

PRIMER BORRADOR

✓ PROPOSALS FOR MAKING CATIE MORE EFFECTIVE //

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## FOREWORD

The suggestions, recommendations and proposals made herein are the result of direct consultations and interviews with Local leaders and Staff of the Central American Ministeries of Agriculture, National Agricultural Research and Extension Institutions, National Agricultural Planning Commissions, Voluntary Regional Cooperative Programs, Regional Governmental Commissions and Sub-committees; the Director and Staff of CATIE; The Dean and Staff of the Faculty of Agriculture, University of Costa Rica, and the Directors or Staff Members of Regional and International Agencies such as IICA, ROCAP, INCAP, SIECA, UNDP, USAID, Rockefeller Foundation, International Centers, IADS and the recently formed International Group for Agricultural Development in Latin America involving USAID, BID and the World Bank (IGAD/LA).

In addition, various pertinent documents or publications concerning plans, activities underway and results obtained in agricultural research and development in the Central American region, were reviewed.

The "1975 Work Document" prepared by Central American Agricultural Leaders, outlining problems, concerns, decisions and suggested actions, was especially helpful.

The Executive Committee of CATIE's Board of Director is deeply indebted to the many individuals that so willingly devoted their valuable time to discussions and meetings, and volunteered their unbiased opinions

on how CATIE might be more useful as a regional agricultural Research and Development Center. Special gratitude is due to Drs. Alfredo Carballo and Astolfo Fumagalli for their services on the Ad Hoc Survey Committee and to Drs. Gerardo Budowski, Marcos Flores R. and César Pérez, who served on the Forestry Committee.

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### PROPOSALS FOR MAKING CATIE MORE EFFECTIVE

#### I INTRODUCTION

1. According to present projections, there will be 20 - 25 million more mouths to feed in Central America and Panama in the next 20 - 25 years. (See population growth annex ). The problems of peace and social order will become more acute year by year and economic stability will be in the balance in this area of the world, unless the rate of progress now being made in the acceleration of food production and in the improvement of income and general welfare of the rural sector is greatly increased.

More than twice as much food as now being consumed will be needed in Central America by the year 2000. Costs of obtaining this through imports from food surplus areas would place intolerable strain on the economy of the region. *The Countries of* Central America have little choice but to substantially increase their food production and place this high in their national frontiers.

2. With this as a background, the Board of Directors of the "Centro Agronómico Tropical de Investigación y Enseñanza" (CATIE) at its last meeting decided that the Executive Committee of the Board should study the problems of the Mesoamerican region and determine how CATIE can be more helpful to national institutions in the giant task of accelerating agricultural, forestry and livestock production in the area, and improving the income and general welfare of the rural sector. In carrying out this assignment, the

Executive Committee named two Ad Hoc committees to assist in the task; namely, (1) a Survey Committee consisting of a member of the Board and two outstanding scientists of the Central American region to visit each of the 6 countries and consult with outstanding leaders in the attempt to define more precisely the constraints and problems tending to slow down progress in agricultural development in the region and how CATIE might be more useful in helping to solve them; and (2) a Forestry Committee composed of three experienced specialists in forestry production, to define the needs and kinds of regional activities most indicated for a more rational and productive exploitation of this commodity.

Individuals serving or that served in these committees are as follows: Executive Committee of the Board - Dr. José Emilio Araujo, Director General IICA; Ing. Hugo Castro, Vice-Ministro de Agricultura, Costa Rica; E. J. Wellhausen, Special Staff Member, Rockefeller Foundation, Chairman. Survey Committee - Dr. Alfredo Carballo, Consultant to the Minister of Agriculture, Costa Rica; Ing. Astolfo Fumagalli, Sub-Director of ICTA, Guatemala; E. J. Wellhausen, Chairman. Forestry Committee - Dr. Gerardo Budowski, Director General, Unión Internacional para la Conservación de la Naturaleza y de los Recursos Naturales, Morges, Suiza, Chairman; Ing. César Pérez, Profesor de Recursos Forestales, Universidad Nacional de Colombia, Medellín. Abstracts of the reports of the two Ad Hoc committees are annexed to this document.

3. The Survey Committee visited each of the Central American countries and Panama in March and discussed the problems, present activities and future role of CATIE in promoting the further development of agricul-

ture in the area, with various individuals, government officials, local and regional institutional directors, representatives of international agencies, program leaders and many research and rural development workers.

4. In addition, this committee studied the "Documento de Trabajo (Agosto, 1975) - "Un Resumen de los Antecedentes Relacionados con la Coordinación de la Investigación Agrícola en Centro América de los Últimos 21 Años") and other documents and publications related to current programs and problems in the area. The Documento de Trabajo, prepared by (SIECA ?) was especially helpful. The many resolutions, agreements and recommendations emitted for the coordination of agricultural research and development efforts in the area by meetings of the Ministers of Agriculture, Economy and Exterior Relations; by meetings of the PCCMCA and various commissions; and through special studies, clearly reveal the deep concern of certain individuals in agencies in Central America, for the more rapid solution of the major agricultural development problems common to the region. The Document strongly points to the need for a nerve center or central apolitical developmental force for the region as a whole. In this connection, it is significant to note that the Ministers of Agriculture in their meeting in San José, Costa Rica, in October 1974, recommended that CATIE serve as the regional organization for research in plant and animal production in Central America.

5. The many discussions, sessions held and studies of various documents available to the committee were extremely fruitful in the identification of problems, requirements and activities underway in the region, and in the definition of the need for and functions of a regional center.

6. On the basis of discussions with key individuals and personal observations in the area, and as a result of discussions with heads and members of certain international development agencies, including IGAD/LA<sup>\*</sup>, members of international research centers and the director and members of the CATIE staff itself, the Executive and Ad Hoc Committees have jointly arrived at the statements, conclusions, suggestions, recommendations and proposals described below:

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\* International Group for Agricultural Development in Latin America



## II Present Nature of CATIE

A brief description of the present nature of CATIE is given in Annex I. CATIE was created in June, 1973, as a civil association, characterized as an autonomous, non lucrative, scientific and educational institution, by the Government of Costa Rica and the Interamerican Institute of Agricultural Sciences of the OAS (IICA). In August of 1975, the Government of Panama joined the association as a new member.

It is governed by a self-perpetuating Board of Directors constituted by two representatives of the Government of Costa Rica (GOCR), the Rector of the University of Costa Rica, two representatives of IICA and four individuals at large, distinguished in agricultural development, elected to serve for a period of 3 years. The Board has full autonomy and represents the maximum authority of the institution, designates the Director, establishes policies and approves the programs and budgets.

CATIE is an outgrowth of the Agricultural Research Center established by IICA in Turrialba, in the 1940's. The inventories and assets, as accumulated by the former IICA center, were transferred to CATIE, with the exception of the Library and Documentation Center, which continues to be controlled and operated by IICA.

The land facilities of CATIE consist of 1100 hectares in Turrialba, plus 149 hectares situated in the Atlantic lowlands, about 40 kms. from Puerto Li-món. Physical facilities for research at Turrialba include space for administrative personnel; offices for research and teaching staff; 2 teaching laboratories; 1 well equipped language laboratory; a seminar room for 100 people; laboratories well equipped for research in soils, plant physiology, entomology and plant pathology; an animal research building including staff offices and laboratories for research and teaching in animal production; a nuclear energy

laboratory for applied research in agriculture, with a source of cobalt 60 gamma radiation; a meteorology station; 13 greenhouses; a herbarium; an air conditioned room for seed storage; and a statistical and electronic computation laboratory, equipped with an IBM Model B computer and corresponding card perforators.

Housing facilities include dormitories and laundry services for 80 persons; sufficient kitchen and dining facilities for 112 (or more) people; 13 apartments for unmarried professional staff; 13 residences for married students; 34 residencies for professionals and their families; 1 guest house for 10 people; and a social center with swimming pool, restaurant, bar and recreation rooms.

In addition to the above, the Turrialba Center provides farm machinery, transportation equipment, repair shops, a carpentry shop and other service facilities.

The Agricultural Library and Interamerican Documentation and Information Center of IICA provides a very important asset not only to the staff of CARI, but to agricultural research and development workers in Latin America in general. The library consists of 60,000 volumes, 2,300 periodicals, 110 bibliographical indexes, and numerous more popular magazines, maps and audio visual materials. It is equipped with modern copying and micro-film facilities.

CARI was designed by its founders primarily as a regional research and development center, to serve the needs of the 5 Central American countries, Panama and the Caribbean, in the acceleration of agricultural production and rural development. It was visualized as a means to provide leadership, coordination and backstopping, as may be necessary, to strengthen the effectiveness of the national research and development installa-

tions. How well it is doing, this is the present major preoccupation of

The present core program of CATIE is geared primarily to research, leading to the improvement in systems of crop production, milk and meat production and systems of forest management and wood production. The objectives and activities in these programs, are described in Annex I.

Research <sup>in</sup> crop production systems is aimed at the small farmer and was recently greatly stimulated by a grant from USAID for research in multiple cropping, in collaboration with national institutions in Central America and Panama. Cooperative activities are already underway in several countries of the region.

Research with livestock primarily involves studies on the efficiency of milk and meat production on grass and by-products of tropical export crops in humid lowland areas. Cooperative work is underway in Panama and Honduras.

The forestry program is now at a low ebb, waiting for the recommendations of the Executive Committee. As part of the forestry program, CATIE maintains an arboretum with 200 species and various nurseries and forest plantations, including a number of hectares of natural tropical forests.

In addition to the above core programs, CATIE has a number of special projects underway in Coffee, Cocoa, application of isotopes, and a germ plasm conservation program in economic tropical crops, such as

coffee, cacao, palms and forest species. CATIE also administers a number of fellowship programs, financed by the Netherlands, OAS and FAO.

Source of funding for the current years' activities are:

<u>I Core Program</u>		855.000
IICA	537.000	
Govt. of Costa Rica	50.000	
Govt. of Panama	50.000	
Commercial Operations	50.000	
Grants	66.000	
	<hr/>	885.000
 <u>II Special Program</u>		
Application of Radio Isotopes		232.000
Int. Coffee Org. Tech. Assts. Fertilizer Treatments		?
COCR and OAS - Forestry Project		?
United Kingdom personnel		?
Netherlands, OAS, FAO - Fellowships		?
Others ?		
		<hr/>
		1.240,000
 <u>III USAID Multiple Cropping Staff services in Production, Economics and Soil Management</u>		
		<hr/>
		540,000
	<hr/>	
Total		1.780,000

At present, the CATIE staff consists of 29 professionals. The names and positions held by the various staff members, are indicated in Annex III.

### III What are the Major Problems and Constraints to Agricultural Production and Development in Central America

Problems and constraints in agricultural production and development in the different countries of Central America and Panama are numerous,

very similar and quite complex. Although many of the problems and constraints are generally known, it seems worth while to review them here, in the attempt to determine the kind of cooperative regional programs most useful for the future development of the area. They are not necessarily listed in order of importance.

### 1. Population Rapidly Increasing

There are 18 million people in Central America and Panama. If the present rate of increase continues, there will be over 36 million by the year 2000. This means that the food production of the region must be more than doubled in the next 24 years, if present levels of nutrition (already low) are to be maintained, or the region will have to resort to massive imports of surpluses from areas which are already in great demand. The problem not only involves an increase in food production, but also a problem of rural development - increasing the income and general welfare of the large rural sector.

### 2. Productive Land Limited

There are 14 million hectares under agricultural exploitation in Central America, about 0.3 ha. per person. This includes land devoted to the production of food and export crops and small-farm livestock production, under various ecological conditions of temperature and rainfall. Rainfall is often deficient and poorly distributed.

### 3. Food Produced Mostly by Small Sized Farmers

Eighty percent of the basic food stuffs in the region is produced on farms varying from 0.5 to 35 hectares, with most of them under 5 hecta-

res. They are semi-commercial family subsistence farms producing on the average only about 25 percent of their potential with modern technology. Many of the rural adult families are landless. All are under-employed.

#### 4. Research and Development Programs are Weak

National research and development programs in most countries are weak, fragmented, under-financed, under-staffed, and poorly oriented. Research, organization, procedures, and delivery systems for gaining the adoption of materials and information produced, in general, lack well-defined objectives that adequately include a global conception of agricultural development. Work plans are not well conceived to bring about the results desired. Innovations are needed.

Much of the present research is crop specific and conducted in collaboration with CIAT and CIMMYT. It is focused largely on the creation of high-yielding, disease-resistant, fertilizer-responsive varieties and the development of agronomic practices for the realization of the maximum potential of these varieties under good conditions of moisture and soil fertility. This is good, but not good enough. There are many gaps between what is available and what is needed. Crop specific research needs to be complemented by work in soils, water management, storage facilities, practical economics, pricing policies and by work in other fields that would allow a systematic approach to the solution of a whole series of inter-related local problems. Much of the research underway is not only <sup>in</sup> complete, but it needs to be aimed at more of the different ecological situations in Central America.

#### 5. Little Impact of Research and Extension

Agricultural and livestock, research and extension activities, have had little impact on the acceleration of food production. They have not been effective in increasing the production of the small farmer and improving the plight of the rural masses. There exists little contact between research workers and those supplying technical assistance to the rural community.

High-yielding, disease-resistant varieties of maize, rice, beans and sorghum, have been made available through the PCCMCA, and much is known about the use of fertilizer, but average yields per hectare have increased very little and rural poverty, if there has been a change, has increased rather than decreased. Not only has the research in many cases been incomplete, but also present strategies and methodologies being used for the transfer of technology are grossly inadequate in view of the extreme ecological diversity in the rural areas, the innumerable combinations of environmental factors, and the prevailing socio-economic and cultural conditions of the people to be benefited. New strategies are needed.

#### 6. Lack of Adequate Farm-Evaluated Technology

One of the greatest constraints to progress in the utilization of modern technology is the lack of direct linkages between the experiment stations and the farmers. Most research work is limited to the experiment station. Little effort is being devoted to on-farm experimentation to adapt research results to local conditions in a form suitable for immediate profitable application. Even more serious is the lack of effort in the development of strategies and methodologies for gaining rapid adoption of suitable technology by large numbers of economically viable small-plot farmers. The

two activities must go hand in hand. In many cases, unfortunately, although the results of research accumulated by the experiment stations to date, (international centers included) are useful, they are often incomplete and not sufficient to launch an effective production campaign. Research workers that don't move off the experiment stations are not aware of what is needed.

Many agricultural production schemes financed by international agencies have failed because of the lack of on-farm area specific adaptive research, and technology delivery systems designed to determine and deliver the package of practices most indicated to bring about the desired production increase.

#### 7. Shortage of Personnel

There is an acute shortage of adequately-trained and experienced personnel at all skill levels. The value of specialized training and experience is not generally recognized. Salaries of research and rural development workers are low. Prospects for career advancement are poor. These and other problems make it difficult to recruit highly competent individuals and retain them and maintain a continuity of programs. Governments do not now make use of existing supplies of trained experienced agricultural manpower.

Under present conditions, trained experienced agricultural research and extension workers move on to more lucrative jobs with other agencies as soon as possible. As a result, the research, extension and development activities are left mostly to recent inexperienced graduates of the agricultural schools.

In general, the supply of manpower is low in all countries. Most are



inexperienced. This, coupled with the fact that most Governments make poor use of those that are experienced, makes progress slow.

### 8. Lack of Favorable Production Policies and Infrastructure

There are a whole series of constraints of a non-technical nature, such as the lack of effective pricing policies (favorable input costs/product price relationships); marketing structure; storage facilities; distribution systems for fertilizer, insecticides and improved seed; and credit systems, that hinder progress in production. In many areas, physical infrastructures such as all weather, farm to market roads, transportation systems, irrigation and drainage systems, rural electrification, are poorly developed.

### 9. Proliferation of Effort

There are many regional and world wide agencies operating in Central America; namely, IICA, FAO, UNDP, UNESCO, INCAP, ROCAP, SIECA, OIRSA, INCAE, BID, World Bank, IGAD/LA, USAID, PCCMCA, CATIE and CIDA - a tremendous proliferation of effort. Each may be providing an important piece of the rural development package, but there is no single coordinating force in operation that tends to pull these pieces together into a comprehensive rural development project.

### 10. Animal Production

The major problems in animal production are concerned with nutrition and management. Animal production resources are poorly exploited. How these can be better used, urgently needs to be determined. Many small farmers have animals of some kind. Research on how these could be made more productive through a better utilization of grazing lands, crop residues or

by products could be very useful.

There is considerable interest in the use of small animals as a source of protein in the rural area. So far little has been done to show how rabbits and Guinea pigs could be effectively used. In the Andes, Guinea pigs have been a source of protein for the rural families for many years.

#### 11. Foreign Specialists

During the late 40's and early 50's, a large number of short-term foreign agricultural specialists were provided by various International Agencies to help in the organization and implementation of agricultural development programs in each of the Central American countries. Results were disappointing. Two things were learned from this effort. For a foreign specialist to be effective, he must become directly involved in the development activities along with national personnel and he must be provided for periods longer than 2 years. The short-term specialists who operated as an advisor, has proven to be of little value.

The above problems are not new. Agricultural development leaders (national, regional and international) have been struggling with the identification of the problems and their solutions in Central America and Panama for a quarter of a century. As pointed out above, in the 1950's almost every country in the area initiated an agricultural research service program, with the assistance of foreign specialists. In the 60's, the foreign specialists were gradually withdrawn and the initial programs have since been reorganized, and modified from time to time, but without much success in solving rural production and development problems.

As indicated (in the 1975 Work Document) there is a strong desire on the part of Central American Governments to integrate and coordinate agricultural research and development activities. Numerous studies have been made by IICA, FAO, SIECA (etc.) Commissions and Sub-committees have been formed; The Ministries of Agriculture, Economy and Foreign Relations of Central America have met jointly and singly. Many ideas, suggestions, plans, recommendations and resolutions have come out of these meetings, but in almost every case this is where the action stopped. There was no effective mechanism for carrying them out.

Today, more than every before, there exists a strong desire and strong sense of urgency to come up with new imaginative ways for a realization of the kinds of action needed. There is a strong feeling that a regional nerve and brain center is needed - a center that can bring together support and maintain a competent high level multidisciplinary technical team, to provide the leadership needed and to inter-act with national Government officials, Scientists and Development workers, in the planning, organization, implementation and coordination of programs and activities required to bring about the desired results.

Accelerating the production, income and general welfare of small-plot farmer and landless rural laborers in Central America, is extremely complicated. It is generally realized that it is not logical or feasible for each country to develop its own fully comprehensive research and development institutions. The consensus of thinking today, is that it doesn't make much sense for each country, with its scarce financial and experienced human resources, to try to unite and maintain a high level team of experts and try

to solve on its own, in an isolated way, its multiple problems in the field of research and rural development that are common to the region as a whole. This is not emphasized here to give impression that the Board is attempting to salvage CATIE. On the contrary, the Members of the Board are deeply concerned about developing the kind of regional institution that Central America needs.

#### IV What Kind of Regional Center is Needed ?

##### 1. Organization and Operational Principals

A regional center, to be effective, must be designed to serve the needs of the countries concerned. It must be an autonomous institution responsive to the interest of the individual countries it is designed to serve, and provide the kinds of highly professional, non-political services they need to achieve their own individual goals. The countries concerned must become an integral part of its organization and operation. It must have their support, work for and with them in providing what the countries want and need, but individually cannot supply. Its capacities and services must be so useful that countries of the region can afford not to subscribe to it. It must integrate its activities with those of national institutions. The staff must interact with those of national institutions in forming a network of collaborating research production and development workers in a coordinated attack on the many production and development problems to be solved.

It must be an autonomous, non-political production and development institution, with complete freedom of operation, strongly oriented toward the rapid acceleration of food production and the income and general welfare of the rural sector, governed by a board of distinguished development minded individuals. The countries to be served must be strongly represented on this Board.

In its operations, it must play a leadership role. It must provide competent, innovative leadership, to help national institutions to identify opportunities and actions to be taken at the local level; assist them in the development of clear-cut production and rural development goals; help for-

mulate practical programs and proposals and aid in the staffing management and implementation of such programs. It must be instrumental in the development of the decision<sup>s</sup> and policies (especially pricing policies) needed to really stimulate production and development. It must have the capacity to serve as a regional nerve center dedicated to action with a multiplier effect. It should serve as a central coordinating institution, with similar objectives and goals. Because of the socio-economic situation in Central America, the Center should concentrate its scope of action first on the development and difusion of useful technology at the small farmer level.

## 2. Regional Research and Development Activities

Since most of the food in Central America is produced by the small and medium sized farmers (1-35 ha) the Center's efforts must be directed more specifically at the identification and solution of the production and social problems of the small farmer and a better utilization of the landless rural laborers. This is a very important and a complicated task. In view of its importance, the regional center should devote its main thrust to launching and spearheading, cooperative, concentrated action programs in each country, for the development of the strategies and methodologies most indicated for improving the production, income and general welfare of small farm families and rural laborers. World wide information and experience in the field should be studied and what is pertinent brought to bear on the solution of the problems. The Center should be able to assist interested countries in the development of successful comprehensive integrated community production and development models and the mechanisms needed for their expansion or extension throughout the country.

*should be promoted*  
Location specific, on-farm adaptive research, to develop adequate tech-

nological packages for increasing production, which will provide sufficient profit to encourage farmers to adopt them. ~~Along with the on-farm research,~~ the Center should facilitate the development of regional commodity research programs, such as those on maize, rice, beans and sorghum now being sponsored by the PCCMCA in Central America, with the assistance of the International Centers. In the case of maize, the regional coordinator and a production agronomist are supplied by CIMMYT, but in case of some of the other commodities, the employment and support of these leaders is a problem. The regional Center should arrange to employ the regional commodity program leaders where indicated and provide the logistic and other supporting services as may be needed. They may be headquartered in different countries, if so indicated.

The regional Center may serve as a springboard for the operation of numerous other cooperative ~~thrusts as may be needed to backstop multi-disciplinary commodity development~~ regional research programs such as multiple cropping (already underway) soil fertility; irrigation and water control; vegetable production; grain storage; production economics (production policy and marketing research); seed production, intensive animal production, including small animals; food technology; home improvement program focused on improving family nutrition, health and quality of life; and agricultural engineering focused on tools, equipment and maintenance facilities for small-size farms, small tube wells, water control and drainage. This might even include a regional cooperative effort in improving administrative procedures for more efficient program operation. Most important of all would be a regional training program which is described in more detail below.

### 3. Staff

The regional Center should bring together, support, encourage and maintain, a competent multi-disciplinary group of specialists that really understand the scientific, political and cultural barriers to the acceleration of food production and rural development in Central America. Individuals selected must be of the highest standards, of wide competence, well-trained, innovative, development minded and highly motivated in increasing the production and general well-being of the rural sector. They must be able to inspire others to greater effort. They should be sufficiently capable to help national institutions organize, manage and operate useful projects and help train local personnel. Initially, it will be difficult to find individuals with all the qualities desired. Many of the capabilities desired will have to be developed in-service, with intelligent guidance and encouragement.

This high quality staff must be available to individual countries to inter-act with <sup>national</sup> natural scientists, bring in new ideas and innovations, help test them and get them applied. They must be supported by long range funding that will guarantee continuity, freedom of action and allow them to grow in knowledge and experience in the area in which they are to serve.

In addition to a core staff, the regional Center could sustain a number of top-notch, broadly competent, experienced personnel in various disciplines, to be temporarily stationed in different countries, to help national institutions with specific developmental problems.

Other organizations could assign personnel to the regional Center, to



be administered by the Center, to carry out specific core functions or regional activities, which the organization may wish to support.

#### 4. Training

Assisting the National Institutions in the preparation of the manpower needed, should be one of the main functions of the regional center. It should identify the deficiencies in present training efforts in the region, as well as design and promote programs to alleviate these deficiencies. Some of the major challenges or needs, are as follows:

(1) Determination of the kinds of training needed and the number needed in each category.

(2) Preparation of specialists for the organization, implementation and evaluation of concentrated community multi-sectoreal rural development programs, with primary emphasis on increasing the production and income and general welfare of the rural people. This can probably best be done in combination with (f) below.

(3) Further development of the Perito Agrónomo and provision of opportunities for his advancements.

(4) In-service training of field level technical assistance personnel - with no more than a secondary education, to assist in carrying out tested strategies in concentrated community action programs.

(5) Training of local leaders and small farmers with limited primary

education:

(5) Preparation of research and development specialists at the post-graduate level. There is a strong feeling in Central America that a good post-graduate degree training center is needed. It would be ideal to develop this kind of training as a joint program between the regional center and one of the leading universities in the area. The program should have a strong inter-disciplinary content, aimed at rural development (education for rural development), with adequate provisions for practical experience. It should produce specialists with a broader range of production and development expertise, mentally "acclimatized" and better prepared to provide the leadership and guidance needed at the local level.

(7) Provision of leadership for the development of a mechanism for a more uniform coordinated effort, by all agencies engaged in training, to produce the kinds of personnel needed. At present, there is a great deal of proliferation. There are a number of programs underway; some operated by IICA and the U. N. system (ILO, UNESCO, FAO) within Central America, and others by CIMMYT, CIAT and CIP in Mexico, Colombia and Peru. None tend to cover the full range of needs. A coordinated training effort perhaps in a team approach is needed.

(8) Training of personnel to assist government officials in the development of favorable government policies, especially those pertaining to production incentives and to salaries, terms of service and career prospect for technical personnel. A number of specialists must be prepared in how to make more effective use of existing manpower.

(9) Training of women for family and home improvement activities.

(10) Training of personnel for more fundamental research in Soil and Water relationship, plant breeding, chemistry, etc., as may be needed to back-stop the more immediately practical research and development efforts.

(11) Training of managers for local agricultural enterprises such as experiment stations, agro business, and agro-industrial.

## 5. Other Activities and Services

### 4) Help to Attract and Coordinate International Funding

There are many agencies providing pieces in rural development. The Center could help to demonstrate how international funding could be used more beneficially through comprehensive integrated, well planned programs back-stopped by a highly quality group of experienced technical personnel. In many instances the lack of coordination or collaboration among donors adds to the difficulties of recipient countries in sorting out their priorities in the use of their own resources more efficiently. Personnel of the Center could aid in identifying the needs and marshaling the resources to strengthen national and regional programs. They could assist in the development of attractive proposals for bilateral or joint regional international funding, and thus serving a coordinating function.

The Center, if so indicated, could serve as an agency for the administration and management of funds and programs that a donor might wish to dedicate to a specific purpose within the region. The Center could serve as a contractor for interested agencies to do certain development jobs.

The national collaborating institutions could, through their regional center, provide a meeting ground for donor agencies interested in helping with developments in Central America, to present information and proposals which will help them decide what to support.

### 4) Linkages with International Centers

The Center could assist the national Institutions in funneling into

the region materials, <sup>and</sup> information, and promote cooperative research between national and international centers where indicated. It could provide leadership in adapting the materials and information developed in the International Centers to the produces<sup>y</sup>.

Linkages with International Centers should be a two way street - providing a flow of materials and information to the national institutions and a feedback to the Centers on the <sup>deficiencies</sup> deficiencies. The regional Center could help promote this two way flow.

#### c) Publication and Documentation Service

There is a large amount of useful research information in the files of national institutions which were never published because of lack of opportunities and facilities. The regional Center could encourage the publication and distribution of this information. In addition, the Center could promote the distribution of literature relevant to ~~ix~~ crop and animal production, transfer of technology, and rural development strategies and processes important to the area. The Center, for example, could assemble all the information, knowledge and experience available world-wide on small farmer group farming and rural development strategies.

#### d) Promote Participation of Women

Women represent half the human resources and could make very significant contributions to rural development. The Center should promote their participation. They could be extremely useful in promoting better nutrition, health, education and family planning.

e) Germplasm Conservation

The Center could render a special service to the region and to Latin America in general, by maintaining a germplasm bank of different varieties of tropical crops such as coffee, cacao, sugar cane and oil palms and making these materials available as needed.

f) A similar type of service could be established in Forestry. The Center could bring together a collection of varieties and species of potential value in Central America and other areas of Latin America.

g) The Center could, if needed, provide regional analytical laboratories in chemistry, statistics, etc.

## V Proposals and Implementation

In view of the problems and needs of the region outlined above, it is proposed that CATIE concentrate its future efforts in the promotion of two major inter-related thrust, as distributed below:

### 1. The Primary Thrust - Rural Development Team

It is proposed that CATIE in the development of this primary thrust begin with the employment, formation and maintenance of a highly competent, well-balanced, multi-disciplinary team of experts,

- to interact with, assist and guide the national institutions of the Central American countries and Panama, individually and collectively;
- in the development and application of the procedures and strategies;
- for gaining a more rapid adoption of more productive technology by the small and medium sized farmers;
- and for bringing about a better focus and coordination of all non-technical supporting activities;

as needed in the promotion of a more rapid increase of plant and animal production and the improvement of the income, employment and general welfare of the rural inhabitants.

#### 1.1 Procedures

Effective strategies for increasing food production and employment, and improving the general welfare of the rural sector (including family planning) are urgently needed. Due to the many different socio-economical and ethnological conditions prevailing in the region, these strategies are not apt to be developed or applied without a special effort. Problems to be solved are

complicated. Activities needed in their solution are poorly understood. Situations vary from country to country and from region to region within countries. Each country will need to develop its own procedures "sobre el terreno andando". Many complex pieces must be brought together. Technical personnel will need to be properly oriented and inspired. A "foco de éxito" is badly needed in each country, to demonstrate that the job can be done and how it can be done, and to serve as a training ground and a springboard for extending the operation throughout the country.

For these reasons, it is proposed that the team of experts proceed on a step by step basis. They would initially concentrate on a selected rural community, working with the small and medium sized farmers and rural laborers to create a successful model in helping them to increase agricultural production and their income. Basically, the procedures would be as follows:

First - Initiate a pilot concentrated action program in a well-selected, limited area with good chances for success, within each of the six countries, in collaboration with (or consultation with, as the case may be) the appropriate national institutions and interested regional agencies\*:

(a) to develop the strategies most indicated for the acceleration of agricultural and animal production, and for increasing the income and general welfare of the people within the area; and (b) help test and apply them in a successful demonstration of how success can be obtained. Hopefully, this would help generate local support needed for expansion of the operations.

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\*This, too, should proceed on a step by step basis, since it will not be possible to launch a program in all six countries simultaneously.



Second - Develop the administration<sup>ion</sup> structure and mechanisms as required for extending the operations throughout the country and train the technical personnel needed, using the successful program as a training ground.

Third - Establish concentrated action "satélites" in other selected areas throughout the country on a step by step basis, as fast as, but no faster than, well-trained, properly oriented and highly-motivated leaders become available, along with the administrative structure and funds to adequately support the new operations.

It is visualized that the three steps might proceed more or less simultaneously as soon as some initial success is attained. The basic idea in the expansion efforts would be to divide the country up into regions on the basis of similarity of problems, if possible, or on a political basis, if more practical, and place a concentrated action team within each region. These would start small and expand their operations throughout the region as fast as possible, setting up micro-units, if necessary. Micro-units may be necessary, for example, if part of the region is under irrigation, different activities may be needed, <sup>2</sup> personnel should live in the regions or micro-regions to which they are assigned.

It is further visualized that as new programs are set up within the country, the more experienced, more capable personnel in the initial pilot program, would be centered some way in a national rural development institution to provide the leadership and guidance needed in the expanded operations. The CATIE development team would interact with these central units,

with local supporting agencies and with all specialized agencies, such as FAO, IICA, UNESCO, INCAP, USAID, CIDA, in the development of a strong net work of collaborating agencies interested in the promotion of rural development throughout the Central American region.

### 1.2 Constitution of CATIE team

It is proposed that the CATIE team initially consist of five individuals:

- a) Crop Production systems specialists
- b) Animal Production systems specialists
- c) A specialist in the diffusion of technology
- d) Specialist in training
- e) Specialist in production economics for program evaluation, improvement of marketing facilities and production incentives.

It may be that one specialist each in home economics, communications and rural sociology should be included in the initial team, for a total of 8 individuals. It is essential that the team be kept intact and based at some place where they could participate directly in a community action program.

The constitution of the initial concentrated action teams within each of the countries should be determined with local institutions on the basis of activities to be promoted.

### 1.3 Training

Numerous trained individuals will be needed at different levels of skill in carrying out activities required. The number of individuals

in each category will need to be determined. Training of personnel with a secondary education, and Perito Agrónomos to carry out the various development activities needed, should be done in action programs <sup>in - countries</sup> within the countries interested. Some of the training at higher levels may be done at the "home base" of the regional development team through well planned short courses, etc. Again, as much of this as possible, should be done within the countries concerned. A scheme for within country training is suggested in Annex ?

It is very likely that the regional development team will also need considerable training. They should become deeply involved in the operational aspects of the initial concentrated action programs. <sup>and gain</sup>  
<sup>from their experiences,</sup>

As the program progresses and the CATIE team becomes more experienced, a post-graduate degree program may be initiated in rural development, with some appropriate interested University.

#### 1.4 Is the Nucleus for this Already Established?

It is possible that the proposed primary thrust could be developed as an outgrowth of the USAID supported multiple cropping program. The within country concentrated action programs might focus first on efficient cropping systems involving corn, beans and sorghum.

## 2. The Secondary Thrust - Regional Cooperative Research Team

As a second major thrust, it is proposed that CATIE employ and maintain on a continuing basis, highly competent experienced leaders (or coordinators) for the development and operation of production-oriented regional cooperative individual commodity research programs and help per-

fect the regional research net work, as may be needed to back-stop the primary thrust.

### 2.1 Initial Steps

Initially, steps should be taken to strengthen the effectiveness of the regional maize, rice, beans and sorghum programs of the PCCMCA. CIMMYT is supplying effective leadership for the maize program, but leaders are lacking for the rice, beans and sorghum programs. CATIE should supply these in cooperation with the indicated international centers (CIAT and ICRISAT), if possible, in a strong effort to draw in the materials, information and expertise available in these centers and feed back to them deficiencies which may need to be remedied.

### 2.2 Additional Backstopping Programs

As soon as desirable and feasible, CATIE should serve as a springboard for launching additional regional research or service programs, following the same basic principles of operation that have proven to be successful in the PCCMCA. A regional multiple cropping or production systems program is already underway. Other choices that might be progressively considered, are: grain storage, seed production, animal production (including small animals), vegetable production, food technology, irrigation and agricultural engineering, soil and water relations. There are many backstopping activities needed. All need to be carefully analysed, in consultation with the Central American countries and launched on a priority basis.

The leaders of the regional programs could be stationed in different countries throughout the area where this is desirable, although there would

be many advantages in keeping them together, especially if they are to participate in post-graduate training programs.

### 2.3 Training

Arrangements for training in the regional back up programs will be one of the responsibilities<sup>of</sup> of the program leader. This could be done at his "home base" or at one of the International Centers, or both. Also as the program progresses, the regional leaders may become involved in a post-graduate degree program for the preparation of the kind of research workers needed in the region in a way similar to what is suggested for the development team.

### 3. Joint Efforts of the Two Teams

The two thrusts must move ahead simultaneously. They are mutually inter-dependent. Without the principal thrust, the second is of limited value and without the appropriate back-up activities the first will not progress for long.

The regional commodity program teams involving crop and animal production, must work in close harmony with the development teams in the on-farm development of profitable technological packages for immediate application.

The two teams in their efforts, as mentioned before, should seek the advice, orientation and support of all regional and international agencies that operate or have an interest in the region. They should take the initiative in bringing all relevant agencies - national, regional and inter-

national - together for joint discussions and development of coordinated action programs, including proposals for funding (bilateral and regional).

The two teams should jointly develop CATIE into a dynamic central axis for the promotion and coordination of research and development activities in Central America. They should provide the necessary leadership in the development of comprehensive production and development programs into which national, regional, international agencies can plug in with supporting activities. Coordination must be attained, not from the top down, but from the bottom up, by getting attractive, successful, comprehensive action programs underway, in which interested agencies ~~having a~~ bearing on rural development can, enthusiastically, participate, or to which they can contribute. These two teams must continuously and consistently be integrated with the daily activities of the collaborating network of individuals, farmers, assistance agencies, private enterprise, etc., and in so being, provide the leadership for progressive reinforcements of collaborative and coordinated efforts with seminars, open panel and round table discussions and other innovative ways of promoting group dynamics. It is important that they make every effort possible to promote a more adequate performance of the total agricultural support systems. They must keep in mind that research and its application is still not enough. They must provide the regional leadership for the better performance of all the components of production and rural development. All this will not come about without genuine demonstrations of success <sup>in progress, designed</sup> on an individual commodity basis of how the job can be done.

## VI Recommendations

The Executive Committee recommends:

1. That the proposals herein presented be carefully considered by the Members of the Board and arrangements made for their implementation.

2. Since success of the new approach will depend upon the interest, commitments and support of the individual Central American countries, it is recommended that key development minded leaders of the region be invited to become members of the Board.

3. That a joint meeting between the Board and Central American research and development leaders be held for discussion of the proposals and subsequent additions and modifications be made as may be indicated. (NOTE: This meeting may be held jointly with the annual meeting of the Board, scheduled from May 31st. - June 3rd.)

4. That a second joint meeting involving members of the Board, Central American research and development leaders, representatives of pertinent international centers and representatives of donor agencies, *to be held* to discuss the new approach, incorporate pertinent suggestions and jointly plan subsequent action. To be successful, the Central American countries must be willing to accept the new center as their own central development axis and make a major commitment and investment to it; and the International Centers and donor agencies must be convinced that the new Center provides a sound way for funneling materials, information and

sizeable resources including manpower into the Central American region.

4. That once the policy and operational proposals are acceptable to all concerned and approved by the Board, concrete program proposals be developed and funds sought for their staffing and implementation.

5. That the Board consider the possibility of changing the name of CATIE to something more in keeping with its new image; for example, Centro Meso Americano de Desarrollo Agropecuario (CEMADA). This name might be appropriate, if the new center is to also serve the interested countries of the Caribbean.

6. That the Board consider the decentralization of activities, especially the establishment of a second campus somewhere outside of Turrialba, or the possibility of making the new location the primary campus and the Turrialba the second campus.

7. It is recommended that the present livestock program in CATIE be converted to a regional cooperative animal production program patterned after the PCCMCA. It should become one of the programs in the secondary thrust. The Central American workers in animal production should be brought together to discuss focus and procedures, keeping in mind that the major focus must be on improving diet of those people that eat primarily maize, rice, sorghum and beans. More attention must be given to animal production *especially* at the level of the small farmer.

The number one problem in animal production is nutrition. New sources of protein must be found for animal feeds. New ways must be found for



using crop residues and by products by the small farmers. The possibilities and methodologies for small farm milk production must be thoroughly studied. Also, the possibilities of the production of animal proteins with small animals must be investigated.

9. It is recommended that the Forestry Program, as in the case of the Animal Program in CATIE, be converted into a regional cooperative forestry program, aimed at strengthening national programs in resource conservation and a more efficient exploitation of the natural forests. Also possibilities of small-farm-group forestry production using rough, rocky, steep, badly eroded land unsuited for crop production and poorly suited for grazing, must be investigated and promoted where feasible. There is a great deal of this kind of land in Central America. The rural people will soon run out of firewood for cooking, unless something is done about producing it. There is a lot of land that could produce charcoal in a well-managed system.

## VII Annexes

1. List of present Board Members
2. Statement of present program of CATIE
3. Present staff list
4. Reports of the Ad Hoc Survey Committee  
E. J. Wellhausen, ACQ and AF
5. Report of the Ad Hoc Forestry Committee
6. Population Growth

Doctor  
E. J. Wellhausen  
Londres 40, 1er Piso  
México 6, D.F., México

Estimado Dr. Wellhausen:

.... Le adjunto mi rápido resumen de las visitas a Centro América.

He conservado las notas originales para darles un buen repaso y extraer cualquier asunto importante que se me pudiera haber escapado esta vez.

Si usted desea otro tipo de resumen, tendré mucho gusto en preparárselo, si me lo hace saber.

Espero que el resumen le sea útil y le estoy enviando copia a Fumagalli y a L. M. R. para su información.

Un afectuoso saludo y mis mejores deseos.

Atentamente,

*Alfredo:*  
Alfredo Carballo Quirós  
Asesor del Ministro  
de Agricultura y Ganadería

ACQ/edm

RESUMEN DE LA VISITA A PANAMA, COSTA RICA, NICARAGUA,  
HONDURAS, EL SALVADOR Y GUATEMALA, COMO MIEMBRO  
DE LA COMISION AD HOC NOMBRADA POR EL COMITE  
EJECUTIVO DEL CATIE.

Alfredo Carballo Quirós

- A. En general, los grupos entrevistados reaccionaron favorablemente ante la creación de un Organismo Regional de apoyo a los programas nacionales, en sus esfuerzos por aumentar la producción y la productividad agropecuarias.
- B. Los grupos nacionales entrevistados estuvieron acordes en reconocer la labor actual del CATIE, pero indicaron la conveniencia de darle a la organización futura una nueva orientación filosófica y estructural, que responda mejor a las urgentes necesidades de la Región y de cada país en lo particular, para que llegue a ser un organismo regional realmente eficaz.
- C. Se nota en el área una gran inquietud por los asuntos relativos al desarrollo agropecuario en general y también al desarrollo rural integrado, lo que se palpa por las sugerencias recibidas al respecto en el curso de las entrevistas.
- D. Preocupa grandemente la inopia de personal local calificado en prácticamente todos los campos de las Ciencias Agrícolas y Sociales, que pueda planear proyectos de desarrollo y canalizar adecuadamente los esfuerzos nacionales tendientes a procurar un grado aceptable de bienestar a la población rural.
- E. La fuga de personal por falta de incentivos, es un problema serio que se plantea a nivel regional y sin excepción de país.
- F. La falta de estructuras y mecanismos que puedan llevar a cabo un eficaz proceso de transferencia de tecnología al productor, es también un problema generalizado en el área.
- G. La explotación irracional de los recursos naturales especialmente el suelo, el bosque y el agua llevó a los grupos entrevistados a dar prioridad a la consideración de la conservación de tales recursos, en cualquier actividad regional que se promueva en el futuro inmediato.

8. En general, los grupos entrevistados coincidieron en asignar al "nuevo" CATIE, las siguientes funciones principales:

- a) Adiestramiento;
- b) Investigación;
- c) Asesoramiento técnico; y
- d) Servicios varios.

### ADIESTRAMIENTO

La falta de personal calificado, a varios niveles, aparece como un problema generalizado e incide negativamente y con gravedad en la efectividad de los esfuerzos nacionales por mejorar la educación agrícola, la investigación y la transferencia de tecnología. En una área como la Centroamericana sujeta ya a presiones poblacionales, de escasez de alimentos y de uso más eficiente de la tierra, la inopia de personal calificado es un serio obstáculo para el desarrollo.

- a) Post-Grado. En este campo se plantearon varias opciones, todas tendientes a lograr para la región una preparación casi masiva de elementos que vayan a reforzar la educación agrícola, la investigación, la extensión y en general, que sirvan de líderes capaces en el campo de su especialidad.

Las opiniones divergieron en cuanto a la localización de la Escuela de Graduados en CATIE, abarcando una amplia gama de disciplinas; o ubicar parte en el CATIE y hacer uso a través del CATIE de las facilidades que ofrecen escuelas de graduados ya establecidas en Latinoamérica.

Razones de costo y de la barrera del idioma fueron factores que se consideraron en las deliberaciones. Pareciera que la opción de que CATIE administre un buen programa de becas para hacer uso del adiestramiento de Pos-grado ahí donde se ofrezca uno mejor en cada caso, es la que parece despertar más interés. CATIE podría, por sí mismo, asumir este tipo de adiestramiento en lo que pueda hacerlo con ventaja sobre otros centros educacionales.

Las necesidades expuestas por los entrevistados se enlistan como sigue, y no en orden de prioridades:

1. Fitotecnia. Con énfasis en producción de renglones alimenticios básicos como granos y otros productos

tropicales industrializables como café, banano, cacao, palma africana, etc. y otros productos de diversificación. También se mencionó productos hortícolas y frutales.

2. Zootecnia. Con énfasis en alimentación; manejo del hato; manejo de pastizales; agrostología; manejo y alimentación de animales menores como cerdos, conejos, gallinas, ovinos, etc; uso de subproductos agrícolas y problemas de las áreas ganaderas durante la época seca.
3. Basconoma. Con énfasis en inventario, clasificación, manejo y explotación racional del bosque nativo; reforestación; manejo y protección de cuencas hidrográficas; industria maderera; etc.
4. Economía Agrícola. Con énfasis en el estudio económico de las explotaciones medianas y pequeñas; comunidades agrícolas naturales o creadas por Reforma Agraria; cooperativas; etc.
5. Sociología Rural. Con énfasis en su aplicación práctica al estudio del proceso de cambio y a la evaluación del mismo como resultado del esfuerzo de mejoramiento rural.
6. Suelos y Fertilizantes. Énfasis en la producción de paquetes tecnológicos; clasificación y mapeo de suelos, etc.
7. Ingeniería Rural. Riego y administración de distritos; uso de maquinaria agrícola en pequeñas explotaciones, en cultivos solos o asociados, etc.
8. Extensión y Comunicación Agrícolas.
9. Biometría y Diseños Experimentales.
10. Administración Rural.
11. Desarrollo Rural y Recursos para el Desarrollo.
12. Entomología.
13. Fitopatología.
14. Planamiento Agropecuario y Organización Rural.
15. Agroindustria.
16. Producción.

La urgente necesidad de contar con Agrónomos de Producción, que agilicen el proceso de transferencia de la tecnología, fue tema largamente debatido.

Se apuntó la necesidad de capacitar personal que pueda prestar ayuda efectiva en la planeación, conducción y evaluación de proyectos en desarrollo agrícola y rural y que puedan conducirlos hacia objetivos más elevados y canalizar eficazmente la ayuda al sector rural. Un esfuerzo regional sería el único que podría resolver el problema neurálgico de los recursos humanos escasos en la región.

Es interesante anotar que surgió una sugerencia muy importante, en el sentido de que se pensara en la posibilidad de integrar un buen grupo de científicos en CATIE, que permitiera adiestrar a nivel de Post-Grado unos 75 ingenieros agrónomos en producción por curso lectivo.

El volumen en el número de adiestrados es importante para acelerar la producción y elevar la productividad, usando estos factores como disparadores en el proceso de desarrollo rural. Estos agrónomos de producción podrían adiestrar in situ a cada país, los cuadros medios tan necesarios en los programas de producción y transferencia de tecnología. Se insistió en que tal programa de Post-Grado debería incluir materias como Agronomía, Sociología Rural, Economía Rural, Metodología de la Transferencia de Tecnología, Administración Rural y otras materias pertinentes más tradicionales en cursos de este tipo.

b) Otros tipos de adiestramiento.

1. Cursos cortos de refrescamiento y otros a petición de los países.
2. Cursos cortos en Producción, extendiendo CATIE un simple certificado de participación:

En el campo del Adiestramiento se le plantearon al "nuevo" CATIE una larga serie de opciones de gran trascendencia para los países y prácticamente todo tipo de adiestramiento encontraría uso inmediato en el área.

ASESORAMIENTO TECNICO

Aquí se presentaron al nuevo CATIE una larga serie de opciones, que representan las necesidades urgentes del área. Sin embargo,

que consenso general que los países desean asesoramiento en nuevos términos.

- a) Que el asesoramiento no sea impuesto y que sea un refuerzo a los programas nacionales;
- b) Que los asesores sean muy cuidadosamente escogidos, y
- c) Que los mismos se integren totalmente al grupo nacional de trabajo en cada caso.

Los deseos por asesoramiento técnico abarcaron una amplia gama de disciplinas y actividades que van desde el planeamiento hasta la ejecución de proyectos, pasando por su evaluación hasta la publicación de resultados e incluyendo hasta asesoramiento en el uso y mantenimiento de equipo de laboratorio y otros.

Las necesidades expuestas están ahí y los países esperan que CATIE les haga frente en forma eficaz.

### SERVICIOS

En el campo de los Servicios, también se reconoció la importancia de una organización regional que estuviera en posición de servir eficazmente a los técnicos y sus programas nacionales.

En el área de los servicios sobresalen los deseos de los países por aquellos que tienen que ver con el mejor uso de las facilidades físicas y de personal que poseen y todos aquellos otros que en una forma o en otra se relacionan con los programas nacionales de aumento de la producción, la productividad y el bienestar de la familia rural.

Se apuntó que CATIE podría servir como ejecutor del PCCMCA, contando con coordinadores regionales para las actividades del Programa y provoyendo ayuda logística para la continuación y fortalecimiento de esta importante actividad regional.

En información y documentación se espera que CATIE dinamice y amplie sus servicios.

En divulgación, se sugirió que CATIE diseñe métodos prácticos y sencillos que no requieran que el campesino sepa leer y escribir para recibir sus beneficios. Esto tendría especial importancia en regiones de alto índice de analfabetismo.

En estadística, diseños experimentales, análisis de experimentos e interpretación de resultados, se apuntó que CATIE podría prestar



servicios de mucha utilidad, los que también incluirían el acceso a una computadora. Estos servicios permitirían contar a tiempo con los resultados experimentales analizados e interpretados para su uso en ulterior experimentación o en recomendaciones prácticas para la siguiente estación de siembra.

Servicios en la búsqueda de alternativas para la producción de rubros de exportación; industrialización, agroindustria; diversificación de cultivos; en cultivos horticolas; en frutales; en implementación de sistemas de cultivo bajo condiciones de "invernadero"; en la legislación sobre control y uso de agroquímicos; servicios de laboratorios centrales que calibren los laboratorios regionales que serían también satélites dentro de un sistema regional; en el desarrollo, manejo y administración de Estaciones Experimentales; identificación de mejores áreas para riego y en el estudio de los mejores sistemas para irrigación; identificación de fuentes protéicas nativas para alimentación humana y animal; identificación de nuevas fuentes energéticas alimentarias para animales que no compitan con el consenso humano; inseminación artificial; etc.

El área de servicios es muy amplia porque llenaría en mucho las deficiencias que causa la inopia de personal capacitado nacional.

También se sugirió que el CATIE asumiera la conducción o ejecución o administración de los servicios que presta OIRSA en el campo de la protección fitosanitaria regional.

Finalmente, puede apuntarse que en una forma implícita o explícita, los entrevistados anotaron la conveniencia de que el CATIE colaborara activamente en ciertos proyectos específicos que desarrollan o intentan desarrollar grupos de trabajo nacionales. Esto sería lo que hemos venido llamando "Proyectos de Acción Concentrada" en que toda la acción del Sector Público se vuelca en una área determinada en proyectos específicos y metas específicas.

Este sistema tendría la ventaja de ejercer un efecto de "succión" sobre aquellas actividades que debieran desarrollar ciertas agencias y que no lo hacen por falta de coordinación interinstitucional, que es un mal generalizado en la región. Estos "focos de éxito" crearían la demanda por esos servicios o actividades y dentro de un plan bien concebido es muy probable que se lograría la coordinación "de abajo hacia arriba": por necesidad y no por imposición o buenos deseos.

La idea pareció interesar a todos y debe analizarse bien en detalle.

Otro problema general en que se espera que el CATIE pueda hacer algo por resolverlo es el de la falta de personal. Aquí habría

que pensar qué se podría hacer, pero vale la pena tenerlo muy en cuenta porque es un problema muy grave.

También se mencionó la posibilidad de que CATIE sirviese como "sonbrilla" para la protección y administración expedita de ciertos fondos de préstamo o donación para proyectos específicos. Valdría la pena estudiar esto, porque los entrambamientos burocráticos y de toda índole son serios en todos los países.

En fin, las entrevistas me dejaron la impresión de que existe el deseo de que se cree una Organización Regional que se centre fuertemente en servir las necesidades del área. Pero no se desea un ente burocrático más, sino una organización fuerte y bien orientada filosóficamente, que sea capaz de actuar dinámica y eficazmente y que sirva como a manera de trampolín para una serie de acciones regionales que cuando menos alivien los problemas pecuarios más urgentes, como disparadores de una serie de acciones que conduzcan eventualmente a un racional desarrollo rural.

También tuve la impresión de que se piensa en una organización que catalice acciones, que sirva de intermediario entre los Centros Internacionales y los programas nacionales y que de alguna manera canalice, en imaginación y eficacia, muchos dineros que intencionalmente sólo esperan buenos proyectos para financiarlos.

Me parece que si CATIE (y es una opinión muy personal) pudiera establecer una buena Escuela de Producción; un buen grupo de muy buenos científicos para dar asistencia técnica; uno o más proyectos de "Acción Concentrada" donde converja y donde exista el deseo nacional de hacerlo y si pone especial atención al área de Servicios, tendría las manos llenas y podría hacer muy buen trabajo.

Si a esto se agregara su acción de trampolín y canalizador de inversiones de fuentes nacionales e internacionales, podría desarrollar una labor interesantísima y de grandes beneficios al área.

Las intenciones nacionales e internacionales de que se preste especial atención al pequeño y mediano productor, abre un amplio campo de estudio, de comprobación o diseño de metodologías y especialmente de acción, en que un nuevo CATIE tendría mucho que hacer y mucho con qué contribuir.

Una nueva concepción filosófica y una constante decisión por la acción es todo lo que se necesita para conceptualmente planear

un nuevo CATIE. Es un campo tanto para las consideraciones técnicas, como para el uso de la imaginación y ambos ingredientes deben usarse en las debidas proporciones para que resulte la mejor organización regional como una función de las necesidades de la región.

Creo haber hecho un resumen muy suscinto de lo que anoté durante las entrevistas y espero que les sirva de algo. Conservaré las notas personales porque hay mucho material interesante para referencia futura.

Si necesitan aclaraciones o información complementaria, pidanmelas que se las enviaré pronto y con mucho gusto.

Saludos,

Alfredo

ACQ/hch

Annex 6

TOTAL POPULATION ESTIMATES (IN THOUSANDS) FOR REGIONS, COUNTRIES OR AREAS, EACH FIVE YEARS, 1950-2000

YEAR	COSTA RICA	GUATEMALA	HONDURAS	MEXICO	NICARAGUA	PANAMA	CANAL ZONE	TEMP. SOUTH AMERICA	ARGENTINA	CHILE	PAKISTAN (PUNJAB)	INDONESIA	YEAR
1950	804	1931	3023	26606	1109	800	42	25437	17150	6091	2	2194	1950
1951	829	1981	3092	27372	1140	823	41	25936	17513	6194	2	2227	1951
1952	854	2030	3168	28196	1173	847	41	26452	17872	6297	2	2263	1952
1953	879	2079	3244	29069	1207	872	40	26971	18232	6400	2	2304	1953
1954	904	2128	3321	29948	1242	897	39	27519	18579	6503	2	2342	1954
1955	929	2177	3398	30829	1278	922	38	28065	18928	6606	2	2382	1955
1956	954	2226	3475	31712	1315	947	37	28616	19273	6709	2	2424	1956
1957	979	2275	3552	32597	1352	972	37	29169	19615	6812	2	2467	1957
1958	1004	2324	3630	33482	1390	997	37	29721	19952	6915	2	2514	1958
1959	1029	2373	3708	34368	1428	1022	36	30273	20284	7018	2	2579	1959
1960	1054	2422	3786	35254	1467	1047	35	30821	20611	7121	2	2623	1960
1961	1079	2471	3864	36140	1506	1072	35	31365	20931	7224	2	2667	1961
1962	1104	2520	3942	37026	1545	1097	35	31905	21247	7327	2	2711	1962
1963	1129	2569	4020	37912	1584	1122	35	32439	21559	7430	2	2754	1963
1964	1154	2618	4098	38800	1623	1147	35	32968	21869	7533	2	2797	1964
1965	1179	2667	4176	39686	1662	1172	35	33493	22179	7636	2	2840	1965
1966	1204	2716	4254	40572	1701	1197	34	34012	22490	7739	2	2883	1966
1967	1229	2765	4332	41458	1740	1222	34	34527	22801	7842	2	2926	1967
1968	1254	2814	4410	42344	1779	1247	34	35040	23114	7945	2	2969	1968
1969	1279	2863	4488	43230	1818	1272	33	35555	23429	8048	2	3012	1969
1970	1304	2912	4566	44116	1857	1297	33	36073	23748	8151	2	3055	1970
1971	1329	2961	4644	45002	1896	1322	33	36597	24069	8254	2	3098	1971
1972	1354	3010	4722	45888	1935	1347	33	37125	24393	8357	2	3141	1972
1973	1379	3059	4800	46774	1974	1372	33	37659	24721	8460	2	3184	1973
1974	1404	3108	4878	47660	2013	1397	33	38200	25051	8563	2	3227	1974
1975	1429	3157	4956	48546	2052	1422	33	38741	25381	8666	2	3270	1975
1976	1454	3206	5034	49432	2091	1447	33	39282	25719	8769	2	3313	1976
1977	1479	3255	5112	50318	2130	1472	33	39823	26056	8872	2	3356	1977
1978	1504	3304	5190	51204	2169	1497	33	40364	26394	8975	2	3399	1978
1979	1529	3353	5268	52090	2208	1522	33	40905	26730	9078	2	3442	1979
1980	1554	3402	5346	52976	2247	1547	33	41564	27064	9181	2	3485	1980
1981	1579	3451	5424	53862	2286	1572	33	42125	27394	9284	2	3528	1981
1982	1604	3500	5502	54748	2325	1597	33	42705	27720	9387	2	3571	1982
1983	1629	3549	5580	55634	2364	1622	33	43275	28043	9490	2	3614	1983
1984	1654	3598	5658	56520	2403	1647	33	43843	28362	9593	2	3657	1984
1985	1679	3647	5736	57406	2442	1672	33	44407	28678	9696	2	3700	1985
1986	1704	3696	5814	58292	2481	1697	33	44967	28989	9799	2	3743	1986
1987	1729	3745	5892	59178	2520	1722	33	45522	29296	9902	2	3786	1987
1988	1754	3794	5970	60064	2559	1747	33	46077	29602	10005	2	3829	1988
1989	1779	3843	6048	60950	2598	1772	33	46616	29906	10108	2	3872	1989
1990	1804	3892	6126	61836	2637	1797	33	47152	30189	10211	2	3915	1990
1991	1829	3941	6204	62722	2676	1822	33	47681	30478	10314	2	3958	1991
1992	1854	3990	6282	63608	2715	1847	33	48203	30762	10417	2	4001	1992
1993	1879	4039	6360	64494	2754	1872	33	48725	31040	10520	2	4044	1993
1994	1904	4088	6438	65380	2793	1897	33	49222	31314	10623	2	4087	1994
1995	1929	4137	6516	66266	2832	1922	33	49719	31584	10726	2	4130	1995
1996	1954	4186	6594	67152	2871	1947	33	50208	31848	10829	2	4173	1996
1997	1979	4235	6672	68038	2910	1972	33	50688	32108	10932	2	4216	1997
1998	2004	4284	6750	68924	2949	1997	33	51160	32363	11035	2	4259	1998
1999	2029	4333	6828	69810	2988	2022	33	51633	32613	11138	2	4302	1999
2000	2054	4382	6906	70696	3027	2047	33	52105	32863	11241	2	4345	2000

Handwritten notes and corrections in the bottom left corner, including the word "DETAILED" and various numbers and scribbles.