

CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH

1818 H St., N.W. Washington, D.C. 20433 U.S.A.  
Telephone (Area Code 202) 477-3592  
Cable Address -- INTBAFRAD

July 28, 1972

Sir John Crawford  
24 Balmain Crescent  
Acton, A.C.T. 2601  
Canberra  
Australia

Dear Sir John,

As a means of helping TAC to carry out its function of keeping the Consultative Group advised about the progress and effectiveness of the existing International Agricultural Research Centers, it was agreed that FAO and the Bank should undertake and forward to TAC appraisals of the programs and budgets of the Centers. The Bank agreed to be responsible for the appraisals of CIAT and CIMMYT, while FAO is responsible for IITA and IRRI.


I enclose herewith a copy of Mr. J.M. Fransen's report to me on CIAT. The Consultative Group Secretariat has already forwarded to you and to members of TAC copies of the CIAT 1973 Proposed Program and Budget and Annual Report.

I hope that TAC will find Mr. Fransen's report to be useful, and we would welcome comments and suggestions as to the form future such appraisals should take.

I am sending simultaneously copies of this letter and of Mr. Fransen's report to all members of TAC and to Peter Oram.

Kindest regards,

Yours sincerely,

  
L.J.C. Evans  
Director

Agriculture Projects Department

Enclosure

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL DEVELOPMENT ASSOCIATION

CENTRO INTERNACIONAL DE AGRICULTURA TROPICAL (CIAT)

Report on CIAT by J.M. Fransen

Senior Research Officer, Agriculture Projects Department, IBRD

1. This report is based on a visit to CIAT from May 6-14, 1972 at the time of the CIAT Annual Board Meeting.

CIAT Objectives

2. CIAT is still a developing Center, searching for and finding focus. Thirty-six young scientists are rapidly developing competence and international reputations and there has been an outstanding improvement in attitude, skill, and morale since this time last year. Perhaps the greatest single problem currently facing the Center is that of how to obtain even sharper focus of Center and program objectives. The CIAT image, in the eyes of some people, is too little on too much. The Director General of CIAT, however, does not consider this a fair assessment and believes that the Center's focus is beef and cassava.
3. It would help to achieve a sharper focus if the budgeting system and staff assignments were changed from the professional group approach to a commodity group approach. The Director General recognizes the importance of this and most staff would support such a change and believe it could contribute to improvement of overall work efficiency. Another change which would help sharpen objectives would be to consider rice and maize not as amongst CIAT's main programs but rather as linkage programs, closely linked to the parent centers for those commodities. As to research on field beans and soybeans, the budget proposed for 1973 and the budget projections for 1974-1977 show a continuing upward trend. I suggest that the program of beans and the allocation of staff and funds to it should not be expanded beyond what is proposed for 1973, pending the proposed review by the Technical Advisory Committee (TAC) of possible locations for main research thrusts on food legumes. For the immediate future, we understand that CIAT management intends to concentrate efforts on identifying and, if possible, finding solutions to the factors responsible for low yields of Phaseolus vulgaris in the tropics.
4. The construction of Center headquarters is scheduled for completion in early 1973 and centralization of facilities should greatly assist some programs, though not the beef program to the same degree. The Director General believes that CIAT's mandate is now becoming clear and that CIAT has full thrust programs with beef and cassava, limited thrust programs with swine and beans, linkage programs with maize and rice, and production systems programs which complement all commodity groups.

## The Research Program

### Program Review Committee

5. Three members of CIAT's Board of Trustees - Dr. Moises Behar, Guatemala; Dr. Luis Marcano, Venezuela; and Dr. Armando Samper, Colombia -- were appointed on August 6, 1971 to serve as a Program Review Committee. (This is intended as an internal review panel, unlike the external review panel which recently visited CIMMYT.) This body then met with the Director General and the executive and professional staff of CIAT from February 9-11, 1972, during which time it reviewed working papers prepared by the Director General and staff and held meetings with them on program activities. On the basis of this conference, the Committee prepared an 8-page report (attached as Annex 1) on six commodities, the production systems program, and the 1973 budget.

6. Beef Cattle. Research on beef cattle is the Center's principal program and good progress is being made, especially with the tropical pasture component for the Llanos region. There is, however, room for improvement in the total program. In particular, more emphasis should be placed on tropical pastures in two other different agro-ecological areas: the dry undulating lower potential and the low-lying higher potential alluvial soils of the coastal and interior regions. Current work is collaborative with the Colombian Agricultural Research Institute. At some future date, CIAT may require its own facilities. The recent change of focus in animal health work from a laboratory-oriented effort to a field production-oriented one deserves support and strengthens the overall thrust on the commodity.

7. Cassava. This important program is under capable guidance and is beginning to move. The emphasis on total yield per hectare rather than on protein content appears sensible, since it is now known that about half of the protein is in the form of non-protein nitrogen, which, because of certain unidentified factors, has a reduced nutritive value.

8. Swine. This is probably the most basically oriented and scientifically directed program in the Center. Very complete and basic studies of tropical foodstuffs are being undertaken and good outreach and strong professional ties in Latin America have been developed. Some thought should now be given as to how even greater "mileage" and exposure can be achieved for this highly transferrable technology, which makes the program ideal for rapid dissemination as an outreach activity.

9. Beans. This program is just getting underway. It concentrates on the field bean and soybean, with major emphasis on the former, although the latter is said to have high potential of becoming a human food source rather than remaining only a conventional oilseed crop. CIAT is initiating outreach activities at the Instituto Interamericano de Ciencias Agrícolas (IICA), in Costa Rica.

10. Rice. This program has so far had the greatest impact throughout Latin America of all Center activities. The Program Director believes that,

although assistance should continue to be given to all countries in the region, the major breakthrough is likely to come in Brazil, which grows over half of the total rice produced in Latin America. The Director has developed an extremely strong outreach program and scientific rapport.

11. Maize. The general objective of the maize program is to help raise yields through introducing and testing new germplasm in searching for varieties with a more efficient plant type, wider adaptation and improved protein quality. The program is closely linked with CIMMYT activities and plays an important role in the entire Andean Region. It is not limited to the lowland tropics, which is CIAT's mandate.

12. Agricultural Production Systems. This program has been in a "stop-go" position since its inception. Its activities are strongly oriented to small farmers and integrated crop/livestock production systems. In the Director General's revised Proposed Program and Budget dated June 20, 1972, he proposed that CIAT's work in Agricultural Production Systems would continue to be exploratory and developmental for the balance of 1972 and into 1973. It is in fact doubtful to what extent "systems research" of the kind proposed can or should be effectively carried out at CIAT. The Deputy Director General, currently in charge of the program, believes that the production systems activities should be a feed-in mechanism to the commodity thrust programs and be mainly carried out by national research systems. This may argue against any rapid build-up of systems research within CIAT until the proper role of CIAT in this field and to relationships with national systems research programs can be determined.

### Training

13. Training continues to be an important component of total Center activities and it is establishing the base for future scientist-to-scientist outreach collaboration in both crop and livestock production, particularly rice and swine. Some 80 Latin American trainees have completed livestock and crop production training programs and/or more formal training in collaboration with other institutes leading to advanced degrees.

### Outreach

14. Outreach activities should be accelerated so that research findings can be effectively disseminated throughout Latin America and elsewhere. Good progress is being made in Colombia, Ecuador, Brazil, and Guatemala and with IICA in Costa Rica. The Guatemalan approach is interesting since it involves institutional building and is a cooperative effort between a local university, the Rockefeller Foundation, USAID, and CIAT.

### The Proposed 1973 Budget

15. CIAT's total financial request for 1973 is estimated at US\$4.144 million, as shown in its 1973 Proposed Program and Budget Report, already circulated under separate cover to members of TAC. In addition, US\$0.518 million, requested in the 1972 budget for capital development has not yet been financed, bringing total requirements to US\$4.662 million. Details are as follows:

	US\$ Millions		1973	
	1972 Amount	Amount	%	% Increase
<u>Core Program</u>				
1. Beef	0.825	1.058	31	23
2. Cassava	0.553	0.564	17	2
3. Swine	0.312	0.332	10	6
4. Field Beans	0.194	0.303	9	56
5. Rice	0.406	0.438	13	8
6. Maize	0.251	0.307	9	22
7. Agricultural Production Systems	0.309	0.361	11	17
Total Core Program	2.850	3.363	100	18
<u>Special Projects</u>				
1. Crop Prod. Specialist Training Program	0.075	0.138	29	84
2. Livestock Prod. Specialist Training Program	0.079	0.091	19	15
3. Conference and Symposia	0.100	0.165	34	65
4. IDRC -- Cassava-Swine Project	0.043	0.054	11	26
5. CIAT -- Cooperation Guatemala	0.025	0.033	7	32
Total Special Projects	0.322	0.481	100	49
<u>Other</u> <sup>1/</sup>	--	0.100		
TOTAL OPERATING FUNDS REQUIRED	3.172	3.944		24
<u>Capital Funds</u>				
1. Equip., Furn. and Inter. Decoration <sup>2/</sup>	3.328	0.200		
TOTAL FUNDS REQUIRED	6.500	4.144		
<u>TOTAL FUNDS REQUIRED FOR BALANCE 1972 AND 1973</u>				
1. Balance 1972 (Capital Funds)		0.518		
2. Total Funds 1973		4.144		
		4.662		

<sup>1/</sup> General stores inventory rotary account one-time request.

<sup>2/</sup> Expenditures for 1972 also include completion of buildings and site development.



16. The beef program would account for 31% of total core program costs; cassava 17% -- together 48%. An increase of US\$0.233 million in the beef program would represent 45% of the total growth in core program costs of US\$0.513 million (18%) over 1972. The strengthening of training and conference activities would be mainly responsible for the US\$0.159 million (49%) increase in special project fund requirements. Overall, the total operating funds, which are being requested for work programs approved by CIAT's Board of Trustees, would represent an increase of US\$0.772 million (24%) over 1972.

17. Of the US\$4.662 million that CIAT is seeking from the Consultative Group on International Agricultural Research, sources of financing have already been identified for all but US\$0.965 million. Details are as follows:

	<u>US\$ Million</u>	
	<u>1972</u>	<u>1973</u>
Unidentified Core Funds	--	0.143
Unidentified Special Project Funds	--	0.104
Unidentified Capital Funds	<u>0.518</u>	<u>0.200</u>
Total Unidentified Funds	<u>0.518</u>	<u>0.447</u>
	=====	=====
TOTAL		0.965
		=====

18. The 1973 budget request includes US\$0.200 million for additional capital expenditure. Not included in the 1973 budget is the item US\$0.513 million of capital expenditure proposed in the 1972 budget, for which no financing has yet been forthcoming. Including the above two items, the total capital expenditure of CIAT by the end of 1973 would total US\$6.244 million. I understand that the Director General of CIAT considers that the above total capital expenditure would be sufficient to provide facilities to support programs as presently approved by CIAT's Board of Trustees and a staff of some 40 full-time scientists.

JMFransen:ma  
IERD

cc: Messrs. Chadenet, Evans, Wapenhans, Fransen, Graves (Development Services)  
Central Files

July 23, 1972

TRANSLATION

11 February 1972

Senor Don  
Francisco de Sola  
Chairman  
Board of Trustees  
Centro Internacional de Agricultura Tropical  
Av. Morazan 117  
San Salvador, El Salvador

Mr. Chairman,

According to the assignment entrusted to us by the CIAT Board of Trustees at the meeting held in Bogota's Hotel Tequendama, on August 6 and 7, 1971, we are pleased to submit our observations and recommendations, unanimously arrived at, as a result of the meeting held in Palmira with the Director, and the executive and professional staff of CIAT, on February 9, 10 and 11.

For this first series of meetings, the Committee considered it would be preferable to limit its analysis to production programs, therefore it studied only the following:

Beef Cattle  
Swine  
Maize  
Rice  
Food Legumes  
Cassava  
Production Systems

The Committee based this study on the concise, clear and well defined working papers prepared by the Director and CIAT's staff.

The progress achieved and the existing limitations for even greater production, were studied at meetings held with the Director, the Deputy Director, the program directors and all the scientists involved in these programs. All discussions were open, direct and cordial.

Whereas the Committee also received information on supporting programs such as Economy, Soils and Agronomy, Agricultural Engineering, Training and Communication and the Center's public image, it did not enter

into a detailed study of these. However, it is expected that these programs will be analyzed by the Committee at the next meeting, since they are considered essential to the achievement of CIAT's objectives.

#### BEEF CATTLE PROGRAM

1. This program, CIAT's most important, is efficiently oriented, directed and carried out. Due to the importance of beef cattle in the development of tropical regions and the balanced diet of their people, the Committee considers that this program should continue to be the most important at CIAT and should continue to receive priority in budgetary allocation.

2. If the tropical regions wish to increase their availabilities of meat and beef for export, they will have to develop simultaneously other sources of protein-rich feed, both of animal and vegetable origin. CIAT should not dilute its efforts or budget allocations on animal science programs other than those on beef cattle and swine production which it is carrying out today.

However, it should efficiently contribute in creating awareness, among the policy makers and the research scientists in tropical countries, of the importance of developing global programs for the best utilization of protein-producing sources. This national effort should cover the development programs at official and production levels.

3. The Committee noted, with satisfaction, the working relationship which has been established between CIAT and the Pastures and Forage Cooperative Program of the Interamerican Institute for Agricultural Sciences of the OEA. This relationship should be tightened and developed so that IICA's Regional Cooperative Program operates efficiently as an institutional instrument in projecting, to all countries, CIAT's work in this field. Eventually, it should be extended to other aspects of cattle production.

4. Animal health is undoubtedly one of the key factors in obtaining an efficient cattle production. Therefore, the Committee highlighted the importance that CIAT is giving in its research programs, to the study of specific animal diseases which affect cattle production. At the same time, the Committee noted the important cooperation which the Texas A & M University is affording CIAT in its research on animal diseases.

CIAT should maintain this approach in its animal health research and tighten its working relations with the national and international centers which study animal health problems in the tropics.



SWINE

5. In this instance the presentation and discussion of the swine production programs was restricted to CIAT's initial efforts in diagnosing and solving the problems encountered by the small family farms, particularly on the Atlantic Coast of Colombia. Therefore, the Committee did not study the program that CIAT is carrying out in cooperation with ICA, to better the commercial production of pigs in regions such as the Cauca Valley.

6. The Committee is pleased to note that CIAT is making efforts to solve the problems of swine production among small family groups. It emphasized the importance of continuing to investigate the usage of tropic - originating feeds that are available locally. The Committee considers, however, that priority should be given to food for pigs that does not conflict with that for human consumption.

MAIZE

7. CIAT is carrying out a very important role as a supporting center for the maize improvement programs developed by CIMMYT in Mexico. It is contributing towards the increase in efficiency of CIMMYT's programs by acting as a link between the latter's research activities and the national institutions that use these, especially in South American Andean areas.

8. This work of orienting, promoting and employing CIMMYT's research efforts should include studying the adaptability to the individual countries' conditions, to be carried out by the national institutions themselves. The most efficient way to achieve this purpose is by means of a regional cooperative program to be promoted and supported by CIAT.

22  
This seems  
at odds with  
present Government  
9. By means of this proposed program, strict priority must be maintained on the research necessary for resolving the problems of maize production in low, tropical lands. This does not exclude the support that CIAT can offer to the national institutions interested in using CIMMYT's studies to improve maize production in the highlands of the Andean region.

RICE

10. The Committee considers that the rice program is properly oriented and led insofar as it is supporting the tropical zone institutions of America which are using rice research that has successfully been developed, throughout the last decade, by the International Rice Research Institute, in the Philippines.

11. The Committee noted the importance of the CIAT sponsored Seminar on Rice Policies in Latin America, held in Cali in October, 1971.

CIAT must continue dedicating all necessary attention to the study of social economical, institutional and, even, political changes caused by technical innovations, such as the production and utilization of new, high-yield varieties. CIAT can make valuable contributions by means of studies, macro-economical or micro-economical, which contribute towards making available the best information to aid the decision makers of each country.

12. CIAT must also dedicate time to making available sufficient information for the promotion of the industrial utilization of rice for human consumption and, when over-production exists, for animal feed.

#### FOOD LEGUMES

13. CIAT should concentrate its legume program efforts on the improvement of the common bean, to increase its yield, dedicating all the funds now assigned to the food legumes programs to this species. This crop is very important in the tropical regions of America and is intimately related to the culture of their people and their eating habits. As a source of proteins that are available to the poorer classes, the bean is an important complement to cassava and cereals.

14. Unfortunately, the lack of solid, constant and efficient research, on one hand, and the tendency to concentrate more on other species which have received efficient, long-termed, well-funded research in the temperate areas, on the other hand, have detracted from the importance of the common bean. Its production has consequently fallen off considerably in the tropical areas of America. As a result, prices have increased to the point that beans are becoming no longer accessible to the poorer classes. The Committee recognizes the fact that the plant is not easy to improve but it considers that improvement is feasible and feels that it is essential CIAT double its efforts in research for this purpose. It was suggested that an expanded program be considered for which additional funds must be obtained.

#### CASSAVA

15. Cassava is a cheap source of energy and forms part of the way of life of a very important part of the people that inhabit the tropics. Therefore, CIAT must continue dedicating its attention to the research for improving the production and utilization of cassava.

16. In doing so, however, it should not aspire to replace cereals with cassava as the basic food for humans. Preferably, it should concentrate its efforts on making cassava a source of calories. At the same time and through other institutions, it should promote the development of cassava-based reinforced flours and other human food that have greater nutritional value.

17. CIAT should dedicate priority attention to making cassava a crop to benefit many small producers. It should contribute to the development of drying systems and other technological innovations that can be used by the smaller farmers.

18. CIAT should also contribute to the research of means that allow for the better utilization of cassava as feed for animals and for industrial uses.

#### PRODUCTION SYSTEMS

19. The Committee is pleased to ascertain that all CIAT, from its Director and executive staff to its scientists, assistant graduates and trainees, has oriented all its efforts to the solution of production problems. The Committee notes the importance which has been given to these efforts, starting with the problems themselves, to the problems existing at the production centers, to seek solutions which will enable the farmers to improve their production, step by step, by the means they have available. CIAT must keep up this basic orientation at all cost.

20. Hence the importance of the development of production systems and other mechanics and means so that all technological innovations in fact reach the production units, considering these as global enterprises, rather than isolated production efforts. In this field, CIAT is at present only designing and discussing production systems, of their own and adapted from those that have been developed elsewhere. It will be necessary to apply a considerable amount of creative imagination to design working systems in this field, which will undoubtedly prove to be more difficult than the technological investigation per se.

21. The Committee notes the importance of the field surveys that CIAT is carrying out in some of their programs to use as useful implements in diagnosing the situations of the production units and the existing production systems. This is an essential initial step to introduce technological innovations and measure their impact. It should be adapted to all programs.

22. The Committee also noted CIAT's healthy criteria in considering the improvement in production, not only with regards to the production stages and the production units themselves, but also as a key factor in regional development.

23. The Committee finds the development of hypothetical production units interesting. It considers they are useful instruments in evaluating the effects of the application of technological packages. The feasibility of these models must be investigated at two or three experimental units that will have been specially established for this purpose. However, when expanding the application of these models and technological packages, this should be done at production units already established in the area and whose owners are willing to participate in a program of this nature.

24. CIAT should complement its technological advancement efforts with concrete investigations, of an economical and social type, at the level of regionally grouped production units, to be able to study the impact of the application of new technology. However, it should also do this on an experimental basis. That is to say, it should design and develop methods and systems, with sufficient control over the conditions in which the experimental studies are carried out, which will allow the countries to develop their different regions. In doing this CIAT should not take over functions that correspond to the national entities nor should it compete with them.

25. The Committee notes the importance of setting up shortly the proposed seminar to analyze the experiences that have been encountered in giving new technology to small producers. This analysis will be made from both the positive and the negative aspects.

26. Personnel is CIAT's strongest resource at the present moment. Both among the executive staff and the professional staff, we have found highly capable people, with experience and dedication to the cause of developing the tropical countries.

27. The Committee is conscious of CIAT's efforts to attract and employ highly qualified professional talent in the American countries. However, it feels that it is essential to continue seeking the way to incorporate a greater amount of people from the American countries on their professional and executive staff. Possibly the best manner in which to achieve this in the future would be to start forming, as from now, a young professional, talented staff which CIAT would send to continue their doctorate studies after a convenient period of association with the Center.

28. It is important, as well, to emphasize the leadership that the Executive Staff has given CIAT, both in the technical and in the administrative field. It is necessary to give the Executive Staff full autonomy so that it can successfully carry out the programs approved by the Board.

29. Another factor which has allowed CIAT to start its research programs in a consolidated and efficient manner, in only two or three years, has been its close association with the Colombian Agricultural Institute (ICA). This association has allowed them to use field facilities they did not themselves possess, in Palmira as well as in other parts of Colombia, especially on the Atlantic Coast and in the Llanos Orientales. On the other hand, ICA has given CIAT wide technical and administrative support. At the same time, ICA has received efficient cooperation from CIAT's highly qualified and professional staff in the development of their own programs.

30. Although CIAT also cooperates with research institutions in other tropical areas, especially in Ecuador, it has not yet developed an efficient system for developing inter-institutional cooperation. Justifiably, this is one of the Director's and Deputy Director's principal concerns, and they should continue in their efforts to institutionalize an effective system of cooperation between CIAT and other international and national institutions that are dedicated to research.

31. Apparently, CIAT has been more successful in obtaining cooperation from other institutions for the development of its own programs, especially from U.S. and Canadian organizations. The policy of receiving financial and technical cooperation from other organizations only when this means a boost to CIAT's programs, is a healthy one and should be maintained.

32. Undoubtedly, the permanent cooperation that CIAT can maintain with the scientists it has trained will prove to be the link that will most efficiently breed cooperation with national institutions. However, a limiting factor in obtaining efficient cooperation will be the capacity for action existing at the national institutions with which links will be established. Therefore, CIAT must make moves to promote the analysis of institutional limitations of the tropical areas' organizations, with which it collaborates, maintaining contacts not only with research centers but with universities, national planning offices, ministries and other entities which decide on development policies.

33. The executive and professional staff of CIAT is fully aware of the danger of giving in to the pressures that arise to dilute research efforts. The tendency existing at the research centers of American countries to embrace too many fields at one time has impeded the study in depth of the principal production problems in the tropics and the solution to these. The Board of Directors should adopt a firm stand in this respect.

#### BUDGET

34. The Committee considers that the budgetary estimates for 1973 which represent an increase of 6 percent over 1972 to compensate for the normal increase in costs and an increase of 10 percent, due mainly to budgeting, for the whole year, charges that were only partly covered in 1972, make up a realistic budget to maintain efficiently the programs that have actually been approved.

Any modification will naturally require a careful revision of fund availability. This would be particularly applicable when reinforcing the bean program.

#### FUTURE COMMITTEE MEETINGS

35. The Committee is grateful for the effort made in preparing the work documents which formed the base for discussions and which were extremely useful for this first meeting. It feels that it will be sufficient, at future meetings, to have only the annual activities report and verbal presentations and discussions, except when new programs must be studied.

36. The Committee considers that the next meeting should take place in the middle of March, 1973, starting on a Thursday and ending on the Tuesday of the following week. This would allow for observation of the field programs during the weekend and for dedicating two week days to each one of the areas of animal and plant production, respectively. Studies of the supporting programs will be fitted in between these days.