency of the reform cooperatives.

Intensification of land use should not be taken to mean cutting of forest for crop production. In fact, a key aspect of the resource management concerns improved forest management programs. Honduras is the most forested country in Central America and has about 2½ times as much land in forests as in crops. In 1987, exports of forest products contributed 77 million Lempiras worth of foreign exchange, fourth on the agricultural list after bananas, coffee, and seafood. The forest resource base is being degraded at an alarming rate - based on current trends, the pine and hardwood forests could disappear in a generation. This would not only represent the loss of a valuable resource, but would also represent a loss of soil and water resources for crop agriculture. Encouraging more intensive use of existing cropland - thus creating more income and employment - would decrease some of the pressure on forest lands.

Much of the currently cropped land could be intensified by the expansion of the irrigation network. It has been estimated that only 15 percent of the land which is potentially suited for irrigation is currently irrigated. Intensification of land use will require additional investment in irrigation infrastructure. Investment in irrigation infrastructure is constrained partly by the lack of adequate services for design of projects and training farmers, but more importantly, many of the policy constraints mentioned elsewhere discourage such investment. At the same time, no other single intervention increases productivity of agricultural land more than the development of irrigation systems.

Human capital is also a basic resource for the sector and ultimately the most important resource. To the extent that adequate human capital is not available, the sector will not be able to fully realize the potential from improved technologies and as agriculture is intensified and modernized, enterprise management becomes more complex and more important. In addition, human capital formation is directly related to improvement in health and other social objectives which will result from the increased growth of the sector.

C. The Access Constraint

The access constraint includes the following issues:

- Costly access to domestic markets because of inadequate transport and storage facilities, and costly and inefficient government services.
- Inadequate access to inputs because of inefficient credit, extension and input delivery systems, and insufficient credit available to small farmers.
- Lack of access for low-income consumers to effective, targeted food assistance programs.

The importance of the access issue can be illustrated by the example of beans. Yields of beans have not increased since 1970, yet there exist field-proven technologies which would permit yield increases of 30 to 40 percent and, at the same, time permit the recuperation of lands that have been lost to production due to a particularly virulent soil borne disease. It currently costs more to market a kilo of beans than a kilo of corn. A concerted effort could break these constraints and would have the added benefit of improving the nutritional status of the poor.

As mentioned elsewhere, port charges are exorbitant and port infrastructure is underdeveloped. There is a lack of storage infrastructure for both perishable and non-perishable products. There is no system of bonded warehouses for agricultural commodities, thereby limiting the use of commodities as collateral. The rural roads infrastructure also requires additional investment. Rural electrification has not developed in consonance with the generation capacity of the country. Relatively inexpensive electricity could replace diesel and gasoline in pumps for irrigation, in drying and moving grain, and in refrigerated storage of perishable products. It could also replace extremely scarce fuelwood in lime and brick kilns.

The access constraint is very much affected by the availability of credit. Historically the roles of BANADESA and the commercial banks in financing agricultural production have been limited. BANADESA serves mainly the agrarian reform sector and small and medium scale private farmers. BANADESA has serious problems of portfolio management, with about 41 percent of the portfolio in arrears. Most of the arrears are owed by large private borrowers and public sector agencies. The commercial banks have traditionally relied on urban-industrial forms of collateral.

There is a pressing need for improved access to institutional credit for smallholder farmers. According to a 1989 survey (conducted by CADESCA) of Honduran basic grains producers, neither BANADESA nor the commercial banks fill this need, resulting in less than ten percent of grains farmers utilizing institutional credit. In a similar study (Webb, Abusada and Velarde, 1988) found that less than 10% of all small-scale farmers obtain institutional credit. Steps can be taken to make agricultural lending more attractive to commercial banks, including macro policy measures that improve real agricultural prices and therefore improve the profitability of agricultural investments.

However, it would be unrealistic to expect commercial lending in agriculture to increase significantly in the short run, even with appropriate policies in place. Honduran banks do not have a tradition of actually taking title to land when a farmer is in default, so agricultural land does not serve as the kind of collateral desired. Even under a regime of equal interest rates across sectors, the incentives for banks to lend are not equal across sectors. Ultimately, as noted in Section V II below, this issue can be addressed by interest rate deregulation and by a new law governing collateral.

Agricultural profit margins have been severely squeezed by declining real output prices. This trend has accelerated during 1989, as many agricultural inputs have been effectively priced at the higher parallel exchange rate (about 75% higher than the official one) while output prices remain at levels corresponding to the official rate (basic grains). (In some

cases, agricultural prices are based on an exchange rate calculated at the weighted average between the official and CETRA rates which is about 30 percent higher than the official rate.) An important implication is that moves to raise real agricultural interest rates should be made in coordination with steps to lessen the distortions in the exchange rate and trade regime.

Another major credit issue revolves around the virtual non existence of long-term lending in Honduran agriculture. Many crops with significant export potential (mango, citrus, pepper, cacao, coffee, to name a few) require long-term investments. The banking system needs to respond to this need by offering a portfolio of lending that includes short-term (annual or less) loans at interest rates higher than the present ones and long-term loans at interest rates that are lower than present ones. This is an area where banking and policy experts need to work together to develop new orientations. Finally, improvements are needed in the legal system to make land a more viable form of banking collateral.

The access constraint also concerns the urban poor who need access to basic foods. The need is already great and will increase if economic policy succeeds in improving producer incentives through higher farmgate prices. Food assistance programs exist, but they are not well targeted and hence costly compared to the benefits delivered.

D. Additional Considerations on Constraints

An issue which has not been mentioned above is the role of aggregate demand. As noted earlier, the agricultural sector expanded more rapidly than the rest of the economy during this decade resulting in a somewhat slower growth in the demand for food by urban households. Aggregate demand for agricultural products is not considered to be a limitation because there exist opportunities to improve agricultural prices through trade and exchange rate policy and the removal of price controls. In addition, agricultural output can be sold on export markets and can be substituted for imports (especially corn and wheat with domestic corn and rice -- and animal feed products with domestic corn, sorghum and cassava). An outlet exists for increments in agricultural production beyond the current rates of increase in domestic demand. Through the multiplier effects of additional agricultural income and the resultant increases in rural household expenditures, the agricultural sector itself can contribute, in part, to accelerated demand for food. This is especially true in the Honduran case because of the relatively large share represented by agriculture and agroindustry in the overall economy. Rapid expansion of the nonagricultural sector would be a welcome development for agriculture, but its absence does not preclude agricultural growth. However, since effective aggregate demand appears to be quite weak, emphasis will be on export markets.

III. An Agricultural Development Strategy for Honduras

The development strategy for Honduran agriculture sector is oriented toward the relaxation or elimination of the key constraints identified above. Accordingly, it will focus on the following:

- Arrest the decline in real agricultural prices, then begin to increase prices through the coordination of macroeconomic policies changes with reforms in agricultural sector policies.
- Improve the efficiency of utilization of the resource base by:
 - Programs and policies to promote intensification of use of existing agricultural land;
 - Programs and policies to arrest the degradation of the resource base, especially in forest areas;
 - Complementary resource-oriented programs in the areas of irrigation and human capital formation.
- Improve access to markets and technologies for producers, and access to staple foods for consumers. Actions in this area are essential to realize the improved price incentives to farmers and to provide the conditions necessary for increased productivity, as well as to enable low-income, malnourished consumers to improve their positions.

The strategy is designed to simultaneously support the immediate objectives of higher real prices, production and exports, and through these the ultimate objectives of higher rural household purchasing power, improved nutrition, and growth of nonagricultural incomes. The agriculture sector's contribution to this last objective takes the form of providing increasing foreign exchange earnings and generating greater demand multiplier effects for urban goods and services.

Implementation of the strategy involves utilization by the Mission of both program and project assistance instruments. It implies a high degree of emphasis on policy reform with program (ESF and PL-480 Title I) support linked to policy conditionality. In the case of ESF, the disbursement of the dollars will be linked to the implementation of specific policy reforms. In the case of PL-480 Title I, the self-help measures will include specific policy reforms. DA projects and the local currency generated from both the ESF and the PL-480 will be used to implement programs designed to enhance and accelerate sector growth made possible by the reforms. For example, the Rural Roads project will target roads for those areas with the highest agricultural potential, the Irrigation project will collaborate with the Export Development project to select areas for irrigation projects and the Agricultural Policy project will continue to develop policy issues and monitor the implementation of reforms.

The overall structural reform program will be guided by the agricultural sector strategy and agricultural sector revitalization statement of the GOH (publication expected shortly). A high degree of coordination among the donors and careful planning of the program and project assistance will be required. Many of the relevant agricultural policy issues have been raised in intensive dialogue with the new Government and the private sector. There now exists a greater appreciation of the impact of policy on the primary objectives of the

sector. A comprehensive policy reform agenda is set out in Section VII. The two priority areas for policy reform are pricing policies, including macroeconomic policy reform (macro level reforms will be part of the broader ESF program) that affect real agricultural prices, and the land tenure regime.

This strategy has grown out of a few key findings discussed previously: real agricultural prices have deteriorated, and policies have played a dominant role in that trend; the land base is a pressing constraint and yet it is being both inefficiently used and degraded; and there are a number of important bottlenecks that inhibit the delivery of inputs (including knowledge of improved practices) to the farmer and the delivery of his product to the market. While the Mission's program cannot attempt to address all the important issues, it can address important aspects of some of these key constraints.

Apart from the question of correcting the biases and distortions in the pricing system, the strategy is productivity oriented, in both the land use aspects and the marketing system. The elimination of distortions in the pricing system can be expected to lead to more efficient resource allocation, and hence to greater overall productivity in the sector. The strategy also attempts to take a food system perspective and meet the needs of low income urban consumers. Production is a key intermediate objective, but the improved well-being of the Honduran population is the ultimate objective.

In terms of crops, the most efficient growth path has been shown by both experience and studies to center around coffee and nontraditionals (shrimp, melon, plantain, cucumbers, tomatoes, cardamon, squash, pineapple, some citrus products, snowpeas, cacao, mangoes, and a number of other crops). These crops are not only the most competitive but they generate the most employment and domestic income per hectare. Most of them involve smallholders to a significant extent, especially coffee (over 90% smallholders), squash, tomatoes and plantain.

In terms of resource utilization, the most efficient growth path for agriculture is associated with intensification of land use and with greater conservation of forest, water and soil resources. These two are compatible. For example, moving corn production from the hillsides into valley lands, displacing at the margin livestock production, would reduce the rate of hillside erosion. Many hillside holdings, properly terraced and managed, with microirrigation, can be sustainably used to produce high value crops. Also, cultivating stands of fuelwood trees would intensify land use and at the same time reduced the rate of soil degradation through deforestation.

Intensification of land use means shifting the output pattern toward higher-value crops (which generally also are more employment intensive) and it also means raising levels of input use and yields. In 1989, Honduras imported less than a tenth as much fertilizer as El Salvador, in spite of having a larger cropped area. Correspondingly, a 1989 survey of grains farmers indicated that less than 10% of them had access to institutional credit.

In terms of markets, the greatest strength of Honduran agriculture lies in producing for export. There are significant possibilities for the domestic market -- poultry, tomatoes, onions, corn, soybeans, oil palm, plantain -- but in general, the most dynamic products (and

the most employment intensive) are the export products. (Some of them are produced both for export and for the domestic market, as in the case of plantain, tomatoes and oil palm).

Successful economic development in the 1990s is going to require that Honduras give up subsidizing food consumption of the urban population. Through generalized subsidies -- effected by an overvalued exchange rate, tariff protection tilted toward the industrial sector, and price controls -- economic policy has encouraged rural to urban migration and discouraged agricultural production. Food pricing policies have led Honduras into a social-economic-political trap, a "low level equilibrium trap". The longer the time spent in the trap, the harder it is to get out, because the pressure group for maintenance of the subsidies -- the urban population -- is continuously growing. India got out of the trap through daring policies, the Green Revolution, and luck (weather); Mexico is getting out only through eight years of economic and social stress; and Egypt and Tunisia still are in the trap. Whenever a reduction of the generalized food subsidies is attempted in these latter two countries, urban riots erupt.

To successfully carry out the strategy outlined here, the public sector needs to redefine its role. It will need to reduce emphasis on direct intervention and fiscal subsidies and increase activities related to defining and carrying out needed policy reforms. The fiscal subsidies to INA, BANADESA and IHMA need to be reduced, and the fiscal incentives to exports (which are necessary in the current environment) need to be replaced by a more suitable exchange rate policy. The direct interventions that need to be curtailed the most are import licensing requirements, price controls, interest rate controls, state control of the seed industry, state interventions in BANADESA, and state ownership of forest land and agrarian reform cooperative land. Policy reorientations also are especially needed in regard to exchange rate policies, tariff policies, the land tenure regime, water use and forest management policies, BANADESA's operating rules, land collateral and taxation questions, and grain import policies.

Concomitantly, the private sector's role would be enhanced significantly in this strategy, especially in areas like land ownership, the ownership and management of grain storage facilities, the seed industry, and the forest industry. Policy making should reflect an awareness that the country has many industries that are characterized by monopolies and oligopolies; and rather than combatting them by state ownership of marketing and production facilities, an element of competition must be introduced by reducing import restrictions and by promoting private marketing cooperatives. In the agrarian reform sector, there is an especially pressing need to develop a framework in which the more than 2,000 state cooperatives can begin to function as market-oriented enterprises.

IV. The Institutional Setting of Honduran Agriculture

The public agricultural sector in Honduras comprises the Ministry of Natural Resources (MRN) and several important, quasi-autonomous parastatal agencies. In total, the budgets of the parastatals are larger than the budget of the MRN (See Annex Table A.4.). Until recently, the budgets of the parastatals were submitted to the economic ministries independently of the MRN, but now those budgets are required to be coordinated by the

Council for Agricultural Development (CODA) which is headed by the Minister of Natural Resources. In addition, the new Government has incorporated the Minister of Natural Resources into the "Economic Cabinet" along with the Ministers of Economy, Finance, Planning and the President of the Central Bank. The Minister of Natural Resources has also been appointed to the Governing Board of the Central Bank. Both of these measures are seen as a recognition on the part of the new regime of the important role of the agricultural sector in the economic recovery of the country.

The MRN has significant institutional weaknesses. In spite of growing PL-480 support for agriculture, the MRN's share of the total public sector budget has declined by about fifty percent since 1980 (See Table A.4). Salary levels have declined in real terms for the staff on regular civil service appointments (which has led to increasing use of the device of annual staff contracts), and the funding available for support expenditures (vehicle operations, office supplies) has declined even more. AID's evaluation of the PL-480 Title I programs showed quantitatively that the MRN's expenditures have not had a perceptible effect on the yields of staple crops, with the exception of the supervised Title I/III programs, in spite of the fact that research, extension, seed multiplication and human capital formation accounted for 49% of the MRN outlays in 1988 (and staple crops were the main focus of those outlays).

The approach of this agricultural strategy is to work on selective improvements in the MRN such as privatization of selected services for improved farmer access to inputs and assistance, and toward rationalization of the principal parastatals in agriculture. A general improvement in the MRN as an institution is not identified as fundamental at this time, in part because the principal objectives of the strategy can be achieved without that, and because institution building would be a difficult undertaking with no guarantee of success. The MRN's internal management procedures would have to be completely re-vamped, staffing patterns would have to be altered significantly, and real salary levels would have to be increased. As an example, the present personnel placement system does not provide for systematic matching of qualifications and job descriptions and routine disbursements sometimes require more than thirty authorizing signatures.

The system for establishing budget priorities also needs improvement. For example, the portion of MNR's budget destined to irrigation has declined from 13.7% in 1980 (already low) to 9.0% in 1988, yet irrigation is one of the more powerful tools for increasing productivity in the sector. Of course, effective increases in productivity through an expansion of irrigable land will require not only capital investments in infrastructure but also improvements in irrigation management practices. Under the Mission's Irrigation Project (522-0268), a water management law has recently been completed, although not yet enacted. The Mission also recently obtained agreement from the Government, as part of PL-480 negotiations, that there should be a significant role for the private sector in the area of seed production, which until now has been distorted by the MRN intervention.

Of the parastatals, BANADESA has the largest budget but also has large revenue sources of its own. IHCAFE also has a significant budget, as does COHDEFOR, but both have revenue sources outside the central Government (the large sporadic replanting campaigns of COHDEFOR are financed by transfers from the Central Government.). INA represents

the largest single drain on the budget, and in some years IHMA has a significant net deficit as well.

The Mission will seek to promote a redefinition of the functions of IHMA, eliminating its monopoly over grain imports and confining its domestic operations to a regulatory reserve role. The Government's policies have effectively led to generalized food subsidies to urban classes, by importing food at an overvalued exchange rate, tariff exemptions on imported basic grains, and some subsidized food sales by BANASUPRO. The implicit subsidies have been regressive in the distribution sense, and together with the price controls they have reduced farm incentives.

The Mission will seek to persuade the Government that the legitimate food assistance needs of the urban poor can be met more effectively by targeted and efficiently administered food subsidy programs, in the context of decontrolled prices and food imports at the parallel exchange rate. IHMA's role would be to maintain a regulatory reserve, from which food stocks would be released only if prices moved out of predetermined range, and only temporarily until new imports could arrive. The range, or band, of prices would be established with respect to a moving average of international prices, thus bringing Honduran relative prices more into line with international relative prices, a development which would promote greater efficiency in resource allocation.

Another thrust of the policy work will be to reduce INA's role in land markets, to encourage appropriate revisions in the agrarian reform legislation and develop a system of land taxes, all designed to encourage more efficient use of land. The Mission's policy activity has supported a Government task force on INA, and significant shifts in the perception of INA's role appear to be developing.

The Mission's forestry project, implemented by COHDEFOR has fostered steps toward more rational methods of timber management. This will continue to be a Mission priority. The Mission has worked with IHCAFE in extending technical assistance and credit to increase coffee productivity, with very positive results. The Mission plans to continue this effort, given the importance of coffee for sector income and foreign exchange and the positive income distribution effects.

The Mission does not have an active project directly with BANADESA (although the Coffee Project and LUPE utilize its facilities through a fiduciary arrangement to deliver credit to small farmers). In the long run, the objectives for that institution will be to reduce its financial intermediation costs; adopt more flexible, market oriented interest rate policies; and carry out structural reforms to give it more autonomy; but that issue will be addressed later after the results are in on the World Bank's work with BANADESA. The Mission's policy analysis activity has supported some re-thinking of BANADESA's structure and functioning, the first fruits of which may come out in the context of a proposed World Bank Sector Loan.

To improve the agricultural policy making framework, the Government has just expanded the "Economic Cabinet" to include the Minister of Natural Resources and have given him budgetary authority over the agricultural parastatals through the CODA mentioned above.

That framework will create a stronger policy analysis and investment programming unit for the public agricultural sector. The amendment to the Policy Analysis and Implementation Project (522-0325) will expand and extend agricultural policy activities, providing substantive assistance to this nascent unit.

The current agricultural policy advisory activities have broadened the scope of the 1989 National Agricultural Survey. This will provide the best agricultural data base since the census of 1974, and an improved informational environment for policy analysis.

V. Sector Performance Targets

A. Procedures for Developing the Targets

This Section presents a quantification of the agricultural objectives discussed in Section II and illustrated in Figure 3. The quantitative targets are derived from projections by product, subsector and sector, and they include the effects of relative price changes as well as projects.

The method of developing the projections was to construct two alternative scenarios, one based on the assumption of no USAID projects or policy initiatives from 1988 onward (Scenario A), and the other based on the current and planned portfolio of projects and activities (Scenario B). In some policy initiatives, other donors are expected to collaborate in the reforms, so the incremental impacts are not attributable exclusively to USAID activities. It has been necessary to take 1987 as the base year, owing to the coverage of the data series. The projections have been made to 1993.

The projections are obviously quite approximate and are only intended to be indicative of the possible magnitudes of change. As the composition tables for production and exports show, in dealing with agriculture it is necessary to take into account items with negative trends as well as the growth items.

The methodology is informal. In some cases, (such as the production and exports of coffee, shrimp, fruits and wood products) projections are based on project studies and the opinions of experts in those fields. The same is true of corn and beans production. In other cases, however, historical trends are the key factors. For example, exports of livestock products amounted to 41 percent of production in 1972, and only 14 percent in 1987. Clearly, domestic demand is growing faster than production, and can be expected to continue to do so. In other cases, world markets are the determining factors (*e.g.*, sugar, tobacco), with allowance for the effects of exchange rate reform. Also there are products such as sorghum that would be unusually sensitive to that kind of reform, because it competes directly with imported animal feeds.

The details of the projections are laid out to show the basis for the aggregate projections. As informal as the methodology may be, the consistency of the projections with past trends and with expert opinion makes it unlikely that even a full-scale model would lead to significantly different projections, at least at the aggregate level.

The projections of nonagricultural GDP are reasonably conservative and attempt to take fully into account the projections for agriculture. It should be noted in this regard that agricultural GDP is about fifty percent larger than industrial GDP (in 1987, at 1987 prices). Also, by including the value added in agricultural marketing (at about forty percent of primary agricultural value added) plus the value added in agro-industry (conservatively, one-half of industrial value added), it turns out that this expanded definition of agriculture accounted for 37 percent of total GDP in 1987. Hence the rest of the economy can be expected to respond significantly to variations in agriculture's performance.

B. The Sectoral Performance Targets

The targets and the relevant historical trends are shown in Tables 1-6. One of the key figures is real agricultural GDP (Table 3); without the current and planned projects and policy initiatives, that variable is likely to continue to grow at approximately its rate of this decade or 2.0 percent. Higher growth rates in shrimp, rice, coffee, oil palm and other products will be offset by negative growth rates in cotton, tobacco and sorghum, and zero or low growth rates in sugarcane, beans, cassava and potatoes (the latter two are included in "others" in Table 5).

With the effects of current and planned projects, plus the anticipated policy changes, it appears reasonable to expect that the growth rate of real agricultural GDP can be raised from 2.0 percent to 3.6 percent per year. That improvement would add 165 million Lempiras to the 1987-1993 increment in agricultural GDP (Table 2). More importantly, the growth rate of the real purchasing power of agricultural GDP would increase from 2.0 percent to 5.0 percent because of the anticipated reforms in trade and exchange rate policies. This would have a very important effect on average daily calorie consumption levels; instead of falling it would rise significantly (Table 2). A corollary effect would be a slight slowing down of the rate of rural-urban migration (Table 3).

The average daily calorie consumption level in urban areas appears bound to decline under any scenario (Table 4). This does not mean that the average diets of people living in urban areas will worsen, but rather that the rural-urban migration trends will cause a continuously higher proportion of the total urban population to be accounted for by lower-income householders. Even though these households may raise their nutrition levels by moving to a city, their caloric intake will still lie below the existing urban average, and hence they will bring that average down.

Progress toward the achievement of nutrition goals is more accurately monitored by anthropometric measures than by the measures of caloric availability. Hence, the Ministry of Health's health status surveys, undertaken every three years, will be used for this purpose.

It should be noted that the effect of the Forestry Project is expected to be the prevention of an anticipated decline in forestry output and exports (Tables 3 and 6). The shrimp activity under the FPX Project will increase an already high growth rate in the subsector of fisheries, beekeeping and hunting. Fruit exports will increase much more rapidly with the aid of FPX and FHIA, but their weight is still small in total exports (5 percent) and

Table 1

QUANTITATIVE TARGETS: INCREMENTS 1987-1993

(in 1987 constant prices)

	1987 <u>Level</u>	<u>Targets</u>		1993 <u>Level</u>
		<u>Absolute Increment</u>	<u>% Increase</u>	
Agricultural GDP (mill. Lps.)	1518	358	23.6	1876
Real agricultural price index	1.0	0.1	10.0	1.1
Purchasing power of agricultural GDP (mill. Lps.)	1518	510	33.6	2028
Agricultural exports (mill. \$)	715	195	27.3	910
Rural per capita average daily calorie consumption	1649	275	16.7	1924
National per capita average daily calorie consumption	1817	182	10.0	1999
Incidence of malnutrition, weight-for-age measure	38.0%	-3.8%	-10.0	34.2%
GDP in (mill. Lps.)				
Crops	966	222	23.0	1188
Livestock and poultry	279	60	21.4	339
Forestry	192	0	0.0	192
Fisheries	81	77	95.1	158

- Notes:**
- a) The sum of the agricultural components of GDP do not add exactly to total agricultural GDP because of rounding errors.
 - b) The 1987 calorie levels represent a slight reduction from the levels of the 1979 household survey.
 - c) The export increment for the items with growing markets will be greater than \$174 million, but some export lines are expected to decline in value (beef, sugar, cotton, tobacco).
 - d) These targets correspond to scenario B in the other tables on projections.
 - e) Note that inputs are subtracted in calculating agricultural GDP, whereas they are not subtracted from the value of export sales. Note also that export crops typically are more input-intensive than crops produced for the domestic market.
 - f) The breakdown of agricultural GDP into its four major components is based on the last available version of the national accounts that included such detail.

Table 2

PROJECTED IMPACT ATTRIBUTABLE TO USAID PROJECTS AND PROGRAMS

(in 1987 constant prices)

	Projected 1987-1993 Increment under Scenarios:		Difference Attributable to Projects and Programs
	A	B	
Agricultural GDP (mill. Lps.)	193	358	165
Purchasing power of agricultural GDP (mill. Lps.)	193	510	317
Agricultural exports (mill. \$)	114	195	81
Rural per capita average daily calorie consumption	0	275	275
National per capita average daily calorie consumption	-44	182	226
GDP by subsector (mill. Lps.)			
Crops	129	222	93
Livestock and Poultry	56	60	4
Forestry	-22	0	22
Fisheries	41	77	36

Notes: a) In program areas like reforms of exchange rate and trade policies, part of the credit for the attributable difference shown in the last column must be shared with other donors and the Honduran Government; otherwise the impacts are specifically associated with USAID projects.

b) See Table 3 for the growth rates behind these scenarios.

Table 3

INDICATORS OF AGRICULTURAL SECTOR PERFORMANCE

(% annual growth rates)

I. <u>Real GDP</u>	<u>1975-1987</u>	<u>1980-1987</u>	Projections ¹ 1987-1993	
			<u>A</u>	<u>B</u>
Total GDP	3.8	1.9	2.8	4.0
Agricultural	3.8	1.9	2.0	3.6
Nonagricultural	3.8	1.7	3.0	4.2
Real purchasing power of agricultural GDP (RPPA)	1.1	-1.8	2.0	5.0 ²
RPPA per capita (rural)	-1.2	-4.1	-0.3	+2.5
Crops	4.4	1.3	2.1	3.5
Livestock and Poultry	3.2	2.7	3.1	3.3
Forestry	1.0	-0.2	-2.0	0
Fisheries ³	4.0	10.1	7.0	11.8
II. <u>Agricultural Foreign Trade</u>				
	<u>1974-1980</u>	<u>1980-1987</u>		
Exports (\$)	25.8	1.1	2.5	4.1
Imports (\$) ⁴	16.8	-1.9	0.0	3.0
III. <u>Population</u>				
	<u>1974-1980</u>	<u>1980-1987</u>		
Rural	2.0	2.0	2.0	2.2
Urban	3.8	3.8	3.8	3.6
Total	2.9	2.9	2.9	2.9

¹Scenario A excludes the impact of all AID projects and policy oriented programs; scenario B includes them.

²The comparable growth rate of real purchasing power of urban households would be 4 percent under this scenario.

³Including hunting and beekeeping.

⁴Imports of agricultural goods, not agricultural inputs. Significant import substitution will take place under scenario B, but the effect of higher GDP growth on import demand will be strong enough that the net effect will be an increase in the growth rate of imports.

Table 4

PROJECTIONS OF NUTRITION LEVELS

(% annual growth rates)

I. Historical Reference Period Growth Rates (1970-84)

Real Private Consumption	2.9
Population	2.9
Calories per Capita	-0.1

Note: The rate of change of calorie consumption per capita is taken from the midpoint of the range estimated by García et al. (1988), adjusting for more recent estimates of the population growth rate during the 1970-84 period. If the income distribution did not change, and the average dietary composition did not change, then it would be expected that the rates of change of population and calories per capita would sum approximately to the rate of change of real private consumption.

II. Projections for 1987-1993 under the Two Growth Scenarios

	<u>A</u>	<u>B</u>
Real purchasing power of agricultural GDP	2.0	5.0
Real purchasing power of nonagricultural GDP	3.0	4.0
Calorie consumption per capita:		
urban	-0.8	+0.4
rural	-0.0	+2.8
total	-0.4	+1.6
Incidence of malnutrition, weight-for-age measure, whole country	+0.4	-1.6

Notes: a) It is assumed that real private consumption grows at the same rate that GDP does, unlike the historical period when GDP grew faster because of the expansion of public consumption.

b) A negative growth of per capita calorie consumption in urban areas does not necessarily mean worsening diets; rather, it means that an increasing share of the urban population is in the low-income strata.

Table 5

GDP GROWTH RATES FOR PRINCIPAL CROPS

(% growth rates in 1987 constant prices)

	<u>Historical Growth Rates</u>		<u>1987-1993 Projected Growth Rates</u>	
	<u>1975-87</u>	<u>1980-87</u>	<u>A</u>	<u>B</u>
Coffee	4.7	2.9	2.7	4.5
Bananas	10.1	0.7	1.5	2.5
Corn	2.2	4.0	1.5	3.0
Rice	6.0	3.7	4.0	6.0
Beans	0.8	0.7	0.6	2.0
Sorghum	-8.0	-6.3	-2.0	4.0
Oil Palm	18.0	19.0	7.0	10.0
Sugarcane	5.5	0.0	0.0	-4.0
Plantain	9.1	5.1	5.0	5.5
Cotton	1.3	-11.9	-4.0	-2.0
Tobacco	0.0	-5.2	-3.0	-1.0
Others	-0.2	-5.4	1.0	5.0

Notes: a) The historical growth rates are in 1978 constant prices.

b) The projections A are made without any of the A.I.D. projects or policy-oriented programs; projections B are based on the inclusion of those programs.

c) The 1980-87 trend in corn production has been partly influenced by weather and partly by the rapid diffusion of new technologies, which may be peaking out unless continuing project and policy support is given. Corn production has experienced significant declines in some historical periods. For these reasons, the baseline projection (scenario A) is cautious.

Table 6

APPROXIMATE COMPOSITION OF THE EXPORT TARGETS

(in million current Lempiras)

	1980	1986	1987	1987-1993 Projected Growth Rates (%)	
				A	B
Fish and Shellfish	47,405	92,106	106,015	7.0	12.0
Livestock products	130,176	36,242	37,580	-10.0	-8.0
Bananas, plantains	466,285	519,715	659,876	1.5	2.5
Vegetables, roots	8,191	4,203	3,549	-5.0	0.0
Coffee and Cacao	416,999	604,283	410,647	5.7	7.1
Sugar	66,581	29,843	41,268	-3.0	-6.0
Wood Products	60,062	73,378	77,028	-2.0	0.0
Natural Fibers	27,298	9,319	4,326	-10.0	-5.0
Beverages, tobacco	37,746	20,846	13,651	-10.0	-6.0
Fruits, nuts, flowers	48,282	60,854	70,863	5.0	10.0
Others	15,088	3,981	5,008	0.0	3.0
TOTAL	1,342,113	1,454,770	1,429,811	2.5	4.1

Notes: a) The projected growth rates are in 1987 constant prices.

b) A unification of the exchange rate would raise the domestic purchasing power of exports, by raising the domestic price of exportables vs. the domestic price of non-tradables.

even smaller in total production. The LUPE Project, combined with price reforms, could make a critical difference in sustaining the momentum in corn production. It should be noted that scenario B also assumes a special effort in production and marketing of beans.

Note that the projected growth rate of exports in Table 3, Scenario B, of 4.1 percent per year, would occur in spite of significant declines in some export lines (beef, sugar, cotton, tobacco). In fact, the anticipated policy reforms are expected to accelerate the decline of sugar exports, and encourage other crops in their stead. On the production side, the key factor for achieving the targets will be increases in productivity. The importance of the land constraint has been mentioned which means the bulk of the output increases will have to come from increased yields and shifts in cropping patterns toward higher-valued crops. The historical role of productivity increases was mentioned in Section II with illustrations from data for the 1970-83 period. Over that period, the aggregate economic yields in the sector increased by 3.0 percent, a rate which is difficult to sustain on a sector wide basis.

For the crop subsector, scenarios A and B can be translated into projections of rates of economic yield increases (which include shifts in cropping patterns) and rates of expansion of the cultivated land. They are as follows:

	A	B
Rate of economic yield increase	2.0	2.5
Rate of cultivated land increase	0.6	1.5
Growth rate of gross output	2.6	4.0
(Growth rate of GDP in crops)	<u>2.1</u>	<u>3.5</u>

A characteristic of the Honduran data series is that gross output always expands more rapidly than GDP in the sector. This implies an intensification of input use, perhaps more rapidly than occurs in reality, but nevertheless the projections must allow for the divergence between the two growth rates.

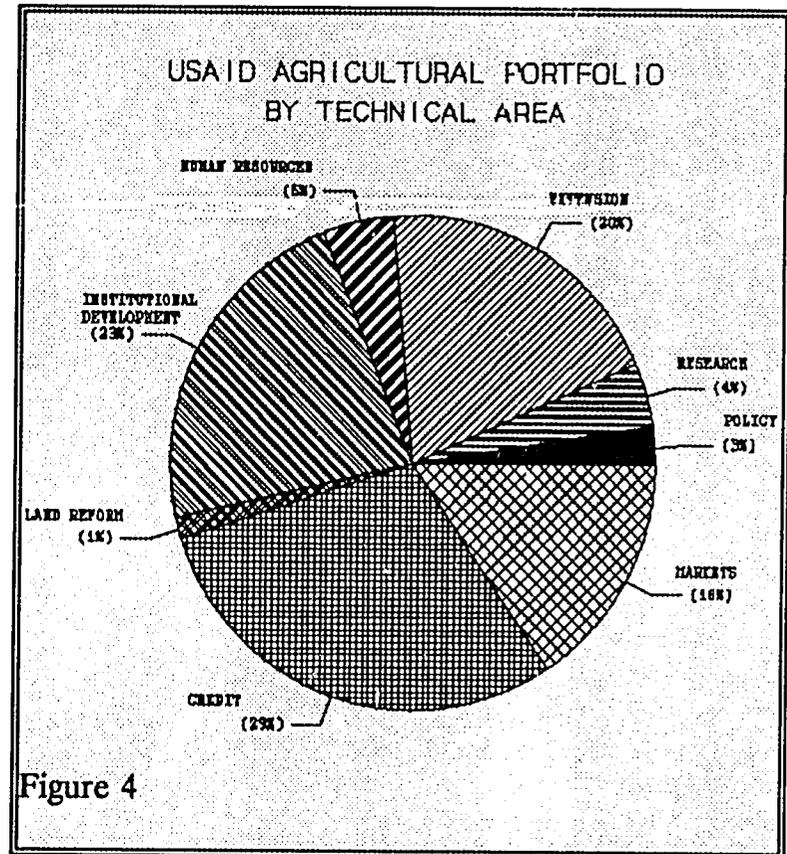
Scenario A assumes a slight decrease in the rate of cropland expansion because of the increasing tightness of the land constraint, and moderate growth in yields. Scenario B assumes better performance on both variables. The more rapid cropland expansion in scenario B can be achieved only by converting some of the pasture land to crops. It was noted in Section II that there are about 368 thousand hectares of valley lands in pastures, most of which would be better suited for crops. To achieve the 1.5 percent annual cropland increase under scenario B, 54,000 hectares (15 percent of the total) would have to be converted. This conversion is feasible agronomically, but it will require changes in the policy environment concerning the security of land tenure and land markets. If the pasture-cropland conversion is not effected, then the pressure on yield increases will become all the greater, probably too great to permit the attainment of the targets under scenario B.

VI. The Current Agricultural Project Portfolio

The distribution of the present DA portfolio in agriculture is shown in Figure 4. The projects are sound and it can be seen that the current portfolio addresses many of the

constraints discussed in Section II (see Tables A.5 and A.6 in the Annex). However, to be fully consistent with the strategy the following changes will be required:

- Devote additional resources to policy planning (currently less than 3% of the total), and the issues of price and land use incentives and the development of appropriate policy structures.
- While there is a land titling project, the portfolio does not have an integrated approach to the multiple constraints to more efficient use of agricultural land.
- The portfolio needs to continue to recognize the potential role of the coffee subsector, both as an earner of foreign exchange and as a source of employment and income for small farmers.

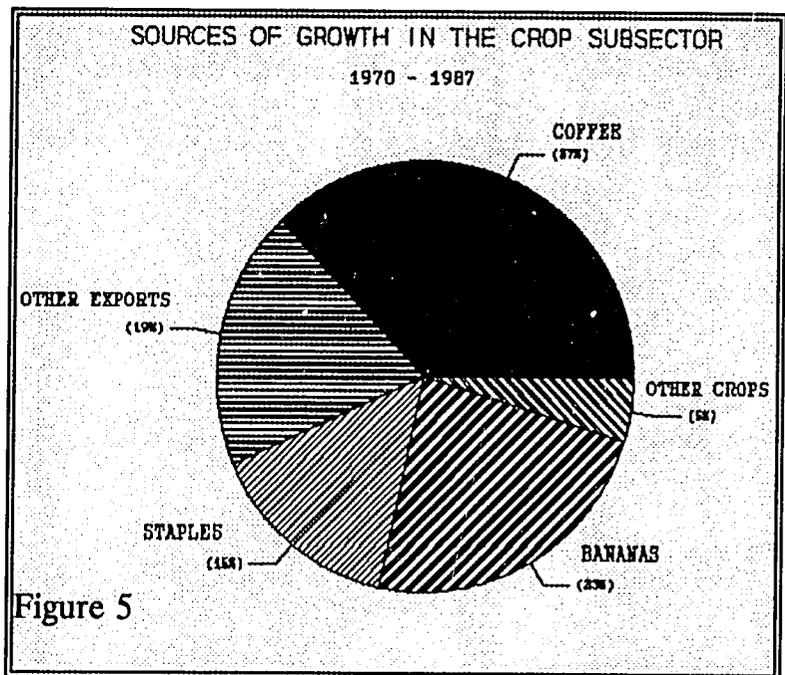


- Although 30 percent of the current portfolio is devoted to credit, (a key to facilitating access to inputs) it is fractured in five different projects. The credit element of the program needs to be integrated and emphasize commercial channels.
- The portfolio should include activities specifically targeted to the domestic marketing constraint, such as investments in on-farm storage, regional storage centers and small-sized refrigerated trucks.

The Mission's Policy Analysis and Implementation Project Amendment is designed to improve policy analysis in the Honduran Government, to increase the awareness of the links between agricultural policies and macro policies, and to develop the necessary implementation studies for specific policy actions. This project will support sectoral policy development across the entire portfolio. It will assist the GOH in the development of policy initiatives related to PL-480 self-help measures, ESF conditionality, as well as project specific issues. The project will also assist the GOH with issues related to the implementation of policy changes.

Research studies on the issue of land markets have highlighted the seriousness of this critical constraint for the development of Honduran agriculture. Recent field experience has demonstrated the benefits of relaxing this constraint, specifically, the land titling program combined with a municipal land tax in the Comayagua Valley. There are many reasons for considering an integrated set of activities as a sequel to the titling project, which would include continued titling, simplification of land sales procedures, issuance of tenure security guarantees ("certificados de inafectabilidad"), land taxation systems at appropriate rates, and policies for export-oriented concessions on national coastal lands. The Government has requested an extension of the existing land titling project, along with a broadening of its scope to deal with the role of INA.

Figure 5 shows that coffee has been the dominant source of growth in the sector over the last 17 years, in addition to its importance as an earner of foreign exchange. Table 7 shows that 56 percent of the 65,000 producers have between 0.7 and 3.5 hectares of land, and 92.5 percent have between 0 and 7 hectares. Hence, it is largely a smallholder sector. It should be noted that much of the land is inappropriate for short term crops, and the range of profitable and sustainable production alternatives for much of this sector is limited. Coffee cultivation remains a good investment, and much more environmentally appropriate than basic grain production on Honduran mountainsides.



Honduras is a low-cost producer of coffee (by world standards) because labor is about 50 percent of the production costs and Honduran wage rates are low. Honduras produces coffee profitably for the nonquota market and hence its production has been expanding. That fact will work in Honduras' favor when the coffee quotas are renegotiated. The present coffee project has been assisting the expansion of the coffee sector by providing technical assistance and credit for replanting 1,500 hectares per year. Sector experts estimate that an increase in replanting rates to 2,100 hectares per year, along the same lines as the current project, would result in a cumulative increase in export earnings of \$96 million over ten years.

Table 7

STRUCTURE OF COFFEE PRODUCTION

Area Planted In Coffee Per Farm (mz.)	Number of Farms	Area		Production 1987/88 (qq.)	Yield (qq./mz.)
		Planted (mz.)	Harvested (mz.)		
Less than 1	13,189	4,650	4,038	24,256	6.01
1 to 2	14,515	17,599	14,606	97,116	6.65
2 to 5	22,933	67,932	55,237	482,950	8.74
5 to 10	10,939	72,543	59,975	574,078	9.57
10 to 15	2,729	31,645	26,668	258,224	9.68
15 to 20	1,062	17,687	14,966	184,219	12.31
More than 20	1,157	38,028	23,052	305,826	13.27
TOTAL	66,524	250,084	198,542	1,926,669	9.70

PERCENTAGE DISTRIBUTION

Less than 1	19.8%	1.9%	2.0%	1.3%
1 to 2	21.8%	7.0%	7.4%	5.0%
2 to 5	34.5%	27.2%	27.8%	25.1%
5 to 10	16.4%	29.0%	30.2%	29.8%
10 to 15	4.1%	12.7%	13.4%	13.4%
15 to 20	1.6%	7.1%	7.5%	9.6%
More than 20	1.7%	15.2%	11.6%	15.9%
TOTAL	100.0%	100.0%	100.0%	100.0%

Source: Encuesta a Productores de 1988, Instituto Hondureño del Café.

Note: mz. = manzana = 0.7 hectare

Recognizing the problem of insufficiency of credit for smallholders, the existing Mission agricultural projects have incorporated their own credit lines in many cases. Experience with these lines suggests the desirability of developing credit reforms through ESF and PL-480 conditionality combined with specific project activities. Currently, interest rates on BANADESA trust funds vary from five to 16 percent. In addition, movement towards the unification of rediscount rates should also be encouraged. Optimally the timing of interest rate increases would follow certain other reforms, however, immediate action could be taken to apply uniform interest rates to the end users, when the risks and administrative costs are uniform. It also is important to continue to work through farmers' organizations and at the same time strengthen their capacity for credit administration.

Irrigation, as mentioned earlier, is an especially important intervention to increase the efficiency of land use. The Mission's irrigation project has been successful in bringing 1,100 hectares under irrigation and has an additional 1,800 hectares in the design stage. The challenge for this project will be in developing private sector capacity to design, install and train farmers in proper use of infrastructure and in getting credit institutions to finance such infrastructure.

Several of the existing projects and activities contribute to the vital task of human capital formation. FHIA adds to the stock of knowledge; FEPROEXAAH, LUPE, and the Irrigation, Forestry, Coffee, and Livestock Projects deliver the knowledge through extension services; the Small Farmer Organization and the Irrigation Projects work on enhancing the capacities of farmer organizations; and there are agricultural scholarships for training abroad as well as activities with Honduran agricultural universities. The linkages among the private organizations which deliver technology to farmers, the private and public sector entities which develop technology and the agricultural education systems needs to be strengthened.

The list of projects and activities in the portfolio will undergo a natural evolution as circumstances and perceptions change, but it appears to reflect a reasonable consensus of agricultural experts at the present time (see Annex Table A.6).

VII. The Policy Agenda for Honduran Agriculture

A. The Context of the Agenda

This Agricultural Strategy Paper has been guiding the Mission policy dialogue with the new GOH. The new Honduran Government has not yet published its overall economic program nor its policy guidelines for agriculture. Both the economic program and an agricultural policy paper are expected to be released shortly. Like AID, other donors have developed their own agendas. The World Bank has outlined six areas of concern that would be important in the development of an agricultural adjustment loan. These include; producer incentives, food security (including questions of food assistance to the poor), land tenure security, BANADESA, institutional performance, and investment projects.

The Mission's Agriculture and Rural Development Office has developed a more detailed agenda. A summary of the agenda is presented in Table 8, and a more detailed list of specific policy actions is contained in Table 9. As may be seen from the summary table, the agenda identifies seven critical areas for improving the sector's performance. While it is a more comprehensive agenda than the World Bank's, it includes most of the Bank's concerns.

The policy agenda is oriented toward relieving the constraints that are described in Section II of the Strategy paper. It covers the key issues and necessary actions in the areas of price structures, the resource base, and problems of access to markets and technologies. The agenda is designed as an integrated policy package for Honduran agriculture, but there is little doubt that the two most critical areas are pricing policy and the land tenure-land markets nexus.

B. Implementation Considerations

The new government, while only having been in office for a few weeks, has indicated substantial support for agricultural policy reform. A letter signed by the Minister of Natural Resources, the Minister of Finance and the President of the Central Bank, requesting the FY 90 PL-480 Title I, indicates the new government's intention to place grain imports on the parallel market; remove remaining agricultural price controls; and privatize the seed industry, the Sula Dairy and the two government owned sugar mills. This bodes well for implementation of the policy reform program.

Elements of the policy agenda are being addressed through various offices and projects. For example, the issues related to exchange rate and tariff policies are included in the program of the Office of Economic and Program Analysis and questions of food assistance targeted for the poor fall under the rubric of the Office of Human Resources Development. The ongoing Forestry Project is dealing with some of the timber management issues, the Irrigation Project with water management issues, LUPE with technology transfer for basic grains, FHIA and FEPROEXAAH with technology generation and transfer for export crops, SFOS with management issues in private cooperatives, and the Land Titling Project with land tenure security.

While it is clear that intensified efforts are warranted in all seven areas of the agenda, this may not be possible. Coordination with the World Bank, as well as other donors and the GOH, on efforts directed towards elements of the agenda will be of continued importance. Given the importance of the policy reform agenda to the achievement of the sectoral goal, the Mission will be developing a sectoral program which will incorporate ESF, DA and PL-480 resources into a combination structural adjustment program and specific project type activities.

Table 8

SUMMARY AGRICULTURAL POLICY AGENDA FOR HONDURAS**1. HIGHER REAL PRODUCER PRICES**

- EQUAL EXCHANGE RATES FOR ALL COMMODITIES
- MORE EQUAL TARIFF RATES ACROSS SECTORS AND COMMODITIES
- ELIMINATION OF PRICE CONTROLS
- REDUCTION OF COFFEE TAX

2. MORE EFFICIENT USE OF THE LAND BASE

- GREATER SECURITY OF LAND TENURE
- IMPROVED LAND MARKETS
- FISCAL INCENTIVES FOR MORE INTENSIVE LAND USE
- IMPROVED MANAGEMENT IN AGRARIAN REFORM AND PRIVATE COOPS
- FULL TITLING ON A WIDER SCALE, INCLUDING AGRARIAN REFORM COOPS

3. IMPROVED NATURAL RESOURCE MANAGEMENT

- IMPROVED TIMBER MANAGEMENT
- IMPROVED WATER MANAGEMENT

4. MORE EFFICIENT FINANCIAL INTERMEDIATION IN AGRICULTURE

- AN AUTONOMOUS AND MORE EFFICIENT BANADESA SERVING SMALL FARMERS
- PHASING OUT SUBSIDIZED CREDIT LINES FOR AGRICULTURE AND RELEASING INTEREST RATE CEILINGS AS REAL PRODUCER PRICES IMPROVE
- REGULARIZE THE AGRICULTURAL DEBT

5. IMPROVED AGRICULTURAL MARKETING AND TRADE POLICIES

- REDUCED STATE ROLE IN IMPORTING AND MARKETING
- IMPROVED MARKETING INFRASTRUCTURE FOR DOMESTIC AND EXPORT COMMODITIES
- BETTER TARGETED AND ADMINISTERED FOOD ASSISTANCE PROGRAMS FOR THE POOR

6. IMPROVED TECHNOLOGY GENERATION AND TRANSFER

- IN BASIC GRAINS
- IN EXPORT CROPS

7. IMPROVED INSTITUTIONAL PERFORMANCE

- IN THE MINISTRY OF NATURAL RESOURCES
- IN THE NATIONAL AGRARIAN INSTITUTE
- IN BANADESA

C. Performance in Agricultural Policy

As a starting point for discussing performance of future policy change, it is useful to review the changes implemented within the last two years against the backdrop of the policy agenda summarized in Table 8. Bearing in mind that 1989 was the last year of a Presidential Administration when it is difficult to effect policy change, the recent progress includes worthwhile measures. All indications are that the new Government will do even more in the way of agricultural policy reform.

Regarding the issue of the need for higher real producer prices, the Government has implemented a system of CETRAs which raise the Lempira price received by exporters. While the CETRAs represent an economy-wide measure, the main beneficiaries are agricultural exporters. The Government also has made a commitment to reduce industrial tariffs, which would bring intersectoral protection rates more into line.

In 1987, on the advice of IHCAFE assisted by AID's coffee project, the Government restructured the coffee tax so that it provides less fiscal revenue when international coffee prices are low and more when they are very high. For a year like 1988, the new tax structure represents a net reduction in the rate.

Late in 1988, the Government removed most price controls in the economy, then reimposed some of them, then again eliminated them with a new law. The status of the price controls is not entirely resolved, but there are many fewer controls than there were in November, 1988, and the new Government has proposed eliminating all agricultural price controls as one of the self-help measures included in their letter of request for the FY 90 PL-480 Title I program.

In the area of land tenure, a law passed in May of 1989 permitted for the first time joint investments between agrarian reform cooperatives and the private sector. In effect, this amounts to a legalization of the renting-out of the lands of state cooperatives. The measure should contribute to their more efficient use.

The same new law (The Emergency Law for Basic Grains) also attempted to address the issue of tenure security by granting immunity from expropriation to lands planted in basic grains, as long as the agrarian reform ceilings on land holdings are observed. There is widespread skepticism about the effectiveness of this provision, but the new law showed that the Government is aware of the need to provide greater tenure security.

The Government also recently requested an extension of the Land Titling Project, another indication of the awareness of the need for tenure security. This request includes significant changes in the concept of the project and the role of titling. A larger proportion of plots exceeding 17 hectares will be titled, to expand the sector's base of banking collateral. This action also will have the salutary effect of expanding INA's revenue base with which to become more self-sufficient in its operations. Also, the Government now has explicitly recognized the value of titling and cadastral work in laying the basis for land taxation. This represents an important change in outlook on the part of officials of SECPLAN and the Ministry of Finance.

In the area of natural resource management, significant strides have been taken recently. A new system of timber stumpage valuation has been put in place for some regions and will be extended in phases to the entire country. This will reduce the amount of logging necessary to produce a given volume of lumber. Also, an important new water management law has been drafted and now is before Congress.

In the area of financial intermediation, an important step was taken in 1988 when lending rates were raised to 17% on AID Agricultural credit lines. Important steps also have been taken with regard to the private agricultural credit cooperatives. An AID project has helped improve their financial soundness and their management effectiveness. BANADESA remains a problem, but its top management is formulating some significant reform proposals (with assistance from the Mission's Agricultural Policy Activity) in the context of the possible World Bank Sector Loan.

In the marketing area, recent progress has been achieved by FEPROEXAAH and the private sector, which together have increased cantaloupe export four-fold in two years and other non-traditional exports by even more. The role of IHMA remains a problem, as does the port management in Puerto Cortés. However, the Ministry of Natural Resources has just agreed to a program of privatization of the seed industry - a very important step - and the Chief Advisor to the Minister of Natural Resources has made a commitment to implement recommended improvements in the procedures for granting concessions on national lands to the shrimp industry.

Regarding technology generation and transfer, great strides for export crops have been made by FHIA and the Coffee Project. LUPE and its predecessor projects, working with the Government and farmers, have improved corn yields significantly in this decade. IHCAFE, in December of 1988, took a policy decision to place its extension experts on the permanent IHCAFE payroll, rather than hire them out of Coffee Project funds, in order to ensure sustainability of the contribution they have been making. Also in 1988 IHCAFE made a formal commitment to a policy of expanding coffee acreage and production, which represented a significant shift in their thinking.

Finally, in the institutional area a very significant step was taken in May of 1989 with the creation of the Council for Agricultural Development (CODA) and the Programming Unit for the Agricultural Sector (UPSA). These are permanent interministerial bodies that give formal recognition to the role of agriculture in economic policy and provide for unified budgeting for all the public agricultural agencies. In addition, the new President has added the Minister of Natural Resources to the "Economic Cabinet" and the Board of Directors of the Central Bank, again an indication of the importance of policy issues to the agricultural sector.

In light of this progress and the initial reaction of the new GOH, there is substantial reason to be optimistic about the prospects for policy reform. This document outline an ambitious set of issues. The following table presents alternative policy actions, grouped under the headings used in Table 8.

Table 9

DETAILED LIST OF ALTERNATIVE POLICY ACTIONS**1. Higher Real Producer Prices**

- a) Full devaluation to an equilibrium exchange rate
- b) Passing all agricultural imports to the CETRA rate
- c) Eliminating IHMA's tariff exemptions on grain imports
- d) Raising all CETRAs to a coverage of 75% for exports
- e) Eliminating milk, wheat flour and sugar price controls
- f) Eliminating all remaining price controls
- g) Reducing all tariffs plus surcharges to a total of 40% or less per product (ad valorem)
- h) Reduction of coffee tax as other revenue measures are developed
- i) Reduction of the export taxes by at least one-third
- j) Elimination of QRs on imports (only if agricultural imports are at the CETRA rate) by establishing an automatic import approval list that includes at least 60% of imports by value, and at least all foods, feeds and agricultural inputs

2. More Efficient Use of the Land Base**• Tenure Security**

- a) Implementation of a new system of complete and unconditional guarantees of tenure security plus swift adjudication of land disputes
- b) Completion of full land titling, including agrarian reform cooperatives
- c) Extension of the cadastre to at least four Departments
- d) Initiation of a program of sales of national and ejidal lands to smallholders who are working them without environmental damage; sales of at least 50,000 hectares under such a program

- e) Implementation of improved procedures for granting concessions on national lands

- Land Markets and Land Use Incentives

- f) Implementation of a land tax of at least 0.5% of market value in at least one Department
- g) Elimination of INA restrictions on sales of private lands under 17 manzanas and of lands for which a mortgage still is owed to INA
- h) Elimination of the prohibition on rental of private lands
- i) Passage of a law clearly allowing land to serve as collateral and allowing banks to sell unconditionally lands taken in receivership
- j) Creation of a land bank
- k) Implementing a program to give agrarian reform cooperatives ownership of their land to allow them complete freedom to restructure the cooperative
- l) Lowering of the INA minimum plot size for titling from 5 to 2.5 hectares.

3. Improved National Resource Management

- Timber Policies

- a) Extension of the new system of stumpage valuation to all areas of the country
- b) Implementation of a new impartial system for awarding timber concessions
- c) Implementation of an effective reforestation program in at least two Departments
- d) Banning the use of firewood for industrial purposes
- e) Implementation of a program to eliminate urban household use of firewood
- f) Implementation of a program of fuelwood cultivation covering at least 10,000 farm families
- g) Elimination of CODEFOR's production and marketing activities
- h) Placing an environmental tax on lumber exports (of at least 25%)
- i) Closure or privatization of the Government owned sawmill

• Water Management Policies

- j) Revision and passage of an appropriate new water management law
- k) Implement a program to turn over management and operation of GOH irrigation districts to private water users associations, including the right to set and collect water use fees
- l) Formulation of a natural resources development plan
- m) Stimulate private development of on-farm irrigation systems
- n) Development and implementation of a water quality management program
- o) Prohibit the development of critical watersheds

4. Improved Financial Intermediation

- a) Prohibition of BANADESA loans to other Government entities
- b) Prohibition of BANADESA loans to individuals in all branches of the Government
- c) Ceilings of 100,000 Lempiras on new BANADESA loans or refinancing of existing loans
- d) Reduction of BANADESA arrears plus refinancing to below 20% of the portfolio
- e) Elimination of BANADESA's non-banking activities
- f) Establishment of technical procedures and criteria for BANADESA loan approval that remove BANADESA's Directors from the loan approval process
- g) Prohibition of BANADESA loans from the Tegucigalpa and San Pedro Sula branches
- h) Unification of BANADESA interest rates to all borrowers
- i) Elimination of subsidized credit lines for agriculture
- j) Creation of a new BANADESA board of directors that has a majority of non-government members and is not chaired by a government official
- k) Privatization of BANADESA

- l) Freeing of all agricultural lending rates and all deposit rates
5. Improved Marketing and Trade Policy for Outputs and Imports
- Grains Marketing
 - a) Elimination of the IHMA import monopoly in basic grains
 - b) Implementing a new role for IHMA as a food security reserve under price bands around international prices rather than fixing guaranteed prices
 - c) Privatization of silo capacity with certificates of deposit (warehouse receipts) for farmers
 - Other Outputs and Inputs
 - d) Privatization of the seed industry
 - e) Reduction of port charges in Puerto Cortés by at least one-third
 - f) Opening air cargo services to competition among airlines
 - g) Development of a more effective program of targeted food assistance for the poor
 - h) Increased investment in cold storage and collection network
 - i) Privatization of the state-owned dairy and sugar mills
6. Improved Technology Generation and Transfer

No policy conditionality is contemplated, as the relevant initiatives are being carried out through projects.

7. Improved Institutional Performance

• Ministry of Natural Resources

- a) Placing the Minister of Natural Resources in the Economic Cabinet and on the board of the Central Bank
- b) Completion of a study on the management of the Ministry of Natural Resources, with concrete proposals for administrative reform
- c) Implementation of the recommended administrative reforms in the Ministry of Natural Resources
- d) Improve system of matching staff to positions
- e) Reduce numbers of staff
- f) Higher real salaries
- g) Increase the proportion of budget allocated for non-salary items
- h) Decrease dependency on external financing
- i) Partial privatization of the extension service

• National Agrarian Institute

- j) Completion of a management review of INA
- k) Reduction of INA's role in the provision of agricultural services
- l) Reduction of INA's subsidy by at least one-third in real terms
- m) Restructuring of INA to focus its activities more narrowly around its principal role

• BANADESA

(see above, item 4 on financial intermediation)

The Mission plans to select specific policy actions from the list contained in Table 9 for inclusion as conditionality to ESF releases and as PL-480 self-help measures and, in some cases, as conditions precedent to DA funded activities. The effectiveness of this to structuring a program of policy reform - a Structural Adjustment Program - depends basically on three things: a) getting the Government deeply involved and committed by negotiating both the policy agenda and the packaging of alternative policy actions; b) a firm commitment on the part of AID to disburse ESF dollar resources upon achievement of an agreed upon set of actions; and c) identifying programs and projects that can be initiated, using both the DA funds and the local currency generations, with each step forward in the accomplishment of the policy reforms. A preliminary identification of such programs and projects is given in Section VIII below.

VIII Sectoral Assistance Plans

A. The Agricultural Sector Adjustment Program

Honduras faces critical macroeconomic choices over the next few years. The macro decisions taken by the Government will reverberate throughout the economy; to the extent that major macro reforms are undertaken, it will be easier to carry out far-reaching policy change in agriculture. However, given the decisive importance of agriculture in the economy, it also is true that major reforms in the sector will help induce macro reforms and will improve macro performance.

Because of the overwhelming importance of policy reform to the achievement of the sectoral performance target, the Strategy leads to an external assistance program which combines traditional economic support type assistance to leverage policy reform with development assistance to assist in the implementation of reforms. As mentioned above, each of the Mission's current portfolio of agriculture projects address some aspects of the identified constraints. Implementation of these projects will contribute to the achievement of the sector performance targets. For example, the Export Development and the Agricultural Research Foundation Projects will continue to promote agricultural exports. The Coffee and the Land Use and Productivity Enhancement project will continue to improve agricultural productivity.

The new DA, ESF and PL 480 financed Agricultural Sector Adjustment Program (ASAP) will have as its ultimate goal to improve the material standard of living of the majority of Hondurans through progress on the achievement of the more immediate and measurable goals of increased production and exports. The purpose of the Program will be to improve the agricultural sector policy framework in order to provide a new growth and production oriented incentive structure which will result in significantly increased agricultural productivity. The policy improvements will enhance land use efficiency and factor productivity, and increase producer access to improved technologies and improved markets.

The ASAP will be a sectoral program structured along the lines of a stabilization program, combined with elements of a development assistance project. ASAP will be a multi-year program and since policy reform is a dynamic, on-going activity, the specific reform actions will be established on an annual basis. As an integral part of the program, the Mission will

incorporate policy reform actions as part of the self-help measures of the PL-480 Title I program. The policy actions presented in Table 9 will provide the basis for the reforms to be accomplished over the seven year life of the project. As negotiations proceed with the new GOH, more specificity can be provided regarding the conditionality of this portion of the program. The PP will include specific conditionality for the disbursement of the first year's ESF dollars and will lay out a tentative set of reforms to be accomplished during the remainder of the program.

B. Considerations for Selection of Future Activities

It should be noted that the future agricultural project portfolio will be very much influenced by the decisions taken on the proposed Agricultural Sector Adjustment Program (ASAP). The screening and appraisal of specific project activities is beyond the scope of a strategy. However, the strategy does have implications for the project portfolio, which are summarized as follows:

- In the current Honduran context, it is quite important that projects be supported by initiatives in the policy area, especially as regards pricing and trade policies, land use policies and programs for targeted food assistance.
- To achieve the development objectives, it also is important that the portfolio be balanced as regards export-oriented projects and projects that work with basic domestic crops.
- Given the severe environmental constraints facing Honduras, a natural resources component is an essential part of any agricultural portfolio.

To be consistent with the strategy, projects would be expected to show an acceptable economic rate of return and, in addition, each project and policy activity would be expected to show:

- A significant contribution to at least one of the three immediate goals; a) higher real agricultural prices, b) higher agricultural production, and c) higher foreign exchange earnings; or
- A significant direct contribution to the ultimate goal of higher rural nutrition levels.

Whenever feasible, the projects should be designed with the goal of self-sustainability in mind.

It is anticipated that PL-480 will continue to play an important role in the portfolio. The Mission has reviewed that program in depth, and the following two conclusions emerge:

- The development impact of the local currency generations need to be improved, and

- Measures should be taken to minimize the disincentive effects on Honduran grain farmers.

C. Stand-alone Activities to be Included in the ASAP Program

In the area of real producer prices, an extension of the coffee project designed to a) obtain a phased reduction of the coffee tax (timed in accordance with the development of alternative revenue sources); b) decontrol of domestic coffee prices; and c) a financial plan which details how project financed activities will achieve self-sufficiency by the new project termination date. As noted earlier in this paper, coffee has been the single largest source of growth in the sector, and more than 90% of the coffee farmers are smallholders. This subsector has made impressive progress in improving its productivity with the help of AID's coffee project, but its growth prospects would be brighter were it not constrained by the coffee export tax and the forced subsidy of domestic coffee consumers through price controls (the domestic consumer price of coffee was less than half the international market price until the recent collapse of the International Coffee Agreement.). Clearly, any reduction in the coffee tax would have to be accompanied by compensating measures to increase fiscal revenues, such as the parastatal reforms and land taxes.

In the area of land utilization, four kinds of subprojects are contemplated as follows:

- An extension of the cadastre and land titling efforts, including the development of a land bank, to improve the functioning of land markets, conditional upon relaxation of restrictions on land sales and a significant reduction in INA budget deficit as well as its role in providing agricultural services.
- A specially-empowered land adjudication court, with powers to quickly and definitively decide ownership issues. Such a court should be funded conditional upon a supplementary agrarian law which would confer the right of issuing unconditional and permanent tenure security (inafectabilidad) to landowners whose holdings were within the ceiling prescribed by the existing Agrarian Reform Law. Alternatively, the certificates of tenure security could be structured so that the existing courts would be required to validate them in less than a week, in cases of contested ownership.
- A subproject for training in financial and enterprise management for the state cooperatives. The members of these cooperatives, by and large did not have experience in enterprise management before the Agrarian Reform process grouped them into cooperatives, and as a result the coops have had well-known management difficulties. They are being given assistance in the area of cultivation techniques, but not in enterprise management. Basic literacy programs for coop members also may be necessary.
- An extension of the SFOS project that provides technical and financial assistance to private cooperatives, which have been increasing rapidly in number. These coops deal with services, such as provision of credit, purchase of inputs, and/or marketing of outputs.

In the area of natural resource management, a hardwood forestry subproject could be developed conditional upon implementation of a program to ban the use of firewood for industrial purposes and to discourage its use for cooking in urban areas. Likewise a fuelwood project would be of very high priority, either in stand-alone form or integrated into other projects. It also would be important to develop more effective measures to discourage the illegal export of raw logs and to place an environmental tax on the export of lumber, at least hardwood lumber.

In the area of financial intermediation, it should be noted that the new Government has drawn up a list of significant structural reforms for BANADESA. If one or more of them is implemented, such as prohibiting loans to other Government agencies - loans which are a major source of BANADESA arrears - then it might be appropriate to move forward with a package of additional reforms (see Table 9) plus funding for recapitalization of the bank and for technical assistance for implementing a modern cost accounting system.

In the area of marketing, a number of reforms are needed (Table 9). The principal subprojects that could be contemplated, apart from possible extensions of existing projects, are the following four:

- If (and only if) Government policy eventually moves in the direction of linking domestic relative prices to international relative prices (within a price band), then technical assistance to IHMA would be important to help implement a vastly different concept of IHMA's role (Minister of Natural Resources has requested Mission assistance to proceed with this).
- If it were decided to redesign the existing food assistance programs and target them more closely to needy groups in society, then technical and financial assistance for the design of targeted food subsidies should be provided.
- Investment in cold storage facilities in ports and airports and regional collection and drying center for grains are required.
- If the Government were to make a commitment to the development of agroindustrial export zones, then investments in the associated infrastructure could be productive.

The conditionality for either of both of the last two programs above would include a true implementation of the open skies policy in the area of air freight and reduced port charges in Puerto Cortés, which are the highest in Central America.

In the area of technology generation and transfer, the most obvious candidates for subprojects are expansions or extensions of the ongoing projects in this area: coffee, FHIA, Small Farmer Organization Strengthening and FEPROEXAAH.

Some of the proposed DA funded activities will make sense, even in absence of policy reform. Those that require policy reforms will be subject to conditions precedent. An

example would be activities in the land markets and land bank area which must be contingent upon revision to the agrarian reform law. Another example would be assistance to IHMA which would be dependent upon a series of action described in Table 9. Continuation of the Coffee and Small Farmer Organizational strengthening activities, on the other hand, make sense without significant progress on policy issues.

It is anticipated the a new, less cumbersome and sector oriented mechanism will be created for the programming and administration of the local currencies generated by the Program. Many of the activities contemplated in the Program will be funded by local currency. DA dollar funds will be reserved primarily for technical assistance, commodities and training, while local currencies will be programmed for local operating expenses, credit lines and other local costs of Program activities (see the FY 91-92 Action Plan for a complete new project description).

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ANNEX A

ADDITIONAL STATISTICAL TABLES

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Table A.1

GROSS DOMESTIC PRODUCT BY SECTOR

1. In Million Current Lempiras

<u>Year</u>	<u>Agriculture</u>	<u>Mining</u>	<u>Mfg.</u>	<u>Total</u>
1975	554	52	319	2045
1976	688	49	363	2431
1977	898	56	443	2952
1978	945	73	520	3372
1979	1048	105	606	3939
1980	1132	96	687	4549
1981	1166	93	726	4956
1982	1186	109	766	5185
1983	1226	117	832	5419
1984	1253	131	913	5757
1985	1328	139	926	6166
1986	1495	114	962	6767
1987	1518	105	1055	7183
1988	1630	115	1230	7897
1989	1779	132	1390	8641

Source: Departamento de Estudios Económicos,
Banco Central de Honduras

II. In Million Lempiras at Prices of 1978

<u>Year</u>	<u>Agriculture</u>	<u>Mining</u>	<u>Mfg.</u>	<u>Total</u>
1975	751	54	398	2610
1976	835	51	426	2862
1977	885	54	484	3102
1978	945	73	520	3372
1979	1022	77	554	3585
1980	1014	66	538	3657
1981	1053	60	525	3706
1982	1047	72	506	3664
1983	1040	78	533	3647
1984	1053	87	578	3720
1985	1084	89	568	3804
1986	1110	83	585	3954
1987	1156	69	644	4134
1988	1177	71	698	4340
1989	1194	83	718	4432

Source: Departamento de Estudios Económicos,
Banco Central de Honduras

Note: The agricultural sector here includes
livestock, forestry and fishing.

TABLE A.2a.

GROSS DOMESTIC PRODUCT BY MAJOR PRODUCT WITHIN AGRICULTURE, IN CURRENT PRICES
(in million current lempiras)

<u>Year</u>	<u>Corn</u>	<u>Sorghum</u>	<u>Rice</u>	<u>Beans</u>	<u>Coffee</u>	<u>Tobacco</u>	<u>Cotton</u>	<u>Palm Oil</u>	<u>Banana</u>	<u>Plantain</u>	<u>Sugar- cane</u>	<u>Crops</u>	<u>All Crops</u>	<u>Forestry</u>	<u>Live- stock</u>	<u>Poultry</u>	<u>Fishing Hunting Honey</u>	<u>Total</u>
1970	40	9	4	16	52	6	2	2	119	4	12	39	305	36	71	7	5	424
1971	42	9	8	18	53	7	1	3	118	4	13	48	324	41	77	8	8	458
1972	41	9	11	16	50	8	1	3	137	5	15	47	343	52	80	8	9	492
1973	45	9	9	14	81	8	3	3	147	6	13	51	389	68	84	10	11	562
1974	52	10	9	19	89	10	5	3	106	6	18	45	372	92	104	12	13	593
1975	56	8	9	17	81	11	6	3	43	5	18	55	312	96	105	20	21	554
1976	64	9	11	16	115	12	17	3	80	6	19	72	424	105	115	23	21	688
1977	73	10	11	19	234	16	20	3	134	6	22	63	611	112	125	25	25	898
1978	75	11	15	21	229	15	15	5	134	7	28	68	623	123	141	30	28	945
1979	67	7	18	20	231	18	18	5	197	9	38	70	698	133	151	33	33	1048
1980	71	12	21	26	218	21	19	8	206	16	50	72	740	151	165	39	37	1132
1981	85	11	23	28	212	21	11	11	184	18	56	81	741	173	170	41	41	1166
1982	93	10	26	30	226	20	4	15	155	19	60	84	742	174	180	48	42	1186
1983	99	13	35	26	172	22	12	18	176	22	65	94	754	176	189	55	52	1226
1984	95	12	30	28	178	18	13	27	189	22	65	105	782	166	203	51	51	1253
1985	109	9	27	32	188	18	7	29	232	23	62	101	837	170	206	54	61	1328
1986	118	8	33	27	330	18	7	27	250	24	58	87	987	175	215	56	62	1495
1987	105	10	33	24	253	19	5	28	274	25	54	143	973	193	225	56	82	1529

Source: Banco Central de Honduras, Departamento de Estudios Económicos.

Note: These data were received by ADAI from the Central Bank in September, 1988. The totals are not completely consistent with the previously published national accounts by sector (Table A.1).

TABLE A.2b.

GROSS DOMESTIC PRODUCT BY MAJOR PRODUCT WITHIN AGRICULTURE, IN CONSTANT PRICES
(in million current lempiras)

Year	Corn	Sorghum	Rice	Beans	Coffee	Tobacco	Cotton	Palm Oil	Banana	Plantain	Sugar- Cane	Crops	All Crops	Forestry	Live- stock	Poultry	Fishing Hunting Honey	Total
1970	72	24	4	20	118	9	4	3	255	6	18	71	605	73	123	7	14	822
1971	74	24	11	23	126	6	2	5	290	7	20	71	659	78	132	8	18	894
1972	74	24	12	21	129	6	2	5	276	7	20	67	644	98	136	11	21	910
1973	71	24	10	17	173	8	4	5	278	8	15	77	691	105	138	12	21	967
1974	72	24	10	23	162	11	6	5	202	7	20	63	606	115	138	12	18	888
1975	69	19	12	20	183	11	6	4	51	6	20	71	472	110	129	22	28	761
1976	74	11	14	19	180	12	16	4	87	7	22	88	534	118	133	24	26	835
1977	72	11	12	21	173	15	23	4	145	7	26	61	570	121	136	26	32	885
1978	75	11	15	21	229	15	15	5	134	7	28	68	623	123	141	30	28	945
1979	69	7	16	20	268	16	18	5	175	9	34	72	709	124	145	32	29	1039
1980	66	11	18	21	260	16	17	7	154	12	38	102	722	124	145	33	23	1047
1981	83	9	18	25	261	16	12	9	130	12	38	102	715	125	145	36	27	1048
1982	77	8	19	24	267	16	5	12	114	12	40	104	695	120	146	39	27	1030
1983	77	9	25	20	285	16	10	15	108	13	41	90	709	119	151	43	30	1052
1984	82	10	23	21	267	16	12	22	115	14	43	93	718	118	154	42	32	1064
1985	88	7	21	22	265	12	11	27	143	16	39	70	725	118	161	39	41	1084
1986	81	6	24	24	272	11	7	28	155	17	39	70	735	118	168	40	41	1102
1987	90	7	24	22	318	11	7	29	162	17	38	69	794	124	175	45	45	1183

Source: Banco Central de Honduras, Departamento de Estudios Económicos.

Note: These data were received by ADAI from the Central Bank in September, 1988. The totals are not completely consistent with the previously published national accounts by sector (Table A.1).

Table A.3.

REAL PRODUCER PRICES FOR AGRICULTURE

Year	All Crops	Staples	Export Prod.	Trad. Export	Other Export	Veg., Roots	Fruit	CPI
1970	95.3	117.4	90.6	87.5	108.5	97.0	116.3	61.5
1971	92.5	117.4	87.1	80.2	126.9	104.0	134.0	62.9
1972	95.4	113.8	91.2	83.9	133.8	111.3	147.6	65.1
1973	100.2	117.3	96.5	88.0	145.9	101.9	178.2	68.1
1974	96.5	112.3	93.3	86.5	132.6	92.9	159.1	76.9
1975	103.6	118.2	100.9	96.5	126.3	91.1	133.1	83.1
1976	111.9	117.7	111.0	110.0	117.0	96.2	104.4	87.3
1977	137.8	125.8	141.1	143.6	126.8	101.7	150.1	94.6
1978	120.8	120.9	121.3	121.1	122.9	95.5	138.9	100.0
1979	108.2	107.7	108.5	108.2	110.2	102.2	117.2	112.1
1980	100.7	101.4	100.7	100.6	101.2	98.9	95.9	132.4
1981	91.0	90.9	90.9	91.3	88.6	98.9	87.0	144.8
1982	85.1	94.6	83.2	82.1	89.6	80.6	93.7	157.8
1983	84.2	93.4	82.5	80.8	92.0	76.3	96.9	170.9
1984	79.6	81.3	79.3	78.2	86.2	73.3	94.1	178.9
1985	79.9	86.4	78.8	77.9	84.3	66.1	98.2	184.9
1986	90.5	90.1	91.2	91.8	87.7	63.4	103.7	189.0
1987	76.6	81.9	75.9	74.4	84.3	61.3	98.8	195.5

Notes: The real prices are defined as the nominal prices deflated by the consumer price index (CPI). The base period is taken to be the composite of the years 1979, 1980 and 1981.

Source: A.D.A.I.

Table A.4.

BUDGET IN THE PUBLIC AGRICULTURAL SECTOR

1980 - 1988

(Thousand Current Lempiras)

	(A) MRN*	IHCAFE	IHMA	INA	BANADESA	COHDEFOR	COHBANA ^{b/}	IHDECOOP	(B) Total Public Agriculture ^{c/}	(C) Total National Government Budget	(A) (c)	(B) (c)
1980	76,506	14,322	6,453	26,223 ^{b/}	n.a.	82,364	11,065	n.a.	205,868	1,136,100	0.067	0.181
1981	91,339	135,057	4,714	28,497 ^{b/}	n.a.	97,554	4,438	2,091	357,161	1,350,000	0.068	0.265
1982	87,073	47,218	5,566	30,811 ^{b/}	n.a.	112,872	12,309	2,057	383,540	1,551,500	0.056	0.183
1983	85,381	53,246	6,396	32,232	n.a.	100,358	4,267	4,113	277,253	1,677,000	0.051	0.165
1984	67,660	39,005	8,106	35,325	n.a.	74,759	n.a.	3,031	224,494	1,523,500	0.044	0.147
1985	70,999	28,912	61,382 ^{a/}	32,163	n.a.	73,386	n.a.	5,814	214,073	1,854,700	0.038	0.115
1986	69,420	37,053	57,032	36,679	n.a.	29,967	n.a.	2,280	178,213	1,886,900	0.037	0.094
1987	73,393	38,000	19,856	44,681	212,737	92,424	1,217	756	251,597	1,681,300	0.044	0.150
1988	70,334	34,170	31,004	33,894	166,317	81,557	3,918	2,868	227,553	2,015,900	0.035	0.113

* Excluding transfers to decentralized agencies.

^{a/} In 1985, the IHMA budgets started including depreciation and amortization for the first time. During the period 1985-88, depr. and amort. averaged.

^{b/} Without depreciation and amortization.

^{c/} Without BANADESA, COHBANA and IHDECOOP, and without IHMA's and INA's depreciation and amortization, to be consistent over time.

Source: Dirección de Planificación Agrícola, SECPLAN.

Table A.5 USAID AGRICULTURAL PORTFOLIO BY TECHNICAL AREAS

PROJECT	LOP DA MILLIONS	POLICY	EXTENSION	RESEARCH	INSTIT DEV	CREDIT	LAND REFORM	HUMAN RESOURCES	MARKETS	LOP BENEFICIARIES	ACTUAL	
EXPORT ORIENTED PROJECTS	LIVESTOCK (0209)	\$13.0		\$0.6	\$3.4	\$9.0		\$0.1		225	156	
	COFFEE (0176)	\$20.3		\$6.5		\$12.8		\$1.0		10,400	9,275	
	FHIA (0249)	\$20.0		\$4.5	\$7.1	\$8.1		\$0.3		1,700	942	
	FPX (0207)	\$23.2	\$1.4			\$10.2		\$0.5	\$11.1		1,603	
	FORESTRY (0246)	\$20.0		\$1.6	\$7.7	\$6.3		\$4.2	\$0.2	2,800	56	
	SUB-TOTAL	\$96.5	\$1.4	\$13.1	\$7.1	\$19.2	\$0.0	\$6.1	\$11.3	15,125	12,032	
EXPORT AND DOMESTIC ORIENTED	SFOS (0252)	\$16.0			\$7.2	\$8.5		\$0.4		20,000	2,000	
	AG. POLICY (0325)	\$1.0	\$1.0									
	LAND TITLING (0173)	\$13.1			\$10.7		\$2.4			40,000	30,000	
	RURAL ROADS (0214)	\$20.0			\$2.2				\$17.8	225,000	225,000	
	SUB-TOTAL	\$50.1	\$1.0	\$0.0	\$0.0	\$20.1	\$8.5	\$2.4	\$0.4	\$17.8	285,000	257,000
DOMESTIC ORIENTED	IRRIGATION (0268)	\$22.5	\$1.9	\$2.5	\$5.2	\$12.3		\$0.6		3,000	20	
	LUPE (0292)	\$36.0	\$1.0	\$25.0	\$1.5	\$2.0		\$2.5	\$2.7	50,000		
	SUB-TOTAL	\$58.5	\$2.9	\$27.5	\$1.5	\$7.2	\$13.6	\$0.0	\$3.1	\$2.7	53,000	20
	GRAND TOTAL	\$205.1	\$5.3	\$40.6	\$8.6	\$46.5	\$60.4	\$2.4	\$9.5	\$31.8	353,125	269,052
	PERCENTAGES		2.6%	19.8%	4.2%	22.7%	29.4%	1.2%	4.6%	15.5%		

Table A.6 RELATIONSHIP OF USAID AGRICULTURAL PORTFOLIO TO STRATEGY

PROJECT	EXPORT ACCESS						DOMESTIC ACCESS					ECONOMIC POLICY	
	RESOURCE BASE	INSTIT	TECHN	EXTENS	CREDIT	MARKET	INSTIT	TECHN	EXTENS	CREDIT	MARKET		INFRAST
EXPORT ORIENTED PROJECTS	LIVESTOCK (0209)		X			X							
	COFFEE (0176)		X	X	X	X							
	FHIA (0249)		X	X									
	FPX (0207)		X		X	X							
RESOURCE ORIENTED	FORESTRY (0246)	X	X		X	X	X						X
	IRRIGATION (0268)	X		X		X			X	X			X
	LAND TITLING (0173)	X	X				X						X
	LUPE (0292)	X						X	X	X	X		
ACCESS ORIENTED	SFOS (0252)		X		X	X	X		X	X	X		
	RURAL ROADS (0214)											X	
	STORAGE (NEW)								X	X		X	
POLICY ORIENTED	AG. POLICY (0325)						X				X		X
	FOOD ASSISTANCE (NEW)												X

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