

REPORT

Program Study Team

**TRAINING
and
COMMUNICATION**



CENTRO INTERNACIONAL DE AGRICULTURA TROPICAL

INTRODUCTION

On Tuesday, January 7, 1969, the Program Study Team for the Training and Communication Program of Centro Internacional de Agricultura Tropical met at the Hotel Geneve in Mexico City, Mexico. Members of the program study team were

Dr. Thurman White, Vice President for University Projects,
University of Oklahoma

Dr. Louis A. Doyle, Associate Director, Continuing
Education Service, Kellogg Center, Michigan State
University

Dr. Harold J. Alford, Director, Department of Independent
Study, University of Minnesota

Host and hostess, guide and translator, from CIAT were

Dr. Francis C. Byrnes, Communication Specialist
Mrs. Edna Sheets, Conference Assistant

Also accompanying the group while in Mexico was Mr. Angel Lara,
Director of the University of Oklahoma Hacienda Conference Center at
Colima, Mexico

Objectives

As part of the involvement of the Program Study Team in the planning of the Training and Communication Program of CIAT, Dr. Byrnes suggested the following as tentative objectives

- 1 To help CIAT establish criteria for making decisions relating to the content, operations, and methods, administration, budget, facilities, and evaluation of the CIAT training and communication programs
- 2 To help CIAT assess present and projected training needs for agricultural development in the lowland tropics taking into account present and projected plans of other organizations
- 3 To identify sources of information, equipment, resources, and personnel relevant to the training and communication program
- 4 To screen related experiences in training and communication, in the United States and abroad, for ideas, approaches, problem areas, alternative solutions, etc
- 5 To help CIAT establish affective rapport with various national educational and extension organizations leading to the development of close working relationships and cooperative programs
- 6 To help CIAT increase the involvement of the senior staff members in planning, development, and execution of training and communication programs
- 7 To identify ways of developing cooperative activities between CIAT and various centers for continuing education in the United States and elsewhere

That these were well chosen and practical objectives became readily apparent to the Program Study Team

During the first week of its investigation, the Team visited with leaders in various national educational and extension organizations throughout Central America and found that the simple fact of its visit prompted conversations which resulted in the enthusiastic suggestion by all parties of ways in which CIAT could develop close working relationships with each organization

As it proceeded, the Program Study Team sought to elicit from the organizations it visited their plans, both present and projected, for program training in agricultural development throughout the lowland tropics, thus, the Team provided CIAT with a base for assessing present and projected training needs in these areas

When the Program Study Team arrived in Colombia, South America, at the beginning of the second week of its investigation, senior staff members of CIAT, under the leadership of Director Ulysses J. Grant, gave freely of their time and knowledge in individual and seminar discussion, the result was not only the provision of useful information to the Team, but the senior members of CIAT staff also immediately became increasingly involved in the planning of the Training and Communication Programs, their contributions, together with the information and insights already obtained from visits with other organizations, provided the basis for the Program Study Team to help CIAT establish criteria for making decisions relating to the details of its Training and Communication Program

Throughout its investigations, the Program Study Team sought to identify sources of information and material and personnel resources relevant to CIAT's Training and Communication Program, and to screen, through the Program Study Team's members' own experiences and associations in the United States and abroad, ideas and approaches to problem areas and the development of alternative solutions to the problems that were identified

Thus, because of the wide range of opportunities for information sampling and personal contact with leadership, the Program Study Team was able to achieve some measure of success in relation to each of the tentative objectives set forth for its investigation

While the emphasis in this report will be on the first of these objectives, "To help CIAI establish criteria for making decisions relating to the content, operations, and methods, administration, budget, facilities, and evaluation of the CIAI Training and Communication Program," the Team hopes that its efforts with relation to the other objectives will contribute both tangibly and intangibly to the long range success of CIAI's efforts, and the Team stands ready to serve as a continuing resource to assist in the identification of information, material, and personnel relevant and useful to the Training and Communication Program of CIAI, as well as to provide a screen for evaluating related experiences in the United States and abroad as they apply to CIAI's activities

Itinerary

The itinerary of the Program Study Team is listed below

- Tues Jan. 7 Arrive Mexico City, meeting on procedures; meet with Director, International Center for Improvement of Corn and Wheat (CIMMYT)
- Wed Jan 8 Meet with Director and Department heads, National School of Agriculture, Chapingo, on present and projected academic and training programs. Tour facilities Evening informal reception, officials of CIMMYI and National School of Agriculture
- Thurs Jan. 9 Morning meet with staff of CIMMYT briefing on Puebla project Depart 13 30, arrive Tegucigalpa, Honduras, 16 55, continue by car to Escuela Agricola Panamericana, Department of Morazán, Zamorana, Honduras Evening meet with Director, Dean, and Farm Manager, EAP
- Fri Jan 10 Morning Inspect Escuela Agricola, briefing by Department heads Afternoon group discussion with EAP staff Return to Tegucigalpa for 17 30 departure, arriving San Jose, Costa Rica, 19 20 Overnight in San Jose
- Sat Jan 11 Meet with Director General IIAS, Dean of Turrialba Graduate School of Agriculture, Director of Planning, and other members of IIAS staff Depart 14 20, arriving Panama 16 20

- Sun Jan 12 (Originally scheduled to depart 19 30, arriving Bogota 20 42, but Braniff flight cancelled)
 Mon Jan 13 (Day spent reviewing and evaluating contacts already made, drawing up summary sheet for report Departed 20 30, arriving Bogota 21 30)
 Tues Jan 14 Confer with officers of Institute for Colombian Agriculture (ICA), National University, etc , about present and projected academic and training programs in agricultural communication and extension, as well as graduate and in-service training in agricultural subjects Evening Informal reception, officials of ICA, National University, and CIAT
 Wed Jan 15 Morning Meet with CIAT Director and senior staff Afternoon meet with CIAT architects Depart 18 30, arriving Cali 19 10
 Thur Jan 16 Morning Visit Faculty of Agronomy, and ICA station near Palmira, about current and projected programs, tour future CIAT site Afternoon Visit Universidad del Valle Evening Informal reception, officials of CIAT
 Fri Jan 17 Morning Confer in CIAT offices with senior staff of CIAT Afternoon initiate work on analysis and evaluation of visitations
 Sat Jan 18 Develop comprehensive outline for draft of Program Study Team Report
 Sun Jan 19 Depart 08 00 for Bogota and onward connections for return to home universities, prepare draft of Study Team Report during next two weeks

Three things deserve special comment 1) the wide range of people, places, and institutions visited, 2) the efficient compactness of the schedule resulting from exemplary planning on the part of CIAT's Training and Communication staff, and 3) the obvious relevance of the itinerary to the achievement of the announced Program Study Team objectives

With regard to the first point, the study team was enabled to visit with the decision makers in such key tropical agricultural organizations as the International Center for Improvement of Corn and Wheat (CIMMYT),

Jointly financed by the Ford and Eccleffeller Foundations the Instituto Interamericano de Ciencias Agricolas (IICA) of the Organization of American States, the Institute for Colombian Agriculture (ICA), an arm of the government of Colombia. The Program Study Team met with Directors and Deans of such educational institutions as the National School of Agriculture at Chapingo, Mexico, the IIAS Graduate School of Agriculture at Turrialba, Costa Rica, the National University at Bogotá, Colombia, and the Universidad del Valle in Cali, Colombia, all concerned essentially with graduate study, although relating to undergraduate work as well. The Study Team was also able to spend a most instructive day at the Escuela Agrícola Panamericana in Zamorana, Honduras, a privately funded three-year practical agricultural school for high school graduates, whose excellence in staff and operation provided both specific insights and inspiration for the Program Study Team insofar as its deliberations related to training at less than the graduate level. In addition, the Program Study Team visited the site of the projected CIAT installation near Palmira, Colombia, gaining first hand experience at the grass roots level, as it were, visiting bunk houses, kitchens and fields of an operating farm on the premises.

These visits, in addition to the intense conversations with staff members of CIAT itself, were compressed into the short space of little over a week and a half, during which the study team found itself rising early, conferring throughout the day and into the evening with the resource people provided by the carefully arranged itinerary, and continuing its conversations even further into the night, as members of the team tested reactions and ideas on each other. Even during an extra day provided by Braniff Airlines' inability to provide a flight out of Panama on Sunday,

January 12, the team utilized the time in intensive joint analysis of the visits it had experienced up to that time and thus was able to get a summing-up perspective of the Central American experience prior to the visit with CIAT and its immediate neighbors in Colombia during the next few days

The relevance and usefulness of both the visitations and the analysis is illustrated by the summary and charts that follow

Summary of Visitations

Perhaps the Program Study Team's visits can best be summarized by grouping them in three categories, A) background information visits with national, regional, and international educational and research and training organizations, B) courtesy calls to CIAT's immediate institutional neighbors in the Cali-Palmira area, and C) direct briefings by senior members of the CIAT staff

A. Background Information Visits

With regard to the first category, the Program Study Team's analysis is indicated on the chart below, the product of intense and extensive discussion (See following chart)

In addition to the institution-by-institution analysis of its visitations, the Program Study Team was able to make the following general observations which it feels are of the greatest significance to CIAT

- 1 In every country and in every institution the team was confronted by strong, aggressive, innovative, committed individuals, both in the leadership and in the practitioners' echelons. The broad range and high quality of these personnel should provide a solid resource and support base upon which to build, and the

University of Oklahoma, (USA)
Hacienda, Colima, Mexico

CIMMYT
(International)

<u>Objectives</u>	To provide a conference center for University of Oklahoma students, specially adults, in Mexico	To accelerate increased production of corn and/or wheat
<u>Principal Audiences</u>	Oklahomans, young and old, who want to learn something about Mexico	Young scientists
<u>Content</u>	Mexican culture, archeology, geography, flora, fauna, geology, Spanish, and other related areas of study	Corn and wheat research and production technology
<u>Methods</u>	Residential short courses	Internships, cooperation, graduate program, post-graduate programs, selected field projects
<u>Problems</u>	Short of money for more bedrooms, equipment, furniture, and the like. Difficult to get equipment in from the US, including a "Center" automobile	Legal, an International language English, Spanish, Support of national leadership
<u>Plans</u>	Full academic year for selected students. More bedrooms. Begin fairly large scale experiments with variety of tropical vegetation and crops	Separate crops, e.g. in continuing training - share problems with other centers
<u>Suggestions to CIAT</u>	Stimulate conversion of abandoned hacienda- all through tropics into centers for study of tropical agriculture by actually doing it, beginning with hacienda at Palmira	Problems of national leadership - share with CIAT. Pooling and sharing data. Exchange of staff

Graduate School,
CHAPINGO, Mexico
(National)

ESCUELA AGRICOLA
PANAMERICANA
Zamarana, Honduras
(Regional)

IICA, San Jose, Costa
Rica (Continental)

To provide advanced
studies and research

To produce practical
agriculturists

Promote Graduate
studies, research,
agricultural reform,
develop national
institutions

B S Engineer
agronomist - Spanish
speaking.

Bachillerato, 18 to
21 years old

Graduate faculty,
experimental farms,
agricultural reformation
organizations

Agriculture and re-
lated sciences

Agronomy, horticulture
and livestock

Advanced study in
agricultural sciences

M. S

Three years residential,
learn by doing

Residential at Turrialba

Neglected crops and
marketing, lack of
Spanish literature,
money, PhD, extension,
student control,
uneven preparation of
bachillerato

Recognition of degrees,
expansion to fourth year,
screening and selection,
staff turnover, finding
qualified staff

Country support and out-
side support, Ministry vs
Educational Institute re-
lationship, library a
firetrap, need multi-
echelon training approach
uneven preparation of
bachilleratos

Direct budget rela-
tion, cooperation
with undergraduate
program, cooperation
with CIMMYT on the
Puebla program

Develop the fourth year,
appointment of fund
raiser, Ford Foundation
review report

PhD Program

Send students Send
reports to them
Facilitate the flow
from farm to market

Help promote their
degree Cooperate on
research, CIAT promote
marketing Provide
economics professor
Send scholars to the
herbarium Translate
texts.

Be a conference center
Short courses Combinati
degree Send scholarship
people to IICA Have
graduate students go for
study and faculty to
Turrialba for research
and study

ICA, Bogota, Colombia
(National)

National University, Bogota,
Colombia, (National)

Objectives

Develop agricultural knowledge through research and get it from laboratories to the field through education, extension, development and regional operation

Meet educational needs of community, develop effective intramural and extramural communication

Principal Audiences

Colombian small farmers, large farmers, businessmen, graduate students, scientists, politicians, other agricultural organizations

Undergrad and grad students, community

Content

Agronomy, animal sciences, economics, social sciences, engineering

Agriculture and related sciences (including social sciences)

Methods

Research and teaching at Bogota and 8 regional center, national regulation of fertilizers, movement of stock, etc , planning

Residential at Bogota and other "faculties" such as Palmira

Problems

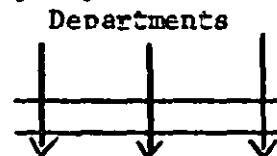
To transform little farmer to effective producer, need surplus from foreign exchange for \$ for development, teaching bridge between highly trained technicians and people, too few qualified teachers, need receptive political situation, national and local, increasing population

How can academic programs, finance, and faculties be moved to the community through present establishment?.

Plans

Develop 8 "little ICA's", regionally, external cooperation through inter-related boards, increase scope through "new ICA" as main agricultural administration.

One department for each field, career curriculums served by departments



Careers

Suggestions to CIAT

Use ICA facilities, staff, research findings. Be concerned that training and communication programs reach small farmer, supplier, and businessman. Remember ICA is national, CIAT international

Use National University, facilities and staff. Work with Palmira faculty. If career courses work, promote in other institutions

Program Team felt that CIAT, through its support to these individuals and their institutions, could anticipate a widespread multiplication effect to its program and policies

2 Everywhere there was enthusiastic general agreement on importance and feasibility of inter-institutional cooperation. Clearly, this willingness to cooperate provides CIAT with a glowing opportunity to serve as a catalyst and a compass, stimulating cooperation and giving it direction

3 Universally, spokesmen for the institutions visited expressed deep concern over the numbers and quality of agriculturally trained people at every level. For CIAT, this suggests that training and communication should be a direct as well as a supplemental or coordinative activity, with the great needs for increases in number and quality of agriculturally trained people at every level, concerns about duplications in training activity are much less crucial than concerns about providing such training wherever and whenever feasible

4 Corollary to the concerns about increasing the number of agriculturally trained people was the oft-repeated statement, "Training is one thing, but effective utilization of the man after he is trained is quite another thing." The question inherent in this statement is, therefore, "Training for what?" At one end of the spectrum, the training in graduate schools of agriculture both in Latin America and the United States appears to be seducing students away from agriculture and into specialized laboratories and institutions where both teaching and research deals

with relatively esoteric subjects unlikely to be translated into improved practices at the peasant level at the other end, young men are being sent back to the farming communities as government or extension agents, ill-equipped to deal with any of the realities which will confront them--ill-equipped both because the knowledge which they have acquired is not applicable to local situations and because the attitudes which they have acquired cause them to be above "showing by doing"--because of training and tradition, they are unwilling and also unable to till the soil themselves

4a) The key to the first part of the problem is, of course, that the training of research specialists to develop more research specialists and to do research will need to be continued, not curtailed, however, CIAT's role might well be to stimulate the broadening of both undergraduate and graduate training through the provision of scholarships, the subsidizing of faculty, and the selection of appropriately oriented students so that present and future non-field academics would be supplemented and supported--not replaced by--a new breed of farm-oriented scholars and teachers

4b.) With regard to the problem of developing appropriate training for the government or extension agent to assume effectively his farm and community development role, two things must be noted

1 Everywhere the Program Study Team observed that libraries--many of them beautifully appointed and

abundantly stocked--contained a dearth of material in Spanish and a preponderance of material in English. This, in itself, would not be disastrous since intensive programs of studies in the English language would bring students up to a necessary competence for the reading (although it would seem that a similar amount of effort and money expended on translations might be a more appropriate solution since the trainee's time could then be concentrated on agricultural subjects rather than language learning), but in discussions with both teachers and practitioners, the Program Study Team learned that much of both the published material and the laboratory work was irrelevant to the situations in which the trainees would find themselves following their studies, training materials based on the North American experience only, laboratory specimens made out of plastic and containing items not indigenous to the Latin American area, and work in the classroom with books rather than in the field with plants and animals all would appear to be clearly destined to provide the student not with useful workable knowledge but rather with irrelevant erudition.

For CIAT, the development of relevant works in the native language would clearly be a worthwhile activity, also, the encouragement of training in the fields and barns rather than in the classroom (and in this

connection the Program Study Team felt the Escuela Agrícola Panamericana provided a prime example of what is possible) would be proper and profitable lines of training stimulation

- 2 The Program Study Team also found general agreement that the transplanted United States agricultural extension model didn't work in Latin America. Coupled with this, the traditional idea that the educated man should demonstrate his education by wearing a coat and tie at all times, and never getting his hands dirty, intensified the inappropriate responses of government and extension agents to the local needs. For CIAT, again, the implication is clear: a new model of extension manned by a new breed of extension agent needs to be developed, a model and breed neither dependent on the trappings of tradition nor the example of the United States, the new breed must be willing and able to show by doing, to be an example as well as a precept.

- 4c) The answer to the basic question, "Training for what?" is, therefore, "Training for doing." Training should be in terms of the possible and the real. CIAT's own training program should be developed in these terms and should be an example of excellence. The imponderables which CIAT should, with other institutions, seek to solve are those of the degree of training needed for each

operational result desired, the best organization to achieve both the training and the involvement of the trained individual following his training, and the kind of support, both financial and instrumental, needed for developing and sustaining the kind of training programs necessary

- 5 In addition to the items enumerated above relating to direct agriculture training, the Program Study Team saw "second generation" problems everywhere not just training nor production is needed, but also training to deal with antiquated marketing systems, inadequate credit structures, insufficient or nonexistent roads, ineffectual and inappropriate public education systems, constricting social systems, and debilitating dietary practices, to name only a few

The lesson for CIAT and its training and communication program is simply that production alone cannot be the focus of its activities. Rather, CIAT must be prepared to grapple with a broad range of human activities and concerns, in all its programs necessary prerequisites to success include the growing importance of working with (1) political entities, (2) agri-business, (3) administrators, from ministers of agriculture, through deans and directors of research and teaching institutions, (4) community development directors, (5) educators in fields other than agriculture, and (6) church and welfare people, in all of the lowland tropic countries which CIAT hopes to serve

B Courtesy Calls

The courtesy visits to CIAT's immediate neighbors produced additional evidence of excellence in personnel and eagerness to develop cooperative enterprises

At the National University Agronomy Faculty near Palmira, great interest was expressed in developing joint use of a library. At the University of the Valley in Cali, the Rector simply said "our house is yours," and other members of his staff foresaw great possibilities in joint use of facilities, exchanges of scholars, and cooperative community activities.

The visit to the future site of the CIAT central facility also was most rewarding, particularly with respect to the use of the present farm facilities and hacienda for practitioner training courses, this visit having particular relevance in view of the previous visit to the University of Oklahoma's hacienda near Colima, Mexico.

C Briefings by CIAT Senior Staff

All of the visitations summarized above were, in a sense, preliminary to the main event--discussions with Dr. Ulysses J. Grant, Director, and senior members of the CIAT staff in Bogota and Cali, Colombia. Without the previous visitations, however, the Program Study Team could hardly have appreciated the excellence, thoroughness, and appropriate innovativeness of the CIAT personnel, organization, and planning.

While the meetings were set up as briefing sessions for the Program Study Team, what actually happened was that the Team became privileged observers sitting in on a series of intensive CIAT staff conferences in which individual members of the staff identified their particular areas of concern and outlined in vivid detail the existing situation--its strengths and weaknesses--and their proposals to solve the problems presented and contribute to the development of better living conditions and a more viable social structure throughout the lowland tropics.

The topics ranged from soil analyses of the Llaros through the development of more productive and protein rich crops of corn, grain legumes, and animals, to marketing, education, social welfare, and political structures. The presentations were carefully structured, incisive, and informative. But, more importantly, each presentation was experimentally provocative, and all members of the CIAT staff present at the briefing sessions entered in to the questioning and analysis following each report.

It was this multiple give-and-take among the members of the CIAT staff that was most rewarding to the Program Study Team. Questions were raised and answers elicited in areas of substantive sophistication which the team would not have been able to touch. As a result, the insights received from the briefing sessions were much greater than would otherwise have been possible. But, most important, the Team was presented with a demonstration of an involved staff in action, a staff well calculated to grapple with the monumental tasks presented by its goal, a goal which emerged from the meetings as much more than the development of an agricultural production package. The goal clearly is no less than a total attack on the complex of problems that confront the lowland tropics of the world, problems that stem from inadequate agricultural production and land use but which reach into the very fabric of the societies which depend upon the food.

Following the information and inspiration gathering sessions provided by the visitations, the Program Study Team doffed coats and ties and went to work, in camera, to develop some suggestions for the training and communications arm of CIAT, suggestions which the Team hopes will contribute in some small ways to the achievement of the terribly important goals of CIAT.

REPORT AND RECOMMENDATIONS

1 Guiding Principles

In developing its recommendations for the training and communication program of CIAT, the Program Study Team first of all made two assumptions

A That the training and communication program would, in concept, content, organization, and execution, be compatible in every respect with CIAT's overall objectives

B. That the single over-riding aspect of CIAT that should infuse all of its training and communication programs would be its development as an international agency rather than simply an instrument of the country in which a particular phase of the program might be located

Based upon these two assumptions, and growing out of the visitations and discussions that preceded the development of this report, the Program Study Team suggests the following guiding principles for the training and communication program of CIAT. These principles might be divided into three groups: A) those having to do with the desirable capabilities which a program should have, B) those dealing with the desired outcomes resulting from the program, and C) the desired characteristics that the program should have.

A Capabilities

The Program Study Team suggests that any program developed by the training and communication section of CIAT should have the

following five capabilities

1 Innovation

The Training and Communication Program of CIAT should plow new ground, as it were, in content, methodology, scope, audience, and effect. It should seek to utilize that which is already known and tested but, in addition, should dare to test new combinations of the old and should seek to create new paths to the minds of men across the trackless plains of the Llanos and through the alternately wet and dry lowlands of the coastal plains.

2 Catalysis

The CIAT Training and Communication Program should be an agent of change. Its activities should not only do what they are designed to do -- transmit knowledge, skills and attitudes, they should also stimulate the learners to become different people than they were before the training so that the action of change will not remain only in themselves but will be transmitted through them to others. This catalytic action is, indeed, a most necessary ingredient if the CIAT Training and Communications Program is to have the kind of impact that will change ways of life in the lowland tropics around the world. It will be equally important to recognize the value and need to develop and train institutions as well as individuals. Effective utilization of trained people may depend upon the training organization, in this case CIAT, helping the employing organization plan how to use the returned trainee.

3 Multiplication

A multiplier factor must be built in to CIAT's Training and Communication Programs in order to insure that regional, national and local activities of a similar nature will perpetuate the process of change. CIAT can only point the way through example and demonstration, organizational structures specially adapted to local conditions must be developed by the catalytic agents trained initially in CIAT's innovative program. In addition, CIAT's program should stimulate not only replicas of itself built to different scales, but it should also stimulate the development of complementary programs and institutions, broadening the scope and impact of the change pattern.

4 Transferability

A most important capability that should be part of each Training and Communication activity is its applicability to other people and other places. An activity that would work only on site at the CIAT base in Colombia, would be an unlikely training and communication proposal, if the other capabilities, particularly of catalysis and multiplication, are going to operate, the activity should have built-in transferability, trainees should be able to take it with them when they leave the training site, they should be able to transfer their training to others when they arrive back home. Such a transferred Training and Communication Program should be able to thrive in local soil under local conditions wherever in the lowland tropics they may be implanted.

5 Flexibility

If change is the goal, changeability is a necessary ingredient for the product itself. Both in planning and execution of large and small projects, Training and Communication personnel need to be alert and responsive to opportunities to adjust their activities to achieve appropriateness, excellence, and effectiveness. All planning should be based on the assumption that new factors may be introduced into the Training and Communication situation at any moment and from any direction, and that therefore the planning process should be continuous and the design should be open in all directions.

B Outcomes

The CIAT Training and Communication Program, organized under the capability principles outlined above, should be designed to 1) mobilize, 2) qualify, and 3) energize the institutions, resources and personnel in the lowland tropics to achieve the overall goals of CIAT.

1. Mobilize

By utilizing all the communications and training skills available to it, CIAT must make people at all levels of production, marketing, government and education aware of the goals and the activities being developed to provide better ways of life in the lowland tropics. CIAT must, through its own activities, through those of its cooperators, and, most of all, through its trainees' actions back home, generate a will to participate and succeed in the farmer, in the townspeople, in

the financier, it must mobilize to action the people, the processors, and the political leaders

2 Qualify

The big task of the training program, particularly, is to develop mobilizers who are called to do an effective job. Probably the most promising and original idea in this respect is that of the "Agricultural Production Generalist," or "Farm Production Specialist," suggested by a member of CIAT's staff. This man would not be narrowly trained in soils, or animal science, or horticulture, or economics, he would be trained to know something about every phase of the "production package" as it related to a specific farm production problem (e g , beef). He would be able to show and do on the spot those things necessary to get the job started and bring it to fruition and sale in the market place.

In the development of this "generalist" and in the development of all other students, CIAT's goal must be to make the man qualified for the job he will be called on to do, not just qualified to have a certificate or some initials after his name.

3. Energize

To make people aware of a problem and to give them the information and tools to solve the problem are just first steps, the big one is to prod them to action, to energize them. This step will take follow-up on the part of CIAT. Communications through all media will need to be widespread and constant, the trainee will have to do his job on home

base on exemplary fashion, and CIAI must be unremitting in capitalizing on every success, both through publicizing the facts and rededicating those involved to renewed effort, and in insuring that temporary local or project setbacks are utilized as valuable guideposts on the road to ultimate achievement

C Characteristics

A third group of guiding principles identified by the Program Study Team involves the desirable characteristics which the Training and Communication Program should have. Four characteristics seem to be essential

1 Training problems should involve real experience

In the visitations made by the Program Study Team, it was noted that with the exception of the Escuela Agricola Panamericana at Zamarana, Honduras, agricultural education sometimes seemed to be removed from the fields and barns, and even the very real work at the experiment stations sometimes appeared to be performed under conditions that had little resemblance to those found on the minifundia or even on the sprawling, under-managed hectares of the large holders. CIAI's Training and Communication Program should emphasize innovation, using tools and customs already in existence, and should involve the trainee in direct contact with the soil and with the situations with which he will have to cope following his training

2 The CIAT Training and Communication Program should be problem oriented

As a change agent, CIAT, through its Training and

Communication Program, must grapple with the problems which beset the people it is trying to help to a better life. Throughout the scholarly world, pressures on individuals engaged in research and training tend to push in the direction of theory and abstract knowledge. Members of CIAT's staff must resist these pressures and must devote their talent and energies to problem solving in the most direct fashion possible.

Within the goals of CIAT's Training and Communication Program, the problems to be solved will provide a matrix of great complexity and sophistication. At every stage the training program must emphasize the possible. And in the way it solves its own problems of organization and presentation it will be an example to trainees and CIAT staff alike, it must be sure that the example is a good one.

- 3 CIAT's Training and Communication Program should stress cooperation with other international, regional, national and local centers.

The spirit of cooperation which was expressed by representatives of all of the institutions visited by the Program Study Team should be capitalized upon in developing CIAT's Training and Communication Program. Particularly CIAT should emphasize cooperation with the growing network of international research and training institutions of which it is a part: Centro Internacional de Mejoramiento de Maiz y Trigo (CIMMYT), the International Rice Research Institute (Philippines) and the International Institute for Tropical Agriculture (Nigeria), as well as the Instituto Interamericano de Ciencias Agrícolas (IICA), one of the pioneer efforts in this field.

4. The Training and Communication Program of CIAT should seek to make maximum use of available resources

Not only should the CIAT staff strive to make maximum use of its own facilities and personnel, but it also should strive to utilize all other available institutions and resources to their utmost capacity. The magnitude of the task embraced by CIAT cannot be accomplished through token activities; its own staff, facilities and activities must be ambitious and extensive, in addition, it must build and strengthen institutions at all levels and in all countries where it hopes to have impact, further, it must not be content simply to train individuals and groups and send them off to attack problems on their own in their own localities, CIAT must provide follow-up support, including materials, personnel, and finance, as well as advice, if the trained personnel are to function effectively and thereby maximize their value.

D Evaluation

The final principle the Program Study Team wishes to emphasize is that of evaluation. Neither the administration nor the teaching staff should be satisfied with anything they do. Method, content, facilities--all should be tested against performance objectives, and charges should be made in the light of the findings. Since the desired outcome of training relates not only to the competence of the trainee on-site but also to his effectiveness as a catalyzer and multiplier back home, the evaluative arms of the Training and Communication Program should reach out into the communities where change is expected as a result of the Training and Communication

activities Evaluation should be a comprehensive and continual task, and should embrace many techniques, subjective and objective, quantitative and qualitative, internal and external

The Program Study Team is confident that CIAT's Training and Communication staff is already operating with these guiding principles-- and others--in mind The principles have been set down essentially as a refresher, but also, since they are now in print, the team hopes that they will provide a periodic reminder as the Training and Communication Program is developed and as new activities are contemplated in the future

II Audiences

The Program Study Team sees the potential audiences for the CIAT Training and Communication Program as consisting of essentially three elements

- A) policy makers and practitioners within CIAT and its cooperating agencies,
- B) professionals and practitioners in the whole range of agriculture and agriculture-related activities--scientists, professors, extension personnel, agri-business people, farm owners, farm managers, farmers, C) policy makers outside of CIAT and Cooperating agencies

A Policy Makers Inside CIAT and Cooperating Agencies

With regard to the first group, it is clear that if CIAT's Training and Communication Program is to be staffed and supported effectively both within its own agency and in cooperating institutions, all policy makers and practitioners involved need to be part of the planning and presentation process In order to function competently in these roles, they need to be an active part of the Training and Communication cycle as students, observers, instructors, coordinators, evaluators, and advisors Their multi-directional involvement, comprising input, take-

out, and feedback, should provide a built-in vitalization of both the Training and Communication Program and the broader administrative and substantive activities of the organizations and institutions represented

B Professionals and Practitioners

However, the core audiences for the Training and Communication Program of CIAT are comprised of the second group, those professionals and practitioners actually engaged in agriculture and agriculturally-related activities in the lowland tropics. These are the people through whom new knowledge and new practices will be moved from the laboratory to the farm, these are the people whose changed behavior will result in increased agricultural production. These are the people who will have to respond to increased production through increased utilization made possible by better transportation, more effective and realistic marketing procedures, new processing and manufacturing techniques, and changes in dietary, social and cultural values, these are the people who will contribute to a rise in the economy, which will provide for increased credit to utilize increased supplies to return to increased production through new knowledge and improved practices.

The important thing to remember about these audiences is that they must comprise the whole range of agriculture and agricultural-related professionals and practitioners, from the research scientist to the consumer

C Policy Makers Outside CIAT

Finally, there is the group of policy makers whose support is necessary to make possible the development and adoption of the program conceived of by the first group and participated in by the second

1 National Leadership

This group includes national leadership in governments throughout the lowland tropics, for without political understanding and financial involvement, increased and improved farm production by individuals will be restricted to such people as large landowners and occasional small farmers subsidized experimentally by private funds, in addition, without political support, both financial and philosophical, the other necessary changes in the economy and the social structure cannot be implemented, and increased production could result only in local surpluses and continued widespread privation

2 Public Media

In addition, policy makers in the public media must understand and support CIAT's wide ranging program, since only through constant and comprehensive public announcement and review can all of the people be apprised of the opportunities available and encouraged to participate in the revitalization of their own lives

3. Agricultural Investors

Agricultural investors--those individuals, organizations, and institutions both within and without the tropical lowlands whose money provides both the credit base and the direct contribution that makes the agricultural enterprise function, from seed to crop to processing, and providing the tools for farming and for manufacture--these constitute an audience vital to CIAT's mission, they must be involved in the Training and Communication Program and must be convinced of the value of the operation if it is to succeed

4 Support Groups

And last, but clearly not least, there are those support groups, present and potential, such as philanthropic foundations, businesses, and governments, perhaps far from the scene of action in the lowland tropics, which constitute a special audience essential to the long range survival of CIAT and its activities

III Content

Four categories of content appear to the Program Study Team to be essential elements for the Training and Communication Program of CIAT. These are A) Technologies, B) Ecologies, C) Humanities, and D) the Learning Process, itself

A Technologies

The first category, technologies, obviously will be the bread and butter subjects, as it were, of the Center operation. Here the Team refers to the straightforward what-to-do and how-to-do-it of specific activities within the total range of subject areas, for example how to plant and bring to harvest a new variety of soy beans, how to develop from insemination to marketing age and size a new cross breed of cattle, how to evaluate the credit risk involved and provide the financing for the opening up of new lands in the llanos, how to develop a communication program for the adoption of a new variety of corn as a dietary practice in an area where corn has previously not been a staple. Not only these large technological problems, which would involve a considerable period of involvement by the students

or trainees, but also smaller segments of techniques within the fields of horticulture, animal science, economics, communications, etc , are envisioned by the team as fitting into this content category

B Ecologies

In a larger focus, the Program Study Team saw the study of both natural and social ecologies as being essential elements of CIAT's Training and Communication Program. In this category, the what-to-do and how-to-do-it would involve operational procedures more amorphous yet just as vital as the specific technologies in the first category of content. Here would be the analysis of effects resulting from the application of the technologies and the development of measures to minimize the adverse affects and maximize the results of beneficial effects. In the area of natural ecology for example, would be the response to the use of a sprayed insecticide, in relation not only to crop production but also to birds, animals, and human beings, as well as forest products and non-cultivated vegetable matter. In the category of social ecology might be the effect on the community of increased buying power resulting from increased production following the application of the insecticide, the social ecology would also be affected by the increased buying power resulting from the sale of the insecticide to the farmers and payments to the insecticide applicators, etc

C. Humanities

Closely related to the ecological subjects would be the content areas embraced by the humanities as defined by the Program Study Team. Among the matters of concern in this category

would be motivation, attitude change, the development of a concern among unconcerned people for themselves and for others, and the formulation of a philosophical framework to embrace the broad metamorphosis which would be triggered by the effective application of CIAT's technologies

1 Motivation

Clearly, in areas where for centuries human expectations have been limited and vision truncated, the adaptation of even such a simple practice as using a new kind of seed or planting seed closer together than in the past will involve an understanding of human motivation and a wisdom in its application which can come only through study and training

2 Attitudes

If attitudes regarding diet and social practices are to be changed, the basis for present and past attitudes must be appreciated and considered, and the route to the new must connect with the old or no one will be able to cross over

3. Concern

The development of a concern for one's self and for others requires an awareness of and an investment in a set of values that can exist only if an appropriate philosophical foundation is laid which can sustain the validity of new motivations, new attitudes, and new awarenesses

Because of the necessary essential technological and scientific orientation of *most of the teaching staff and most of the trainees* who will be involved in the Training and Communication Program of CIAT, the Program Study Team wishes to emphasize its concern that the humanities content areas be stressed at all levels and stages

of training, since in both the short and long run the success of CIAT's program and, perhaps, the future of the lowland tropics and the world, depend on the acceptance of change by the peasant farmer, the cowboy, the major domo, the storekeeper in the small village, the president of a large corporation somewhere in Europe or the United States

D Learning Process

The fourth content category suggested by the Team for the Training and Communication Program of CIAT is the learning process itself. CIAT cannot, on its own, train all of the farmers, the artisans, the businessmen who must put its programs into operation. Essentially all that CIAT can do is train teachers who, formally or informally, will pass the information, the skills, the attitudes along. One major activity of CIAT, therefore, must be to train these future trainers how to train, these teachers how to teach. Hopefully, the teaching staff of CIAT's Training and Communication Program will convey the techniques of teaching both by action and by precept. But the adoption of techniques will not be enough. An awareness of what is known about the learning process and how the skilled teacher adapts this knowledge to his teaching will constitute a major content contribution of the program.

IV Objectives

Up to this point in its report and recommendations, the Program Study Team has been dealing with rather large and inclusive concepts into which the specifics of the Training and Communication Program

a

of CIAT must fit. From this point on, the Team will increasingly come to grips with the specifics of the Training and Communication Program, personnel and facilities, primarily at the CIAT Center between Cali and Palmira, Colombia. In a sense, the transition from the general to the specific is illustrated by the objectives for the Training and Communication Program which the Program Study Team recommends:

A Comprehensive Overall Content and Coverage

First of all, there is the general objective that the Training and Communication Program provide courses and information in all CIAT content categories for all appropriate audiences throughout the lowland tropics.

B Comprehensive Program at Palmira Center

Focusing in on the CIAT Conference Center between Cali and Palmira, Colombia, the Program Study Team recommends that the courses at the Center likewise embrace all CIAT content categories and be offered for all CIAT audiences.

C Maximum Use of Palmira Center, One Year After Construction

Finally, and specifically, the Program Study Team recommends that the Training and Communication Program be designed so that it will be making maximum use of the CIAT Center between Cali and Palmira within one year after the facility is completed. This last objective, is, of course, the one which the Program Study Team anticipates will most involve the Training and Communication staff during the next two or three years.

While preliminary plans and pilot projects designed to assist in the achievement of the first objective should be developed concurrently with the work at the main CIAT Center, the Team suggests that the out-

reach effort can most effectively be built on successes under the more controlled situation to be found at the main Center. All planning for the use of the main Center should also be concerned with achieving the second objective, that of on-site all-inclusiveness, however, the Team feels that if the program and training staff constantly bear in mind the necessity of achieving all-inclusiveness as it works toward the immediate task of making maximum use of the facilities, such maximum use will, itself, contribute to a broad ranging program involving many audiences.

The goal of maximizing the use of the facilities at Palmira should not, however, obscure the vital necessity to carry out training where the problems exist. Consequently, the Program Study Team noted that the CIAT staff was making plans for on-site training activities in lowlands areas characterized by specific crop and animal problems. One such area is the north coastal plains of Colombia where CIAT will cooperate with ICA in major research and training efforts at the ICA station near Turipaná.

V Organization

Since Dr. Francis Byrnes, Director of CIAT's Training and Communication Program, has already developed a detailed statement of his anticipated personnel and organizational needs, which the Program Study Group finds most satisfactory (except for the items discussed under Budget in this report), it recommends that Dr. Byrnes' proposals be adopted by CIAT. (The proposed Training and Communication Program is outlined in detail in the document, "Proposed Program, Staff, Budget Centro Internacional de Agricultura Tropical," May, 1968, pages 56-64.)

The Team, however, would like to emphasize that in order to carry out its objectives, the Training and Communication phase of CIAT should contain, in itself, all organizational echelons needed to do its job

1. There should be an advisory board made up of knowledgeable and influential people both inside and outside CIAT and the countries it serves

2. There should be a single director responsible for the total Training and Communication Program

3. The director should have reporting to him

- a. Program developers, who would be scientists and professional people in the various program categories

- b. Material developers responsible for the preparation of both Training and Communication material

- c. A facility director responsible to the Training and Communication Director for the effective operation of the facility as a program supporting arm

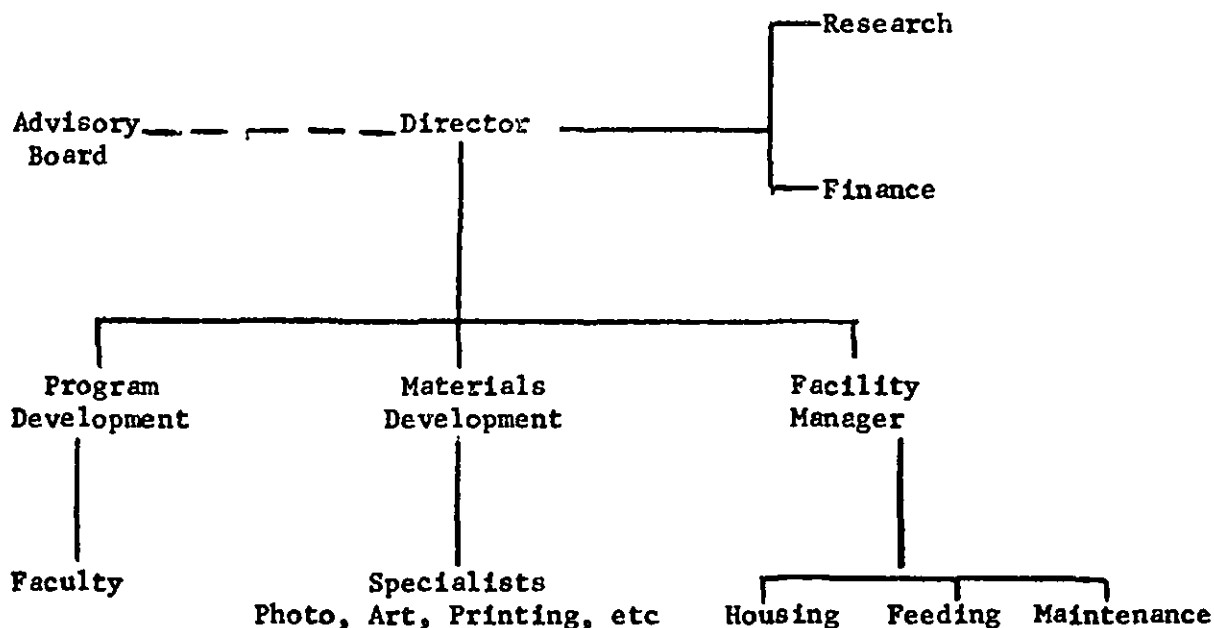
- d. A budget and finance office

- e. A research office

4. Reporting to the program developers would be the faculty, both full time and part time. Reporting to the facility director would be the facility staff, including everything from food preparation people to janitors, laborers, and maintenance personnel responsible only for the Training and Communication operation and clearly assigned to the facility director

5. Appropriate supporting staff, such as secretaries, clerks, accountants, etc., need to be provided in each of the organizational staff areas

A simple organizational chart, therefore, might look like this



The Program Team recommends, as with all other aspects of its report, that an important guiding principle must be flexibility, on the other hand, the concept of a single director with a staff capable of doing the total job is essential to the effective development of the Training and Communication Program

VI Methods

The Program Study Team is impressed by the professional competence of the Training and Communication Director and the staff he is gathering. Therefore, it sees no profit in detailing teaching methods which might be used by the instructional staff, nor in dwelling on a listing of available communications media and methods. The Team presumes that the training staff would use a variety of conventional teaching methods as

appropriate It presumes also that the teaching staff will be encouraged by the Training Director to experiment with new methods and combinations of old methods

The Team does urge, however, that the guiding principle of real experience and problem orientation be particularly emphasized in the training methodology used at the CIAT Center and in its outreach phase, in this respect, the setting up of small plots of land and the assigning of production goals to individual trainees, to be worked by them through their own initiative, is one technique that might be used, the constant precept of "learning by doing" in the fields and in the barns is paramount

Where learning by doing needs to be supplemented by other methods, the Program Study Team recommends that the training staff seek to have programmed materials developed for self-experience, and that the great potential of television both for magnification of experiments in laboratory and classroom situations and for the projection of material to outlying areas and distant locations be explored

Still another specific need which the Program Study Team hopes the Training and Communication staff will meet is that of the development of relevant synoptic material--in lay language wherever possible and appropriate--in the various national tongues so that it can be put to maximum use

VII Facilities

In a very real sense the most important concern of the Training and Communication staff at this point in its development must be the planning for the residential continuing education facility to be located on the

CIAT property between Cali and Palmira The importance of this project to CIAT's program cannot be overstated

In a later section of this report, under "Priorities", the Team has made some very specific suggestions about personnel, activities, and equipment which it feels are vital links in the planning process At this point, however, the Team's intent is to set down the larger considerations with which it feels the planners must be constantly concerned if crucial eventualities are to be anticipated and viable solutions developed

A Visible Symbol

First of all, the facility (consisting of laboratories, administrative buildings, green houses, conference center, library, etc) will be the only clearly visible evidence of CIAT's existence It will also be a symbol of what CIAT stands for Because it is both the tangible and symbolic representation of a project based on high aspirations and dependent upon excellence in all of its aspects, the total facility must, in its appearance, in its construction, and in its use, unmistakably demonstrate achievement of these qualities Moreover, despite the fact that flexibility is essential if maximum use is the mode of the facility, once construction starts, this symbol and this tool will be cast in concrete, it will be either a monument to achieved aspirations or a marker for lost opportunities, more than that, either it will be an operationally viable instrument or it will be a permanently constricting coffin

In all of the Program Study Team's conversations with the CIAT staff and with the architects retained to develop the design for the total facility, the Team has been impressed with the excellence of the initial planning and the potential for creative solutions provided by

the personnel involved. However, the Team wishes to emphasize the necessity for unremitting effort, relentless watchfulness, and meticulous attention to detail that is essential to the success of the design and execution of this facility.

B Operationally Complex Aspects of Training-Conference Facility

First of all, the Team is abundantly aware of the operational complexity of this particular residential continuing education facility, stemming from the wide range of people to be served as well as from the wide range of activities to be undertaken.

- * Since this is an international center, people from vastly varied cultural backgrounds and socio-economic situations need to be provided for.

- * The juxtaposition of policy-making VIP's and peasant farmers may well be the rule rather than the exception in this Center.

- * There will be trainees coming for long term courses involving residence for six months to a year, and there will be seminar participants or casual visitors coming in for a day or even less.

- * There will be small group teaching, perhaps individual tutorials, and there will be large lectures or demonstrations involving several hundred students.

- * There will be practical, on the farm, work courses, and there will be formal classroom sessions, there will be informal seminars, detailed laboratory studies, and complex demonstrations.

- * There may be the need to move livestock or equipment, ranging from heavy machinery to delicate scientific instruments,

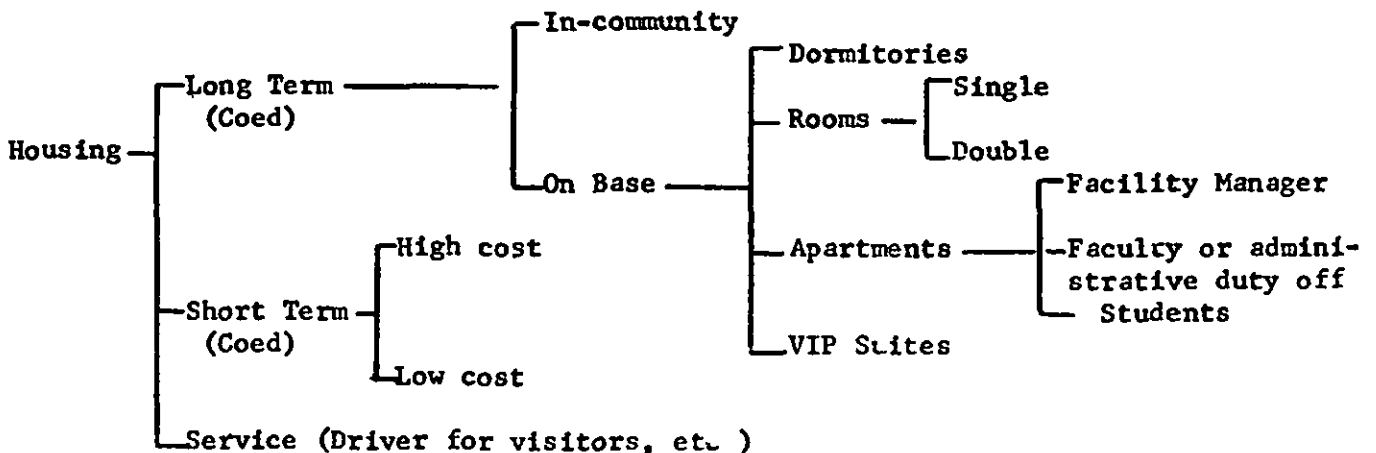
into the instructional area, and there may be the necessity to move groups of people from one site to another as part of the learning activity

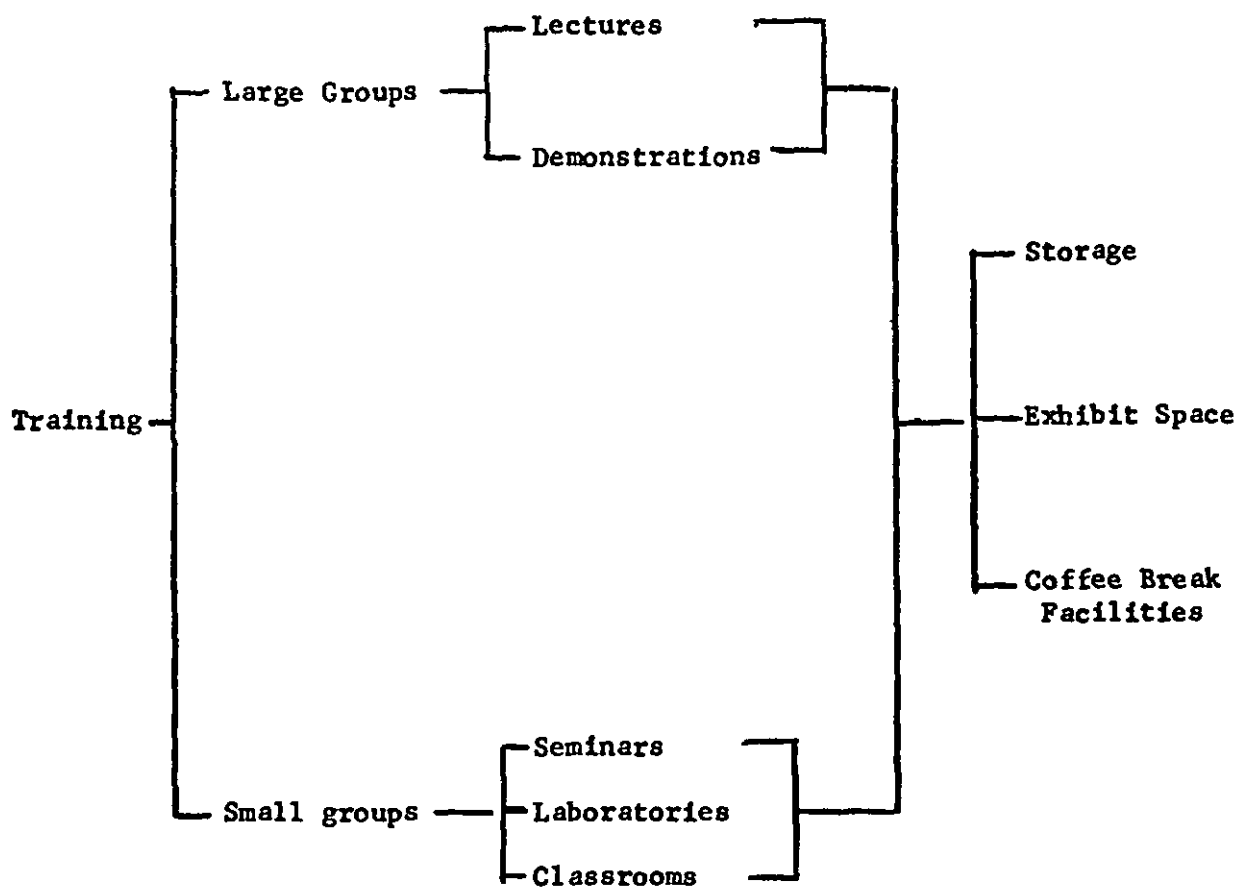
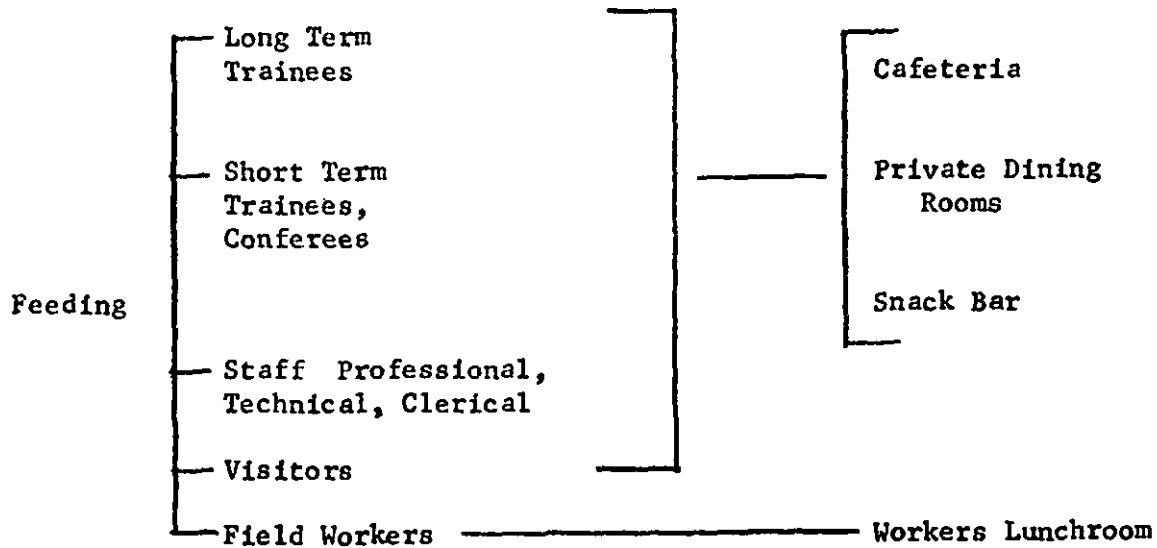
* Some staff members may need to live permanently on site, other staff members may need to be accommodated occasionally on site for a few days at a time Staff and students undoubtedly will comprise both men and women, perhaps even an occasional family with children Provision will need to be made for non-participant personnel such as the drivers for distinguished visitors

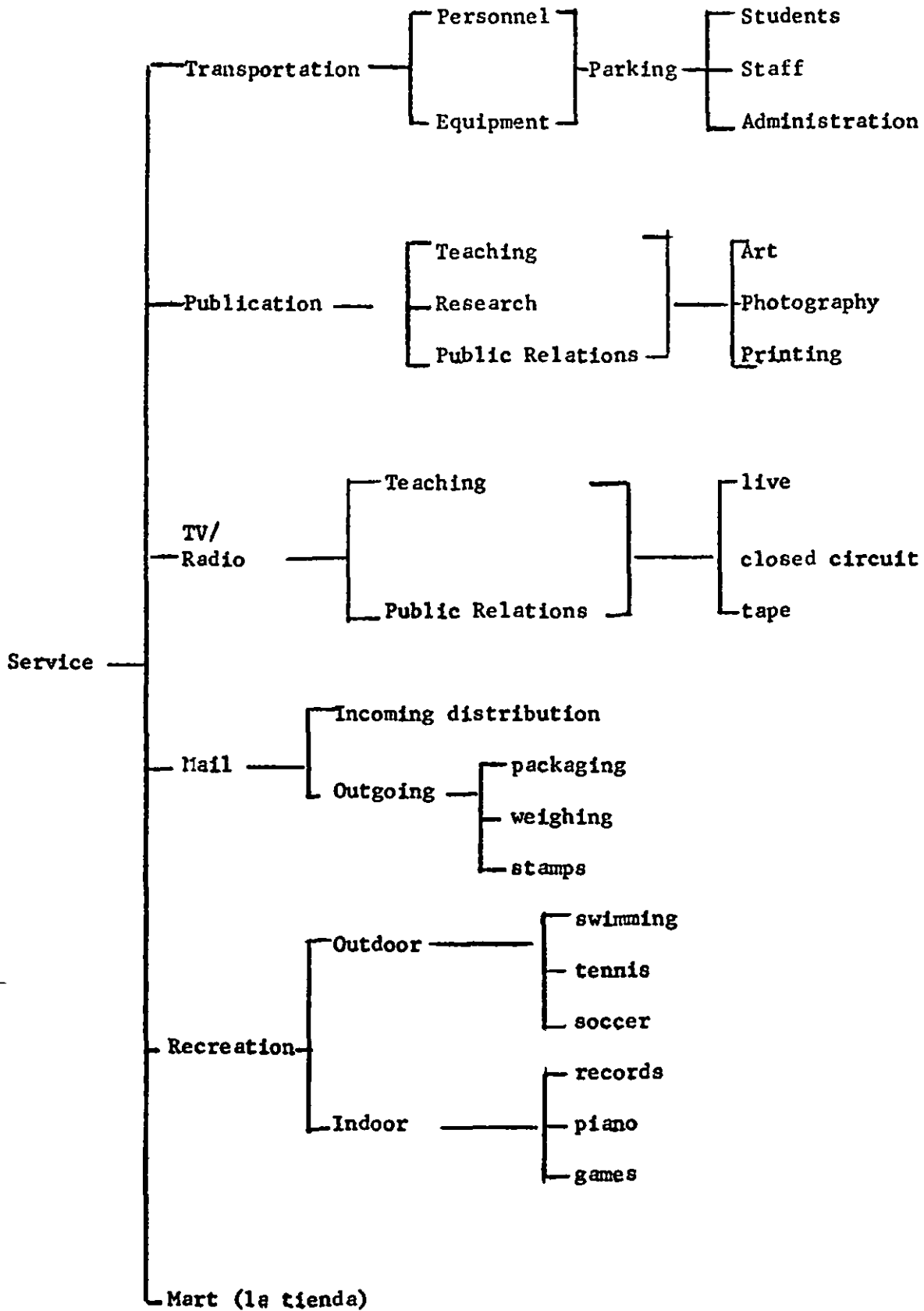
* There will be special dietary considerations for people from particular cultures, and there will be need to provide for separate food availability for field hands, professional staff, and the several categories of trainees, with feeding facilities ranging from a snack bar to formal dining, and with some consideration being given to the availability of alcoholic beverages when and where appropriate

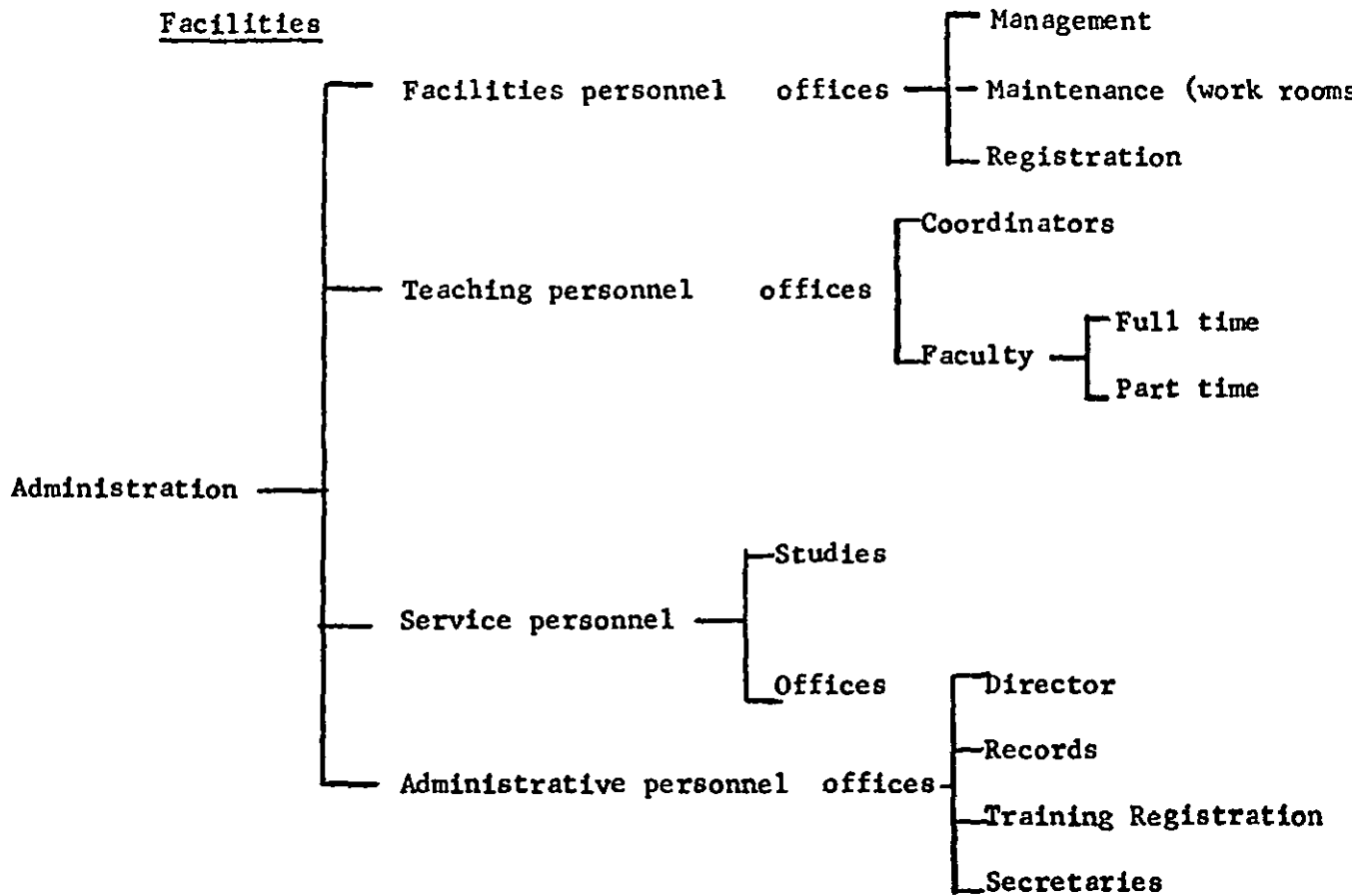
C Five Main Elements

In an attempt to visualize the various elements that must be kept in mind in planning the residential continuing education facility the Program Study Team developed the charts below









D Space Analysis Essential

The need for careful space analysis, depending on the anticipated numbers of staff and trainee personnel, is implicit in the charts above. These points need to be stressed:

- 1 Adequate office space, storage space and operational space is requisite for each area of activity
- 2 Each activity needs specially structured space, and it needs to be sited in proximity to related activities
- 3 For both staff and trainees, the walking distance between probable stations of activity needs to be minimized (and walkways should all be covered)

4 Parking areas need to be adequate and in close proximity to housing for those who are remaining on-site overnight, and close to presentation areas for those whose visit will be of shorter duration

5 Some areas will need to be air conditioned, some not

6 Multipurpose use of areas should be planned wherever possible, and flexibility in size gained by the use of folding walls is highly advisable

7 Adequate and specialized equipment must be planned and secured for each activity

E Design Concept Vital

Despite the variety of activities contemplated, unity as well as conceptual innovation in the overall design is vitally important. CIAT's staff should insist on and not accept anything less than a visual concept which will tell the visitor immediately and emphatically "Here is an international agricultural training and communication center of global importance, dedicated to innovation and excellence, and focusing on improved standards of living throughout the lowland tropics"

In this connection, there is one final item which the Program Study Team understands cannot be financed with present resources, yet it would seem to merit the extra effort of special solicitation: the provision of a railroad overpass-viewpoint at the main entrance to the CIAT Center

As the railroad must be crossed by visitors approaching the Center, a particularly effective first impression could be attained

if the roadway were to rise above the tracks, with turn-out space provided, so that from this vantage point visitors could look out across the table land of experimental areas stretching in each direction and could view, from above, the showplace plots of agricultural production laid out between the viewpoint and the imposing entrance to the Center, itself. In no other way can full appreciation of the site be gained by the visitor than through such a sweeping panoramic view

VIII Budget

Since the initial Training and Communication budget has already been fixed, and since future budgets will depend on future developments, the Program Study Team simply wishes to endorse the planning which has already been done. However, the Team does recommend that additional funds be sought immediately for three items which it does not believe can be supported with the resources presently available but which the Team believes are items essential to the success of the Training and Communication Program: A) facility management personnel prior to construction of the Center, B) railroad overpass viewpoint, C) trainee support.

A Facilities Manager

The Program Study Team believes that it is absolutely essential to the success of the operation that a facilities manager--to have charge of both housing and feeding--be employed early to supervise the design, construction, equipping, and staffing of the facilities which he will manage. This individual should be a person experienced in hotel management in Latin America and should also be dedicated

to the concept that since training and research are the essential functions of the Center, the housing and feeding facilities will be there to support these activities rather than vice versa. In addition, the facilities manager should be able to employ an assistant manager, a chef, a head housekeeper, a head houseman, registration clerks and accountants as he needs them prior to the completion of the facility.

Since the program budget for training and communication in CIAT may not provide for this staff prior to and during the first three to five years of operation, the Program Study Team recommends that CIAT seek additional support from the Kellogg Foundation for these positions during that period of time.

B. Railroad Overpass-Viewpoint

The case for the railroad overpass-viewpoint has been made in the previous section. The Team merely wishes to emphasize here that, despite its cost, such a structure would provide a specialness to the Center that could not be obtained any other way.

C. Trainee Support

One final item the present budget does not provide for extensive support of trainees, on the apparent assumption that parent organizations would provide such support. The Program Study Team is not sanguine that such support will be forthcoming in sufficient amounts that the trainees whom CIAT would particularly like to have involved in the initial stages of its program will be able to participate. Therefore, an active effort must be made immediately by CIAT to obtain from other sources such support funds as are needed.

IX Priorities

In light of the deep involvement and commitment of the scientists and program specialists on the CIAT staff in the planning of the Training and Communication Program, the Program Study Team felt that it would be presumptuous on its part to attempt to indicate content priorities in any detail. The Team is confident that the program will proceed in line with the overall crop and animal priorities established by CIAT.

However, the Program Study Team has set down some non-content program and facility planning priorities related to a specific time schedule and in an order which indicates the Team's estimate of their probable implementation.

PROGRAM*

On-going

- 1 Provide internships with scientists on specific technologies
- 2 Provide graduate scholarships to other institutions.
3. Establish and continue communication with present/potential support organizations and cooperating institutions
- 4 Order additional training and communication equipment before construction

Immediate Future

- 5 Set up short courses and production clinics (specific, e g , corn planter calibration) in cooperation with national agencies
- 6 Provide for staff visitations to other countries
- 7 Develop orientations conferences (local) on CIAT (e g , Public Media)
- 8 Compile comprehensive and selective mailing lists
- 9 Employ training and communication technicians by July 1 (Editor, printer, photographer, etc)

July - December, 1969

- 10 Hold scientific conferences and symposia (e g Opaque -2)
- 11 Issue CIAT newsletter on regular schedule
- 12 Institute practical training program for livestock production generalists (e g , Hacienda, or cooperative ranch site)
- 13 Employ program developer for training in plant sciences

o

Early 1970

14 Employ Social Scientist research person and program developer

*The crop and animal priorities will be those established by CIAT

Facilities

- 1 Employ Center Manager and arrange for architect consultation
- 2 Arrange for consulting artist (interior decoration) on use of cultural motifs
- 3 Arrange for educational media equipment consultant
- 4 Arrange for consultation on purchase of equipment, furniture and basic supplies
- 5 Arrange for local architect to visit architect in Battle Creek and visit centers and research and training centers facilities
- 6 Develop plan to remodel Hacienda building for continued use for practical training after June 1
- 7 Develop inventory of training facilities in (a) Cauca Valley (b) Colombia (c) Latin America
- 8 Advise international agencies of plans and seek their consultation (international congress)
- 9 Work with national agencies for development of facilities for training in lowland tropics

X Conclusion

The Training and Communication Program Study Team for CIAT has found its involvement in this project to be a most valuable learning experience for its members, and it wishes to express again its thanks to Dr Francis Byrnes for his careful prior planning and his constant attention to detail while the study was going on, it also wishes to make special note of the contribution of Mrs Edna Sheets, Conference Assistant, whose gracious presence made each meeting and each stage of the journey a special event, and whose intellectual and linguistic capabilities helped members of the Team understand both the denotative and connotative meanings of the words and actions that needed translation into more familiar cultural and syntactic patterns.

From an evaluation of its observations and visits, the Team suggests that CIAT watch carefully the Puebla experiments in Mexico, in which the individual farmers of the state of Puebla are being encouraged to adopt an improved corn and are being guided and supported in developing improved farm management and social and economic practices to take full advantage of increased yields. The Team also urges that a most successful model of actual "in the field and barn training" is provided by the Escuela Agricola Panamericana in Zamorana, Honduras, and that the excellent staff of that institution provides a most useful resource.

From the briefings provided by CIAT's senior staff, the Program Study Team was especially impressed by the idea of the creation of a new type of on-the-farm trainer, the "agricultural generalist" or "farm production specialist", and the Team was also impressed by the staff's general commitment to the concept of a "production package" rather than "fragmented knowledge" as its training goal.

At the same time, the Team members remember well the point stressed by Dr. Herman Felstehausen (of the Land Tenure Center operated in conjunction with IICA at Bogota) that production training programs sometimes fail to attend to the little things upon which the success or efficiency of the training may depend. He cited the example that training efforts for farmers in Colombia have failed to take into account that farmers still use a horn tie rather than a neck yoke with their oxen. Plowing efficiency could be greatly increased if farmers were taught how to make this simple change.

The Program Study Team has every confidence that the staff of CIAT's Training and Communication Program will develop a superior activity well calculated to succeed in the vital mission that CIAT has undertaken.

Training in terms of the possible and the real, emphasizing innovation and using tools and customs already in existence in the various geographical and political areas throughout the lowland tropics of the world, should materially further CIAT's program, destined to bring about changes in agricultural production and living conditions that will have a profound effect on the future of mankind during the next quarter century. To this great task, the Program Study Team hopes its report and recommendations may make some contribution, however modest.

EXPERIENCE SPEAKS

Near the end of the Program Study Team's deliberations in Cali the members of the group informally shared their experiences with adult education, training programs, and operation of continuing education facilities in many places and under different circumstances. As they did so, they screened these experiences for possible implications for CIAT. Of particular concern were those experiences at the University of Nigeria and the International Rice Research Institute (Philippines) where persons of many nationalities constituted the staffs as well as the trainee and conferee groups.

Fortunately, while the team members exchanged ideas, the tape recorder preserved their comments for later analysis. These, appropriately reorganized into categories, follow.

EDITED TRANSCRIPT OF DISCUSSION CONCERNING FACILITIES FOR CIAT
TRAINING AND COMMUNICATION PROGRAM - JANUARY 16-17, 1969

1 Conference room facilities

- 1 Keep conference room arrangement flexible, and capable of having variety introduced
- 2 Keep each conference room distinctive in character, with variety introduced
- 3 Try to introduce motion into conference rooms in some way - possibly with lights
- 4 Provide portable platforms for various conference rooms
- 5 Provide at least one conference room for each major laboratory unit
6. Dark room for visiting photographers
- 7 Need readily available copying machine
- 8 Room for press conferences, distribution of releases
- 9 Air conditioning of conference rooms
- 10 Air conditioning must operate at low sound level, probably a central system
- 11 Blackout curtains in windows

- 12 Facilities for sound recording
- 13 Facilities for projection and other presentation equipment
- 14 Facilities for simultaneous translations
 - a In major conference rooms, auditoriums
 - b Use portable systems in other rooms
 - i Use wall outlets if possible
 - ii Portable booths, if sound proof
- 15 Arrangements for group secretariat (packaged conferences)
- 16 Portable coffee bar to serve conference room

II Floor Plans

- 1 Separate program registration from room registration
- 2 Plenty of rest rooms, centrally located
- 3 Space for exhibits, particularly for conferences involving commercial interests, (corridors) make halls wide enough, adequate lighting, electrical outlets in walls
- 4 Lounge and recreational facilities possibly a place where native groups can cook own food for a party (Country kitchen)
- 5 Laundry services, clearing and pressing services for guests (Long term vs short term solutions)
- 6 Have all dining rooms back up to kitchen, as well as large room which can serve as a banquet hall
- 7 Consider possibility of VIP cottage instead of VIP suite
- 8 Facilities for coats, bundles, etc , a check room
- 9 Must have at least one VIP dining room, with appropriate appointments
- 10 Need to provide overnight accomodation for drivers of VIP's
- 11 Provide a family room to encourage use of facilities by wives of staff members, etc , arrange for country dinners and typical parties
- 12 Include an apartment for staff duty officer for the week
- 13 Manager of physical facility must have apartment in center, also probably head housekeeper, might be a husband and wife

III Furniture and Lquipment

- 1 Fixed vs loose tables and chairs
- 2 Storage for movable furniture
- 3 Buy chairs that don't squeak
- 4 Furnish lobby areas with small groups of chairs - two or three to a group, both inside and out
- 5 Build in furniture as much as possible, and save money on carpets
- 6 Provide plenty of chart boards
- 7 Portable laboratory benches with various outlets for demonstrations
- 8 Publication equipment needed

IV Miscellaneous

- 1 Check lists on menus, laundry lists, etc , to overcome language problem
- 2 Washing machine, iron and ironing board for those who wish to do own laundry
3. Possibility of making trainees responsible for maintenance of their rooms
- 4 Keep personal services on a flexible basis
- 5 Use artefacts and decor typical of various countries in decorating various rooms
- 6 Put explanatory plaque outside of each room, i e , Mayan, Inca, Spanish, Maize, etc
- 7 Use native crafts from different countries in drapery materials
- 8 Install ice cube and vending machines, if reliable operation is assured, otherwise provide a small store for dispensing such
- 9 Entrance to building is important, need a distinctive symbol that expresses central idea of center
- 10 Encourage staff members to use center by providing facilities and services appropriate to departmental needs

- 11 Provide guest facilities for staff member and wives in connection with conferences of persons in their fields
- 12 Hire professional hotel man as manager early in the planning of facilities, or arrange for series of competent consultants
- 13 Director of training and communication must be responsible for program operation and facility operation (housing and food)
- 14 Recommend continuing education center have its own crew of maintenance and utility men cleaners, carpenter, plumber, painter etc This was important in Nigeria
- 15 Suggest that Gordon Belson, Battle Creek architect with Sarvis Associates, be engaged as a consultant to architects
- 16 Must arrange in some way for liquor service where appropriate
- 17 Make adequate provisions for parking and transportation
- 18 Staff must include a knowledgeable photographer

V Training Program

- 1 Exploit possibility of carrying out some kind of training in other places, i e , old hacienda
- 2 Provide training facilities in connection with Station Operations
- 3 Conferences and training programs frequently will generate communication materials
- 4 Facilities for preparing specimens for training programs and photography

VI Visual and Audio Aids

- 1 Facilities for closed circuit television
- 2 Closed circuit TV offers excellent opportunities to provide close-up experiences for conferences and trainees on groups
- 3 Facilities for radio and TV program origination from center, room which could be used for a studio-sound proof, special lighting with adjacent control room with glass window
- 4 Prepare orientation for visitors on video tape
- 5 Possibility of producing short training films, some of these based on demonstrations

TRAINING AND COMMUNICATION PROGRAM

The objectives of CIAT's integrated program of training and communication are to help mobilize, qualify, and energize the personnel and organizations in the socio-economic environment necessary to the realization of the national productivity goals in the lowland tropics. This involves linking the technical production systems involved to the larger system of human, organizational, and material resources (Chart #38). Training and communication are the additional necessary inputs to influence the performance of persons and organizations upon whom the farmer must depend for support and guidance.

The planned activities include four inter-related elements: Operation of an international educational conference and training facility, tentatively called "International Center for Continuing Education", research and demonstration projects on farms, training of professionals, sub-professionals, and technicians, and information processing and dissemination. These activities will provide opportunities for persons interested in professional careers in training or communication to receive instruction and experience. The key aspect of their training will be learning how to develop training and informational materials designed to achieve specific performance objectives for the particular audience or group.

Specific objectives of the training and communication program include the following:

- a) To develop strategies and techniques for the rapid spread and adoption of improved materials and practices
- b) To provide specialized instruction and experience in specific research fields for young scientists, and to provide opportunities for such persons to engage in supervised research on problems of significance to their countries

- c) To develop and demonstrate more productive approaches for pre-and in-service preparation of professionals in agriculture
- d) To assist other institutions in establishing and conducting educational and training programs appropriate to the needs and institutional capabilities
- e) To help national leaders and policy-makers understand the agricultural potentials of their countries, and how these can be realized
- f) To provide information and instructional materials for use in reference libraries and training programs of other institutions
- g) To provide orientation and communication programs and services for the staff of CIAT

Within CIAT, the office will assist central administration with orientation and communication programs for the professional staff and personnel of CIAT. These activities will deserve high priority in achieving such objectives as understanding and commitment to multi-disciplinary, production-oriented research and training, how to develop and maintain effective working relationships with national agencies, and establishing high levels of enthusiasm for the goals of CIAT and a sense of urgency for their attainment.

PROPOSED STAFFING PATTERN

Office of Training and Communication, CIAT

<u>Title</u>	<u>Positions</u>
Head, Training and Communication	(1)
Bilingual Secretary	(1)
Administrative Assistant	(1)
Visitor Guide	(2)
Driver-Messenger	(1)
(Information Processing Dissemination)	-
Editor-Bilingual	(1)
Typists and Clerks	(4)
Associate Editors	(3)
Graphic Designer	(1)
Artists	(3)
Printers	(2)
Printer Assistants	(2)
Photographer	(1)
Asst Photographers and technicians	(3)
Translators and Assistant Editors	(2)
Production Training and Training	
Materials Specialists	(3)
Bilingual Secretaries	(2)
Clerk Typists	(4)
Training Associates	(2)
Conference Associate	(1)
Simultaneous Interpreters	(2)
Laborers	(6)
Social Scientist	(1)
Bilingual Secretary	(1)
Clerk-Typist	(1)
Research Associates	(2)
Field Project Coordinators	(2)
	<hr/> 55
Manager, Conference Center	(1)
Bilingual Secretary	(1)
Bookkeeper	(1)
Food Supervisor	(1)
Chef	(1)
Cooks and Bakers	(3)
Kitchen Helpers	(8)
Head Waiter	(1)
Waiters	(10)
Housing Supervisor	(1)
Housekeepers	(2)
Dormitory helpers & Housemen	(10)
General Utility and Maintenance men	(4)
	<hr/> 44
Total ..	99

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