

AGRICULTURAL TRAINING IN THE CENTRAL AMERICAN ISTHMUS



**Project financed by the
W.K.KELLOGG FOUNDATION
through the
Pan American Development Foundation**

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- 1 **Tropical Agricultural Research and Training Center, CATIE.**
2. **“Agricultural Training in the Central American Isthmus”.**

1 THE TROPICAL AGRICULTURAL RESEARCH AND TRAINING CENTER CATIE

The Tropical Agricultural Research and Training Center, CATIE, is a regional center dedicated to agricultural, livestock and forestry development in the tropical zone of Latin America, especially of the Central American Isthmus and the Caribbean.* It was constituted in 1973, in Turrialba, Costa Rica, thanks to the joint efforts of the Government of Costa Rica and the Inter-American Institute for Cooperation on Agriculture of the OAS.*

CATIE's origin, however, goes back to the creation of IICA itself in 1942. From then on, the institution has gone through a series of adjustments in its organization and structure, in order to adapt itself to the growing needs of the countries that it serves.*

CATIE has two main functions: one is Research, to generate technology, much needed for the agricultural development of the region; the second is education, essential for the transmission of technical and scientific knowledge.*

* Slides change

The methodological approach of research, is oriented towards the development of production systems for small farms, unproductive land and marginal areas, in order to achieve an integrated utilization of land, labor and capital resources.*

It also contemplates the study of non-traditional crops, of great potential for producing food and energy requiring low-technical inputs.*

Under this approach, efforts are oriented towards the development of three basic areas: crop production, animal production and renewable natural resources.*

Adaptive crop production research is oriented towards the development of appropriate technologies for agricultural production systems, in three ecological zones: the low humid tropic, the semiarid tropic and the humid dry tropic.*

Research in animal production, is based on the socio-economic characterization of different areas in the countries, and the generation of basic informa-

tion* to develop and validate livestock system prototypes for medium and small farms. In this way, a close relationship between research and transfer of technology is established.*

In renewable natural resources, research is carried out in three areas: agroforestry systems, wood production, and management of hydrographic basins and wildland areas,* in order to find ways of rational extraction of the natural forest products.*

The educational function of the Center is oriented toward the preparation of specialized human resources in the region at two levels,*

At the graduate level, CATIE offers a study program at the of master's degree, in which students from different countries receive specific training on production systems research.*

At the informal level, short term training seeks to refresh knowledge and to teach new technologies,

appropriate for agricultural, animal and forestry development.*

The research and educational activities of the Center are widely supported by specialized services such as data analysis and processing,* information, documentation, a library* and diverse laboratories.*

CATIE's activities in Central America have been strengthened by agreements of cooperation with international, regional and national institutions.*

This support is of two natures: The technical and financial cooperation, allows CATIE to chanel the resources of different institution* to carry on research and educational projects throughout the region and in the Headquarters.*

Another form of support is the technical and reciprocal cooperation in which all the efforts are shared by both CATIE and the cooperating institution.*

The success accomplished so far by these forms of cooperation allows CATIE to foresee an expansion of agreements in the near future.* This no doubt, will serve to better support the efforts of the Central American countries toward their own agricultural development.



THE PROJECT "AGRICULTURAL TRAINING IN THE CENTRAL AMERICAN ISTHMUS"

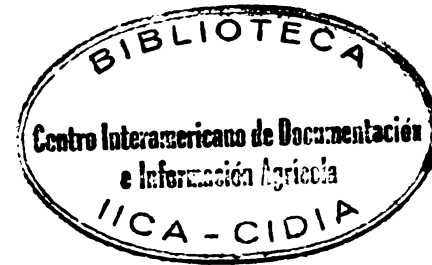
At the beginning of 1979 the W. K. Kellogg Foundation replied positively to a request from the Tropical Agricultural Research and Training Center, CATIE,* in order to strengthen the capability of national institutions in the countries of the Central American Isthmus and the Caribbean* for developing or adapting appropriate technologies for the small farmer* and to accelerate their transfer in order to improve agricultural production and productivity, therefore, the living conditions of the small farmer.*

This request is materialized as a cooperative Project of four years of duration, called "Agricultural Training in the Central American Isthmus", which started its activities in July, 1979. Through the Pan American Development Foundation.*

The specific objectives of the Project have been the following:

- To train enough national personnel with sufficient knowledge of tropical crops, forestry and livestock production* to cope with the problems of their individual countries, by developing appropriate technologies to meet their needs.*
- To provide "refresher" training, and to strengthen the capability of new staff in national institutions through short term training and finally.*
- To plan models of education for accelerating the process of transferring adequate technology at the small farm level.*

In quantitative terms the goals of the Project have been to provide specialized training to a group of 1400 professionals, researchers and university professors,* in specific areas of agricultural production through short courses, intensive courses, workshops, seminars and in-service training.*



CATIE makes available for these activities the physical installations and the technical support of 75 specialist at MS and PhD level; all located in its headquarters and in the regional offices of the Central American countries.*

This way, the activities of the Project are directed towards a greater number of professionals and technicians that need to refresh or complete their knowledge.*

This group, already trained, is in the best position to divulge the new technologies through the national institutions in each country.*

Every training event is designed according to the participant's level of knowledge considering the emphasis of the technical aspects of the content and the geographic covering.*

Thus as an example, short national courses on crop production are designed at different levels that include methodological aspects in agricultural systems,*

sistematic aspects as vegetable production and disciplinary aspects as weed and insect control.*

These events are usually originated by a special request of a country. Later on, this knowledge is utilized in regional or international activities.*

The results of the Project, until June of 1982, consist of a total of 23 short courses and 6 intensive courses developed in the headquarters and the countries of the region. In these courses, 705 technicians from different national institutions have participated.*

Of the 23 short courses, 16 are national events, last one week each, in which 374 participants were trained.* From these courses, three were held in the Dominican Republic as an extension of the Project to the Caribbean.*

There were also, eight events at the regional level with a two week duration, five of these at the headquarters, Turrialba,* and three in different Central American countries, with a total participation of 170 professionals.*

The intensive courses of 4 to 6 weeks of duration each, 6 in total, were held mainly at the headquarters with 161 technicians attending.* Two of these courses referring to horticulture production were carried out in El Salvador and Honduras,* considering the need to develop and transfer appropriate technology for the production of crops.*

Other aspects of the production in regard to methodological problems were discussed and analyzed in eight seminars and workshops with the participation of 270 technicians.* Among these the ones related to tropical perennial plant such as coffee, cocoa and bananas,* were emphasized as well as those about the production of cattle and crops* and its relation to agroclimatic conditions of the tropics.*

Another form of training is the in-service training, a methodology that permits to carry out the philosophy of "learning by doing". Under this point of view,* CATIE has received, during the first three years, a total of 111 professionals who have been working in close interaction with the specialists of the institutions,* receiving training in diverse areas associated with the research Projects of the Center.*

One of these types of training, which constituted an important advance in its field, was directed towards the development of a methodology for the study of the agricultural and forestry production systems.*

This methodology allows the finding of answers to questions such as: What is an agricultural system? How is it defined? and What are its components? * But, to really "learn by doing" this methodology was applied in three in-service training sessions about the characterization of agricultural systems*: the first one in the region of Coto Brus, in Costa Rica* the second one in La Esperanza, in Honduras, and the third in Hojancha, also in Costa Rica*, in which the diagram of the farms was utilized as a fundamental tool in the analysis of the systems, as basis for the recommendations of studies and improvements of tropical agricultural systems.*

Similar trainings are carried out in areas such as weed control, soils, wildland management, cocoa production, genetic resources and* librarianship. In addition to the benefits that these events represent for the region,* they have yielded, as a secondary product, a

... great amount of information that the Project has utilized in the production of educational software,* used as means of support in subsequent events that has allowed as well, a wider diffusion of knowledge for its multiplying effect.* To adequately continue preparing and therefore divulging the information in the american tropic.* The project has promoted in the Center, the creation of an educational media production section.*

From another point of view, the Project has contributed positively to the training activities of CATIE. In 1979 this contribution represented 130/o of the Center's activities in this field, while in 1982 it went up to 60 o/o.*

Also, the participation of the technicians in the events, as well as that of the specialists of the Center within the Project has increased, to attend 454 participants in 1982 in contrast with 46 in 1979.*

In the same way, it has been possible to increase the level of knowledge, skills and abilities of 1089 professionals and technicians from Central America, with an effort of 2100 man/weeks of work.*

If you add to this effort the work of invited speakers and coordination and support personnel, it is easy to understand the magnitude of the contribution* that the W. K. Kellogg Foundation and CATIE are doing* to improve the quality of the human resources in the agricultural field in the Central American and Caribbean region.