

# PROCITROPICOS

*Programa Cooperativo de Investigación y  
Transferencia de Tecnología para los  
Trópicos Suramericanos*

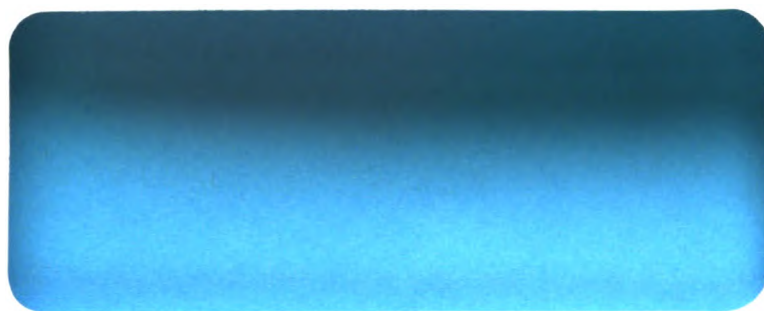
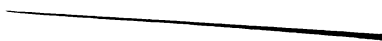
# IICA



TRÓPICOS

S  
117

*Bulletin*



**PROCITROPICOS  
EXTERNAL EVALUATION REPORT**

**First Phase**

11/11/2015

#73

7/27/7

27/15

18N-5777

# PROCITROPICOS

## EXTERNAL EVALUATION OF THE FIRST PHASE

### I. BACKGROUND

1. The Programa Cooperativo de Investigación y Transferencia de Tecnología para los Trópicos (PROCITROPICOS) was established in 1991 through the Convenio de Cooperación (Cooperation Agreement) signed by the Board of Directors of the national agriculture/livestock<sup>1</sup> research institutions of the eight Amazon countries and the Instituto Interamericano de Cooperación para la Agricultura (IICA).
2. In summary, the Agreement envisaged the following objectives for PROCITROPICOS:
  - a. To contribute to the development of the ecosystems of the humid tropics, savannahs and the Amazon Foothills of the participant countries, in order to overcome factors which hinder a rational agricultural production; to maintain the productive capacity of natural resources; to preserve the quality of the environment and to offer alternatives for the economic reactivation of the region.
  - b. To establish the conditions and ensure the means for an on-going joint effort of reciprocal support and integrated action between the national research and agriculture/livestock technology transfer institutions and IICA in the subregions of the Amazon tropics with major potential for the development of a sustainable agriculture.
  - c. To serve as an instrument for the dialogue and negotiation of joint activities for agriculture/livestock technology generation and transfer, which might result in commitments and contributions of resources by the parties; to provide a means for enhancing and coordinating the individual capabilities and resources of the different parties in the area of research and agriculture/livestock technology transfer; and
  - d. To facilitate the search for and procurement of external resources from both inside and outside the region, and to promote their efficient use in the drawing up and implementation of joint projects and activities.
3. PROCITROPICOS' activities started in 1992. The Agreement contemplates a first stage of six years, to terminate in August 1997. As it is now at a mid-point of the first stage, its Board of Directors has provided for an external evaluation of the progress reached by the Program in its first four years of action. Such evaluation aimed at identifying issues that need to be analysed, as well as recommending the necessary adjustments for the rest of the first stage and examining the outlooks and opportunities related to the second one. The Terms of Reference of the external evaluation are given in Annex 1. This report represents the team's conclusions.

---

<sup>1</sup> Instituto Boliviano de Tecnología Agropecuaria - IBTA  
Empresa Brasileira de Pesquisa Agropecuária - EMBRAPA  
Instituto Colombiano agropecuario - ICA  
Instituto Nacional Autónomo de Investigaciones Agropecuarias - INIAP (Equator)  
National Agricultural Research Institute - NARI (Guyana)  
Instituto Nacional de Investigación Agraria - INIA (Perú)  
Ministry of agriculture, Animal Husbandry, and Fisheries - MAAHF (Suriname)  
Fondo Nacional de Investigaciones Agropecuarias - FONAIAP (Venezuela).

## **II. EXTERNAL EVALUATION**

4. A two-man team - consisted of John L. Nicke<sup>2</sup>, mission's head, and Juvenal Castillo, contracted by IICA for this purpose - evaluated PROCITROPICOS from Sept. 16th to Nov. 5th, 1995, visiting IICA headquarters in San Jose, Costa Rica, and watching field activities in Venezuela, Colombia, Ecuador, Peru, Bolivia and Brazil. The team also met with officials of the INIAs, IICA, CIAT and other governmental agencies and NGOs involved in activities related to the sustainable development of agriculture/livestock and natural resources, and reviewed many documents provided by PROCITROPICOS and the institutions that have been visited. A list of institutions and persons contacted is given in Annex 3.

5. The evaluation team wishes to express its sincere thanks to the PROCITROPICOS Executive Secretariat for its valuable help, to IICA's Technical Cooperation Agencies, for the excellent logistical support given to the mission, and to the INIAs and other agencies, for their courtesy and voluntary and extremely useful information.

## **III. GENERAL OVERVIEW**

6. Much has been accomplished with few resources. The Executive Secretary and the Scientific Advisor of PROCITROPICOS, together with the various International Coordinators and Consultants should be congratulated for the outstanding way they are used to face the very complex and varied aspects related to the sustainable development of South American tropics. Ecosystems definitions and diagnosis, and the identification of strategies and technologies for the sustainable management of each ecosystem have been analyzed and synthesized on the basis of a healthy combination of professional experience, scientific rigour, and pragmatism, commensurate with objectives' relevance. While the process of projects drawing up may have seemed unusually slow and cumbersome, it has yielded far more than project profiles and proposals. The various steps of this process have provided for a wealth of information from many sources; and all that knowledge has been horizontally transferred to scientists and leaders who have attended to seminars, workshops and training programs. These alone represent valuable outputs from the time and resources that have been invested in such activities. The principal payoff and challenges, however, lie ahead, as long as those projects are funded and implemented. It is, then, of utmost importance for PROCITROPICOS to carefully chart its future action. The aspects contemplated in this report are meant to serve as a stimulus and guide for the managerial decisions to be taken by the Board of Directors and the Scientific Council as they are confronted with such challenges.

7. The scenery of PROCITROPICOS' work presents quite a few actors. Many governmental agencies (often scattered through various ministries), as well as countless NGOs, several international and regional research and development institutions are dealing with related fields of agriculture/livestock development, natural resources management and environmental issues. This raises two questions: what role does PROCITROPICOS play? How these actors could work together, in a more harmonious and integrated way, towards the common goal of sustainable development? Those aspects are discussed below.

---

<sup>2</sup> Consultant on Research Management, Lincoln City, Oregon, USA.

<sup>3</sup> Head of the Production Systems National Program, CIAE-LARA, FONAIAP, Barquisimeto, Venezuela.



8. PROCITROPICOS is a quite efficient operation. It works with the help of a very small Secretariat, part-time coordinators, and *ad honorem* administrative and technical committees. In spite of that, the sustainability of its long-term funding basis is at stake, as the raising of additional resources for a substantial increase of its operational staff is getting quite problematic. This implies the need of reviewing its future actions and sharpening its focus on doing the most important with excellence, rather than attempting to do too much with doubtful results. The organizational structure, as it has evolved during the first three years of operation, is somewhat different from what has been originally foresaw in the Agreement. And the experience of the period suggests some modifications in the ecosystem and topics coverage. A new Agreement with updated mandates and a management structure better adjusted to these mandates will be necessary for the second phase.

#### **IV. SUMMARY OF ACHIEVEMENTS**

##### **A. CONCEPTUAL FRAMEWORK**

9. A quite clear conceptual framework has been defined by and for PROCITROPICOS, through the drawing up and publication of a series of position papers. The documents on the organization of the Cooperative Program include the following topics: characterization of the three fragile ecosystems; key criteria for the Cooperative Program, with a definition of sustainability and the characteristics, objectives and conditions for a sustainable development; the diagnosis of the predominant forms of land use in the target ecosystems, along with a description of the critical processes in terms of sustainability; methodologies for generation, validation and transfer of sustainability's technologies; and a description of the basic knowledge required for the sustainability management. These have been summarized in the excellent publication *PROCITROPICOS: Bases Conceptuales y Operativas (Brasilia, Brazil, 1995)*, that also includes a floppy disk (11 annexes) and complete information on projects related to Savannahs, Forest, Genetic Resources, and Information and Training Systems. Such conceptual development represents a very important PROCITROPICOS' achievement. More important, however, is the participative nature which gave origin to those documents, through various workshops and seminars – a process that represents an excellent way for exchanging ideas and data.

##### **B. ROLE OF AND SUPPORT FOR PROCITROPICOS**

10. The role of PROCITROPICOS gets clear with the definition of its specific niche within the group of institutions involved with sustainable development and natural resources preservation. The consortium for the savannahs, which includes the national programs and also FAO, CIAT, CIRAD and PROCITROPICOS, is a good model for the respective partners to work together, on the basis of principles of complementarity and comparative advantages. The role of PROCITROPICOS involves three areas: a forum for exchanging views and information on aspects of the sustainable development in the Amazon Basin; training activities; and validation of sustainable development technologies.

##### **C. INSTITUTIONAL SUPPORT**

11. A broad support to PROCITROPICOS comes from those who know it best. To some extent, this defies logic. Its conceptual and operational basis, as well as its methodological focus are not new, but have been synthesized through an amalgamation of agro-ecological data, together with strategies and methods which have been developed by others. Concepts such as validation of on-farm technology, farmers participation and the systems approach have been around for decades. Besides, PROCITROPICOS has developed no new technologies. The technological solutions that are being promoted for the validation work originate from national programs and international

centers. Yet the various institutions that have developed those technologies and whose strategies have been appropriated show no resentment at all. On the contrary, they seem to strongly applaud PROCITROPICOS' work. The technicians who have attended to the workshops, seminars and training programs organized by PROCITROPICOS and are collaborating with its projects, are enthusiastic about the Cooperative Program. This cannot be justified by any material or financial support they eventually may have received from the Program, as, unlike other projects, PROCITROPICOS provides no equipment or operational funding, and their participation in seminars and training activities has been financed by the participants' organizations. One explanation for this intriguing question may well be a sense of "ownership" towards PROCITROPICOS, since it is an organization created and governed by the very national institutions. Another explanation could be the fact that those who have generated the technologies see PROCITROPICOS as an effective mechanism for larger scale use. However, there is also an expectation that PROCITROPICOS will be able to obtain - or will help to do it - additional funds for its different activities.

## **1. TRAINING PROGRAM**

12. Along with the process of drawing up and implementing its projects, PROCITROPICOS has developed intensive and well equipped training activities for technicians and farmers, based on 2 courses and 13 seminars involving more than 400 people and administered by important experts (university teachers, consultants, and so on). The basic criteria of such trainings, fully shared by the evaluation team, is the so called "tropicalized training", with a view of getting a set of knowledge and concepts that may lead to the formation of a new generation of professionals involved with the development of sustainability conditions in the context of tropical regions.

## **E. RELATIONS WITH THE AMAZON COOPERATION TREATY (TCA)**

13. The Evaluation Team applauds the efforts of both PROCITROPICOS and TCA boards of directors in the drawing up of a Cooperation Agreement between both agencies. This agreement is included in the Agenda of the Seventh Meeting of the Amazon Cooperation Council (Nov. 30th thru Dec. 1st, 1995) and the Meeting of Foreign Affairs Ministers of Amazonic Countries (4 and 5 December, 1995) - IICA's Managing Director has been invited to those meetings. The agreement is expected to be signed immediately after those meetings.

## **V. SUMMARY OF MISSION VISITS AND EXCHANGE OF VIEWS**

14. To comply with the Team's objectives, PROCITROPICOS' Executive Secretariat has arranged for a set of visits to institutions of various countries (exception made to Suriname and Guyana), that, for its magnitude, organization and logistic aspects, deserves the highest acknowledgement. The interviews with technical staffs and the visits for field observation of on-going experiences (especially as pertains to Savannahs Project) provided the Evaluation Team with a broad view of the present status and future perspectives of PROCITROPICOS' activities.

15. Annex 2 synthesizes such perception, which, for obvious reasons, does not necessarily reflects the overall reality. However, it gives a good idea of the institutions' role in the program, their relationship with and interest on PROCITROPICOS.

16. The Evaluation Team points out the highly positive surplus of PROCITROPICOS' management, determined both by the acknowledgement given to the program by national institutions (INIAs, OG, ONG, ...) and the expectations the program has created.



17. The institutions corroborate the righteousness of the conceptual and methodological approach used in the projects formulation, especially in what pertains to the definition of the target ecosystems, the systemic focus, the methodological framework of the research/development activities, and the inclusion of farmers in the process of diagnosis, detection and establishment of limitations priority, and also the validation of adequate practices.

18. To develop its activities, PROCITROPICOS must count on the INIAs' relevant support. Unfortunately, most of them run into great difficulties, mainly as a result of their reduced budgets and more and more recurrent re-structuring processes. Together with the setting up of priorities associated to national programs and which have nothing to do with ecosystems or big natural areas, such situation has led to the reduction of working teams in zones considered of high priority by PROCITROPICOS (Savannahs and Forest Project). These groups have been lowered to a small number of technicians, who feel oppressed by the challenge they are confronted to. Significant examples of this reality are Venezuela (States of Anzoátegui, Monagas and Guárico); Colombia (Villavicencio and Carimagua zones); Equator (Napo Province); Peru (Ucayali region); and Brazil (Altamira).

19. As per official and technicians point of view, the methodological approach of the research/development framework, based on the validation/transfer process, is an adequate one. So, the Evaluation Team emphasizes the fact that though PROCITROPICOS has not generated the methodological approaches nor the techniques to be validated, its presence has been extremely important for their utilization, as it gave birth to an important discussion process and to the analysis of new focuses within the institutions (in the INIAs, for example).

20. In spite of its relative or determinant importance in politics definition, lands arrangement, data generation and collection, a relevant number of the institutions that have been visited in the various countries has not taken part in PROCITROPICOS' activities. This represents a feebleness that has to be effectively overcome at the earliest possible time. To this end, the publication and prompt distribution of the booklet mentioned in item 9 will certainly be quite useful. However, the Team finds it convenient the development of some strategies and mechanisms, so that institutions and associates may internalize – not only at their own management's level, but also and especially at the level of their operational personnel – PROCITROPICOS' importance as a Cooperative Program for the Amazon countries and the relevance of a joint action for agriculture/livestock and forest sustainable development in the Region's main ecosystems.

21. The farmers' affinity with the Program (demonstrated in the interviews carried on by the Team in Venezuela, Colombia, Bolivia and Brazil, for example), is quite a remarkable fact. Their observations do confirm their similar interests and a strong belief in the solutions which are being applied in the attempt to overcome the degradation problems which affect areas (savannahs, plains, *cerrados*...) of intensive farming (annual crops) or pastures (savannahs).

22. It has been acknowledged the fact that, from its very beginning, PROCITROPICOS has created a mistaken image of a financial resources provider, capable of supporting the the national institutions confronted with modest budgets. This aspect has somewhat frustrated the operational technical staffs. At the present time, those expectations are changing, though people still find that PROCITROPICOS should include, among its basic functions, the search for funds or that it should cooperate to their procurement, both at national and international levels.

## **VI. KEY ISSUES AND RECOMMENDATIONS**

### **A. SECOND PHASE**

23. PROCITROPICOS should push ahead from its initial stage. The first six years of the Agreement have been important for the Program to prove it is worthwhile and capable of going on for a larger period. Along its first three and half years of activity quite a few excellent results have been achieved. But such efforts will have a small impact whenever the Program lacks time to move from the formulation to the execution of projects. It is, therefore, recommended that a new six years stage be approved.

24. During the present evaluation work some important issues and recommendations have been identified. Many of them deal with short-time improvements. However, due to the way PROCITROPICOS activities have evolved, some people suggest a change in programatic contents and a organizational structure somewhat different from the one envisaged by the Agreement. Consequently, it is firmly recommended that the present Agreement comes to an end in August 1996, instead of August 1997, and the necessary actions be taken for the establishment of a new six years Agreement, to begin immediately after the conclusion of the first one.

### **B. BROADENING AND INTEGRATING PARTNERS NETWORK**

#### **1. National Consortia for Liaison with PROCITROPICOS**

25. As mentioned above, there are many active governmental and non-governmental organizations in the field of sustainable development and natural resources preservation – some of them involved with PROCITROPICOS action. It is extremely important that some mechanisms be found in order to broaden out the scope of the institutions the Program is used to work with. Such mechanisms are essential not only for PROCITROPICOS' effectiveness, but also as a means of stimulating a greater cooperation among the various agencies that work on a regular basis on related issues in the same country but do not communicate or cooperate with each other. Thus, it is recommended that national consortia be created in each member country as a liaison with PROCITROPICOS. Membership in these consortia should be broad enough to include all major actors in related fields, but manageable enough to enable effective dialogue and decision-making procedures. While the number may vary, something in the order of 10-15 members is suggested.

26. Each national consortium should meet once or twice a year. The purpose of these meetings would be three-fold: first, to keep the representative of PROCITROPICOS' Board of Directors informed on its activities and priorities; second, to share and analyze all information provided by the Cooperative Program; and third, to serve as a national forum for the exchange of views and information on issues referring to the sustainable development of the Amazon Basin regions in each country.

27. Due to their neutrality and convoking power, it is recommended that IICA's Technical Cooperation Agencies play a major role in the organization of the national consortia, and in the logistical support to the meetings.

#### **2. Mutual Cooperation with FAO**

28. FAO and IICA have pushed forward some conversations for the coordination of their respective activities in Latin American and Caribbean regions. The Evaluation Team's view is that this will have important implications in the Cooperative Program's future. FAO projects that appear to

be most directly related to PROCITROPICOS are:

- World Council on Sustainable Development
- Technical Cooperation Network on Oil Palm
- Technical Cooperation Network on Hydrographic Basins Management
- Support to TCA's *Pro Tempore* Secretariat

### 3. Further Steps in Integration with TCA

29. The agreement with TCA (see paragraph 13, above) is a good first step for the integration of TCA and PROCITROPICOS activities. It is, however, limited to cooperation in some projects that are being developed by PROCITROPICOS. TCA is carrying out or planning to implement a number of projects and publications that are extremely relevant to PROCITROPICOS activities:

- Survey and Analysis of Institutions and Projects on Preservation and Development in the Venezuelan Amazon Region.
- Tarapoto's proposal on Criteria and Indicators of Sustainability for the Amazon Forest.
- Retrieval of the productivity of soils affected by intensive farming and livestock activities.
- Inventory of palm-trees with economic and social potential in the Amazon Region.

This partial list indicates that there are many on-going or planned TCA's activities the Cooperative Program should be actively involved with. As the signing of the Cooperation Agreement will lead to mutual confidence, it is recommended that necessary actions be taken towards the goal of joint planning and execution of relevant projects.

### C. DEVELOPMENT OF NATIONAL PROJECTS

30. Evidently, one of the most convenient ways to expand present PROCITROPICOS outputs would be the planning and execution of national projects in the mentioned countries (Venezuela, Colombia, Bolivia and Brazil, as to the Savannahs project, and Equator, Peru, Bolivia, Brazil and Colombia, as far as the Forest project is concerned). With adequate structure, they would be incorporated to INIAs' planning and programming mechanisms, and financially supported by their own funds and by external sources of the corresponding country.

31. Most of the INIAs' difficult budget situation hinders the execution of the national projects and make it clear the need for financial support from external sources (preferably, national ones). Such funds must be broad enough to adequately cover the typical deficiencies (vehicles, moving expenses, cost-allowances, air-tickets, field and office crews, stationery, and so on) which have been detected by the Evaluation Team. On the other hand, the hiring of young professionals, rigorously selected, for supporting the present staff, would be highly advisable.

32. For the adequate execution of the national projects it is extremely important that INIAs' funds be provided through a flexible and expeditious administrative way. To this end, IICA's intermediation would be quite convenient, for its internationally acknowledged efficiency in the administration of financial resources. It would also be advisable the establishment of some agreements among the INIAs and IICA, in order to allow the latter, if necessary, to try to obtain the necessary funds.

## **D. FINANCIAL ISSUES**

### **1. Member Countries**

33. Some delays in the payment of membership fees from the part of participant institutions are evident. This is somewhat troublesome not only for its implication on the scarce resources on which the Executive Secretariat is counting for carrying out its activities, but also because it may give an impression of indifference towards the Program. It is therefore recommended to identify the reasons of such delays.

### **2. National Consortia**

34. In the case of the national consortia, participants should be required to pay an annual membership fee which could help to cover the costs of the meetings.

### **3. IICA**

35. IICA's participation comes under another head. Through its financial support and administrative and logistic capacity, this international organism has been the operational basis for PROCITROPICOS' action. Either for its present and future budget difficulties or for its day-to-day complex relationship with the Cooperative Programs - perhaps magnified, in some cases, by a *will of doing it* and, in others, by the *impossibility of doing it* - the problems that have been detected are making the Evaluation Team to worry about them.

36. As we know, one of the postulates embodied by the Cooperative Programs is that they should achieve administrative autonomy in the mid-term through self-financing. Unfortunately, the global Latin America economic crisis of the 80's - not yet overcome in the 90's - prevented them from becoming economically self-sufficient through foundations, consortia etc. The situation is so serious that the payment of IICA's quotas by the participant countries is always being delayed.

37. In spite of the above mentioned problems, it is firmly hoped that the Institute will fulfil its basic mission -international cooperation in agriculture- and will continue to support PROCITROPICOS in a decisive manner. The interest on PROCITROPICOS' work, which has been strongly demonstrated by its Managing Director, as well as by Managers and Representatives of the countries visited by the Evaluation Team - due to its innovated conception regarding the research/development process and the efficiency shown by the Program in the administration of its modest resources - is an assurance that that support will continue to be rendered by IICA.

### **4. CIRAD**

38. The *Centre de Coopération Internationale en Recherche Agronomique pour le Développement* - CIRAD, has been playing an important role in PROCITROPICOS' performance, especially in what pertains to its conceptual and methodological basis. It is, therefore, extremely important that CIRAD continues to give its valuable support to the Program. It should be stressed the assurance generally provided by the fact that, due to its spillover effect, PROCITROPICOS deeds could influence similar programs in savannahs and tropical forests of the African continent, where French cooperation is deep-rooted.

## **E. LEGUME-PASTURE CULTURES**

39. An apparent debility of the technological solutions promoted and validated by PROCITROPICOS is the lack of emphasis in the use of legume-pasture crops. Sustainability is the Program's key word. One of the most important causes of the savannahs' degradation is the soil's progressive loss of nitrogen, a key element which can be supplied through fertilization or from the atmosphere. Nitrogen is not only an expensive substance but is likely to contribute to the pollution of superficial and deep waters. So it would be advisable for a Program involved in the promotion of sustainability's systems, either from an ecologic or economic point of view, to put a strong emphasis on the nitrogen-fixing plants. Undoubtedly, the incorporation of leguminous to pastures demands quite a few adequate management practices. However, the use of legume-pasture crops in association with gramineous, pasture-bushes and protein banks, has proved to be possible in on-farm validation tests, in spite of producers' traditional resistance to the use of such plants. What is quite understandable, since some previous experiences have been carried out with non-adapted legumes. Presently, new identified legumes have proved to be well adaptable. Only when broadly validated these practices will be accepted by farmers under their specific conditions. It is therefore recommended that this be one of the main approaches used by PROCITROPICOS in its efforts towards pastures validation.

## **F. SECOND STAGE: A VISION TOWARDS THE FUTURE**

### **1. Priorities**

40. The future of PROCITROPICOS will be highly determined by its capacity of promoting and implementing the various research/development projects identified by the Executive Secretariat at regional or national contexts and which are expected to solve the most relevant issues (Savannahs, Forest, Genetic Resources, Floodable Lands, Foothills, Information and Pathology Systems for Perennial Crops). Table 1 shows what has been achieved to this date and also what is planned until 1996, in terms of projects development. Considering what has been already done and also the large period between the drawing up of the draft project (profile) and the project's execution (one regional project and "n" national projects), the Evaluation Team finds it convenient to make the following remarks about the Second Stage:

- The determinant reference basis for the projects should be the ecosystem, where, on the basis of a matrix structure, the other projects (genetic resources, information and pathology systems for perennial crops) may interact for supporting the main projects, and whose relative importance will be determined by that ecosystem (for example, Pathology of perennial crops/Forest).
- It is extremely necessary that some priorities be settled, in order to avoid efforts dispersion and also to consolidate the on-going structures. To this end, the Evaluation Team establishes the following order of priorities: Savannahs, Forest, *Floodable lands* and Foothills.
- The consolidation of each project, including the definition of its technical and administrative structure, as well as the operational and coordination levels (regional and national), will indicate the "release" of the project and the concentration of the Executive Secretariat efforts on another project, based on the priorities that have been set up.

**TABLE 1. PROCITROPICOS' Status**

PROJECTS	PROFILE PROJECT	REGIONAL PROJECT	REMARKS	NATIONAL PROJECT	REMARKS
Savannahs	1993	1994	Financing Required	1995	-Implementation <sup>4</sup> -Validation/difusion
Forest	1993	1995	Financing to be required in 1996	1996	Diagnosis done for the Transamazonic Region (Pará/Brazil)
Genetic Resources	1993	1996			No drawing up of national projects
Information Systems	1993	1995	-Zoning -Financing required	1996	-Zoning
Floodable lands	Background obtained in 1995	1996	To be drafting in 1996		
Foothills					
Pathology of Perennial Crops					

41. The Savannahs project should include the work of a full-time expert on information, so that, with CENARGEN's cooperation, the development of an Internet core for PROCITROPICOS could go ahead. Through this and other means of information based on such project, as well as on other projects and activities of the Cooperative Program, it could be available very soon. It is therefore recommended for PROCITROPICOS to discontinue its plans for the development of a separate project on Information Systems and replace them by joint activities that emphasize information through projects that deal with the target ecosystems.

42. Cooperation in the genetic resources area has been carried out through the TROPIGEN network. Due to IPGRI's leadership on this kind of activity, together with CENARGEN's and other international centers for collection and preservation of germplasm, it would be convenient for PROCITROPICOS to discontinue its efforts for the development of a separate genetic resources project. *In situ* preservation of genetic resources in the tropical forest ecosystem is highly important and requires the identification of key areas of biodiversity which should be protected. It might be necessary for PROCITROPICOS to take some actions for centralizing and coordinating the activities involved in the Geographic Information and Biodiversity Systems. By the way, it seems to be essential that such activities of the Cooperative Program be incorporated into the Forest Project.

43. The plans for a project on Pathology of Humid Tropics Perennial Crops are quite a complex issue. The External Evaluation Team has no doubt on the importance of attempting to solve the problem of the serious diseases which limitate the potentiality of perennial crops such as oil palm, rubber, coffee and pepper, used in sustainable production systems of the humid tropics. The big

<sup>4</sup> Venezuela, Bolivia and Brazil. In Colombia some actions have been pushed forward at CORPOICA's and an independent producer's level. Some areas and 14 reference farms have been selected in those four countries.



issue is whether PROCITROPICOS would be able to carry on those researches involving obstacles which have already proved to be extremely difficult to overcome and that demand basic research and more advanced biologic methods. PROCITROPICOS' strength lies on researches adaptable to on-farm and validation activities, as well as on the horizontal transfer of information. The involvement in a sophisticated lab research would put the Program aside of its area of influence and would disperse its limited resources in activities with no comparative advantages. It is then suggested that PROCITROPICOS efforts be limited to that area, with the Program submitting those issues to other institutions.

44. From now on the third phase of the Program should be visualized on a transition basis towards a permanent structure (Regional Reference Center) which could well be considered the transformation of PROCITROPICOS into the "technological arm" of the Amazon Cooperation Treaty.

## **2. Organization and Structure of PROCITROPICOS**

### **a. Board of Directors**

45. The Evaluation Team finds it convenient that the signing of an Agreement for the development of PROCITROPICOS' second phase should contemplate some changes in the Board of Directors' structure. Once it is accepted the idea of incorporating other actors (national institutions, universities, NGOs, private sector, foundations etc.), quite capable to deal with one or more ecosystems (forest, savannahs, wetlands, and foothills), national consortia should be structured. They might be represented in the Board of Directors by the corresponding INIA's Managing Director, exception made to those cases where the country decides to indicate another member of the consortium. In any event, each country is to have only one representative in the Board of Directors.

46. As an international agency, IICA plays a unique role in PROCITROPICOS, for its support in terms of personnel, logistic activities, offices etc. So, and considering also its technical and operational capacity, it is suggested that IICA be represented by one of its managers in the Board Directors, at the same level of the national institutions and with voting right.

### **b. Executive Secretariat**

47. The Evaluation Team wishes to reaffirm the excellent work done by the Executive Secretariat, with IICA and EMBRAPA's support. The high level of its staff and its team spirit make it capable to deal with the high complexity of a Program that counts on the participation of the eight countries of the Amazon Basin with an area of influence of approximately ten million square kilometers. The concentration of PROCITROPICOS' working areas, by reducing some of them (as it has already been discussed), as well as the presence of the projects' leaders, will somewhat smooth out the burden of the Executive Secretariat. However, as long as the four projects evolve, new activities for supporting the projects and new coordination efforts among the projects will take place, in terms of training courses, workshops and information collection and distribution. At least a high level technician should, thus, be incorporated into the Executive Secretariat's staff.

### **c. Scientific Council**

48. The Scientific Council is integrated by high level researchers. Undoubtedly it represents an important forum for the analysis of proposals, documents and reports submitted to its appreciation and to the Board of Directors' decision by the Executive Secretariat. In order to stimulate the work of its components, they should be raised to a consultants level, in terms of salary.

### **3. Executive Secretariat's and Projects' Headquarters**

49. The fact that the headquarters of PROCITROPICOS' Executive Secretariat is located in Brazil has been criticized by some officials and functionaries of other countries. The Evaluation Team accepts that criticism but doesn't agree with it, as it considers the present site the most advisable one. However, for the sake of a future adequate balance it seems convenient that the international coordinators of PROCITROPICOS projects be located in different countries, particularly in regions with a good capacity of response to the main topics. It is suggested, for example, the Centro Internacional de Agricultura Tropical (Cali, Colombia), for the Savannahs Project, and Pucallpa (Peru), as far as the Forest Project is concerned.

### **4. Sustainability and Funding of PROCITROPICOS**

50. In the long term PROCITROPICOS sustainability lies on the hope that its efforts will be worthwhile and will be of help to the procurement of enough resources, so that the Program does not depend on external financial sources. During its limited lifetime, PROCITROPICOS has advanced towards that goal, since it receives a significant amount of funds, through its membership fees. Yet, these contributions are not enough to cover all PROCITROPICOS' activities, and budget difficulties make it impossible for the Program to rely on this only financing source. As far as the Second Phase is concerned, it would therefore be necessary for IICA and CIRAD to go on supporting the Program and also that additional financial resources be obtained. In order to minimize such requirements, many Executive Secretariat's efforts should be included as direct costs in the context of projects related to the target ecosystems.

## **ANNEXES**

- 1. Terms of Reference of the External Evaluation**
- 2. Observations on Visits and Discussions**
- 3. List of Institutions and Persons Contacted**
- 4. Acronyms and Abbreviations.**



**ANNEX 1**  
**TERMS OF REFERENCE**





## ANEXO 1

### TERMINOS DE REFERENCIA

#### I. ANTECEDENTES

El Convenio de Cooperación que creó el *Programa Cooperativo de Investigación y Transferencia de Tecnología para los Trópicos Suramericanos* (PROCITROPICOS) se firmó en el mes de agosto de 1991. Firmaron el Convenio los miembros de la Comisión Directiva del PROCITROPICOS –formada por los Directores de las Instituciones Nacionales de Investigación Agropecuaria<sup>1</sup> de los ocho países Amazónicos–, por una parte, y el Instituto Interamericano de Cooperación para la Agricultura (IICA), por otra, con el objetivo general de fortalecer las actividades regionales para la sostenibilidad de la producción agrosilvopastoril en tres grandes ecosistemas de la región tropical suramericana:

- El Bosque Tropical Amazónico.
- Las Sabanas (Llanos y "Cerrados").
- El Piedemonte Amazónico (Valles y Laderas de las Etribaciones Orientales de los Andes).

PROCITROPICOS inició sus actividades en enero de 1992. El Convenio contempla una Primera Etapa de seis años, que se cumplirá en agosto de 1997. A fines de 1995, el PROCITROPICOS tendrá cuatro años de ejecución, siendo que dos de sus Proyectos de carácter ecoregional ya están elaborados, o se encuentran en un proceso avanzado de elaboración, en los ámbitos de las Sabanas<sup>2</sup> y del Bosque<sup>3</sup>.

Por otra parte, el Programa Cooperativo ya ha reunido mucho elementos como para proponer un Proyecto en cuanto al manejo de los recursos genéticos de los tres ecosistemas mencionados. En los tres casos, se trata de perspectivas de mediano y largo plazo, valorizando los conocimientos disponibles y los equipos existentes.

Por lo demás, la Comisión Directiva del Programa Cooperativo considera que la sostenibilidad de la producción agrosilvopastoril de esas regiones requiere elaborar otros Proyectos de envergadura, como los que se refieren al manejo de las áreas periódicamente inundables ("várzeas", vegas, barriales, restingas,...), las enfermedades y plagas de los cultivos perennes y la agilización de los intercambios de información científica y tecnológica (en colaboración con el SIAMAZ).

Frente a estas perspectivas, la Comisión Directiva del Programa Cooperativo desea disponer de elementos de juicio para su actuación futura, teniendo en consideración las siguientes preguntas:

---

<sup>1</sup> Instituto Boliviano de Tecnología Agropecuaria - IBTA.  
Empresa Brasileira de Pesquisa Agropecuária - EMBRAPA.  
Instituto Colombiano Agropecuario - ICA.  
Instituto Nacional Autónomo de Investigaciones Agropecuarias - INIAP (Ecuador).  
National Agricultural Research Institute - NARI (Guyana).  
Instituto Nacional de Investigación Agraria - INIA (Peru).  
Ministry of Agriculture, Animal Husbandry, and Fisheries - MAAHF (Suriname).  
Fondo Nacional de Investigaciones Agropecuarias - FONAIAP (Venezuela).

<sup>2</sup> Proyecto PROCITROPICOS *Regeneración y Manejo Sostenible de los Suelos Degradados de las Sabanas: una Estrategia para la Preservación del Medio Ambiente.*

<sup>3</sup> Proyecto PROCITROPICOS *Preservación del Bosque Amazónico: una Estrategia Común en Base a la Estabilización de la Agricultura Migratoria y al Manejo Sostenible del Bosque.*

- El contacto regional e internacional es adecuado para llevar a efecto Proyectos de este alcance?
- La estructura actual del Programa Cooperativo es adecuada para cumplir con las tareas correspondientes?

En consecuencia, para responder esas preguntas, la Comisión Directiva encargó a la Secretaría Ejecutiva del Programa Cooperativo organizar, en 1995, una evaluación externa, con el propósito central de verificar los avances y orientar al futuro del Programa<sup>4</sup>. Adicionalmente, la Comisión recomendó:

- Que el Coordinador (Jefe) del Equipo de Evaluación sea al experto en los asuntos institucionales y en las problemáticas generales de la región, complementado por un experto en los ecosistemas del Programa Cooperativo (el Bosque Tropical Amazónico, las Sabanas (Llanos y "Cerrados") y el Piedemonte Amazónico.
- Incluir en los términos de referencia un análisis institucional de la estructura del Programa Cooperativo y de su funcionamiento (Comisión Directiva, Consejo Científico, Secretaría Ejecutiva, Coordinadores Internacionales,...), así como de sus relaciones con las instituciones nacionales e internacionales, de los aspectos de financiamiento y captación de recursos, lo mismo que un análisis de la propia sostenibilidad institucional del PROCITROPICOS.
- Que los términos de referencia incluyan un análisis y discusión de las perspectivas y oportunidades para el futuro del Programa Cooperativo (nuevas alianzas estratégicas, nuevas fuentes de financiamiento, ideas para nuevas iniciativas y proyectos, propuestas organizacionales,...).
- Que la evaluación externa no sólo se concentre en los productos del Programa Cooperativo (proyectos, actividades de capacitación,...) y en las perspectivas y oportunidades para el futuro, sino también en el propio "proceso de construcción" del Programa y de sus proyectos.
- Que la convocatoria y las invitaciones a los miembros del Equipo de Evaluación las realicen, en forma conjunta, el Presidente de la Comisión Directiva del PROCITROPICOS y el Director General del IICA.

## II. EL EQUIPO DE EVALUACION Y SUS RESPONSABILIDADES (Términos de Referencia específicos)

En función de los antecedentes mencionados, la evaluación externa deberá ser realizada durante el cuarto trimestre de 1995, empezando, a más tardar en el mes de octubre, para que sus resultados puedan ser sometidos a consideración de la Comisión Directiva antes de fin de año.

La evaluación externa será realizada por un Equipo constituido por dos personalidades altamente calificadas en los temas institucionales y en los aspectos de la sostenibilidad de los ecosistemas abarcados por el Programa Cooperativo, que sean independientes de la realización de los Proyectos del PROCITROPICOS. Los siguientes perfiles cumplen con ese propósito:

---

<sup>4</sup> Acuerdo N° 05/94 de la Comisión Directiva de PROCITROPICOS, tomado durante la V Reunión Ordinaria, realizada en Caracas, Venezuela, los días 8 y 9 de diciembre de 1994.

1. Un experto en los aspectos institucionales y en las problemáticas generales de la región –tanto en sus aspectos técnicos como económicos–, quien actuará como Coordinador (Jefe) del Equipo.
2. Un experto en los principales ecosistemas cubiertos por el Programa Cooperativo, buen conocedor del mandato y de los programas de las instituciones nacionales e internacionales vinculadas a esta temática.

El Equipo de Evaluación analizará los avances (logros y fallas) del Programa Cooperativo, teniendo en cuenta el mandato inicial de la Primera Etapa y los cuatro aspectos siguientes:

1. El primer aspecto corresponde a la evaluación de los avances del Programa Cooperativo (logros y fallas) en vista del mandato inicial para la Primera Etapa, a ser realizado mediante el análisis de los productos disponibles:
  - a. El Convenio de Cooperación.
  - b. El documento constitutivo<sup>5</sup>, que definió sus bases conceptuales, objetivos, cobertura espacial, criterios centrales, instituciones participantes, estructura organizativa, costos y calendario de acciones del Programa Cooperativo.
  - c. El Marco Conceptual del Programa Cooperativo<sup>6</sup>.
  - d. Otros documentos publicados.
  - e. Informes de avance de los Proyectos.
  - f. Entrevistas a personalidades de las Instituciones miembros, asociadas y beneficiarias.

Los criterios relevantes para esta parte de la evaluación son:

- a. La identificación y el uso de los conocimientos disponibles (el estado del arte regional e internacional en los dominios de los cuatro proyectos).
  - b. La calidad del diagnóstico y de las propuestas.
  - c. La identificación de los socios y de los donantes para la realización de los proyectos.
  - d. La calidad de los trabajos de realizados (ensayos de validación y difusión, levantamientos, capacitación,...) y de los nuevos conocimientos adquiridos.
2. El segundo aspecto se refiere al análisis institucional de la estructura del Programa Cooperativo y de su funcionamiento, incluyendo:
    - a. La Comisión Directiva.
    - b. El Consejo Científico.
    - c. La Secretaría Ejecutiva.
    - d. Los Coordinadores Internacionales.

Los criterios relevantes para esta parte de la evaluación también incluyen:

- a. Las relaciones con la Sede del IICA y con sus Agencias de Cooperación Técnica en los países.
- b. Las relaciones con las instituciones nacionales e internacionales.
- c. Los aspectos de financiamiento y captación de recursos.
- d. Un análisis de la sostenibilidad institucional del propio Programa Cooperativo.

---

<sup>5</sup> IICA. Programa Cooperativo de Generación y Transferencia de Tecnología para los Trópicos Suramericanos (PROCITROPICOS), Noviembre, 1990. San José, Costa Rica.

<sup>6</sup> PROCITROPICOS. Marco Conceptual, Versión III, Brasilia, 1993.

3. El tercer aspecto se relaciona con el análisis y discusión de las perspectivas y oportunidades para la Segunda Etapa del Programa Cooperativo, incluyendo:
  - a. Ideas para nuevas iniciativas y proyectos.
  - b. Nuevas alianzas estratégicas.
  - c. Nuevas fuentes de financiamiento.
  - d. La formulación de nuevas propuestas organizacionales.
  
4. Como consecuencia de los anteriores, el cuarto aspecto es que la evaluación externa, además de concentrarse en el análisis de los productos del Programa Cooperativo (proyectos, actividades de capacitación,...) y en las perspectivas y oportunidades para el futuro, también deberá analizar el "proceso de construcción" del Programa y de sus proyectos.

#### **III. PROGRAMA Y CALENDARIO**

La evaluación externa será realizada durante un período de tres semanas, y tendrá, en principio, el siguiente programa general:

1. Dos días iniciales en la Sede del IICA en San José, Costa Rica, para contactos con Directores del Instituto, el Presidente de la Comisión Directiva (Rafael Vera), el Presidente del Consejo Científico de PROCITROPICOS (José M. Toledo) y los miembros de la Secretaría Ejecutiva.
2. Trece días de visitas a los países.
3. Cinco días para análisis, síntesis, conclusiones y redacción del informe, en la Sede de la Secretaría Ejecutiva, en Brasilia, DF, Brasil.

En función de la disponibilidad de las personas e instituciones involucradas en la evaluación, el período más adecuado será del 16 de octubre al 4 de noviembre de 1995. Un programa detallado será elaborado entre los miembros del Equipo de Evaluación y la Secretaría Ejecutiva.

#### **IV. APOYO LOGISTICO Y ADMINISTRATIVO**

La Secretaría Ejecutiva de PROCITROPICOS brindará a los miembros del Equipo de Evaluación todo el apoyo logístico y los servicios administrativos necesarios.

**ANNEX 2**

**RELATIONS OF PROCITROPICOS  
WITH INSTITUTIONS VISITED**





Relations of PROCIPTROPICOS with Institutions Visited

Country	Acronym <sup>1</sup>	Main Activity	Level	Nature <sup>2</sup>	Insertion <sup>3</sup>	Relationship <sup>4</sup>	Interest <sup>5</sup>
Venezuela	FONAIAP	Agr. Research	National	OG	++ + <sup>6</sup>	Savannahs	++ +
	ASOPORTUGUESA	Agr. Production	Federal	Private sector	+	Savannahs	++
	ICA <sup>7</sup>	Agriculture Service	National	GO	+	Sav/Forest	+
Colombia <sup>7</sup>	CORPOICA <sup>8</sup>	Agr. Research	National	GO	+++	Sav/Forest	++
	Acronym	Main Activity	Level	Nature	Insertion	Relationship	Interest
	CIAT	Agr. Research; Training; GIS; Genetics Resources Biotechnology	International	IO	+++	Savannahs Forest Tropigen GIS/Info	++ +
	IPGRI (Regional Office)	Genetics Resources	International	IO	+++	Tropigen Network	++ +
	INIAP	Agr. Research	National	GO	+	Forest	++
Ecuador	UICN (Regional Office)	Natural Resources	International	ONG	++	Forest	++
	PROFORS	Forest Program	Regional	NGO	+++	Forest	++
	CAAM	Environmental	National	GO	+	Forest	+
Peru	INEFAN	Forest	National	GO	+++	Forest	+
	INIA Sede	Agr. Research	Nacional	GO	++	Forest	++
	INIA (Pucallpa)	Agr. Research	Regional	GO	+++	Forest	++
	IIAP (Pucallpa)	Agr. Reserach	Regional	GO	++	Forest	+
	IVITA	Livestock Research	Regional	University	++	Forest	+
	MA (Ucayali)	Agr. Development	Regional	GO	+++	Forest	+
	Gob. Reg. (Ucayali)	Development	Regional	OG	++	Forest	++ +
	Von Humbolt	Forest Development	Regional	OG	+++	Forest	+
	CODESU	Farming Development	Regional	CO	+++	Forest	++ +
	FUNDEAGRO	Agr. Research	National	ONG	++	Forest	++ +
TCA	Amazonian Cooperation	International	OIG	+++	Forest	++ +	
CIP	Agr. Research, Genetics Resources	International	OI	+	Tropigen Network	++ +	

Relations of PROCITROPICOS with Institutions Visited								
Country	Acronym	Main Activity	Level	Nature	Insertion	Relationship	Interest	
	CE&DAP <sup>10</sup>	Agr. Development	National	ONG	+	Forest	+	
Bolivia	IBTA	Agr. Research	National	GO	+	Forest	++	
	CIAT (Sta. Cruz)	Agr. Research	Regional	GO	+++	Savannahs	+++	
	PRODISA	Farming Development	Regional	GO	+++	Forest	++	
	CAO	Agr. Production	Regional	Private sector	++	Savannahs	++	
	PROMASOR	Agr. Production	Regional	Private sector	+	Savannahs	+	
	FEGASACRUZ	Agr. Production	Regional	Private sector I	+	Savannahs	+	
	CAICO	Production Cooper.	Local	Private sector I	++	Savannahs	+++	
	RDS	Information Network	National	GO/NGO	+++	Forest	++	
Brazil	EMBRAPA Headquarter	Agr. Research	National	GO	+++	Sav/Forest	+++	
	CENARGEN	Genetics Resources	National	GO	+++	Grac/Info.	+++	
	CPATU	Agr. Research	Regional	GO	+++	Forest	+++	
	FCAP	University Document	Regional	GO	+++	Forest	+++	
	LAET	Inv. Agropecuaria	Regional	NGO	+++	Forest	+++	
	CPAO	Agr. Research	Regional	GO	+++	Savannahs	+++	
	CNPGC	Livestock Research	National	GO	+++	Savannahs	+++	
	CPAC	Agr. Research	Regional	GO	+++	Savannahs	+++	
	CNPAF	Agr. Research	National	GO	+++	Savannahs	+++	
	CIRAD	Agr. Research	International	IO	+++	Savannahs	+++	

- 
- 1 See list - Annex 4.
  - 2 GO = Governmental Organism; IO = International Organism; IGO = Intergovernmental Organism; NGO = Non-Governmental Organism; CO = Consortium of OG & NGO institutions.
  - 3 Insertion of PROCITROPICOS issues.
  - 4 List of PROCITROPICOS projects.
  - 5 Interest on PROCITROPICOS.
  - 6 + = Low; ++ = Medium; +++ = High.
  - 7 Three Colombian institutions (SINCHI, INDERENA and CONIF), that are quite important in matters of natural resources, were invited to attend to ICA's meeting, but they didn't participate. So, it is not possible to have an idea of their development level and interest on PROCITROPICOS.
  - 8 ICA has signed the Agreement that established PROCITROPICOS. It is Colombia's representative within the Board of Directors and the most important Program's contact. However, since the research responsibilities have been transferred to CORPOCA and as the germplasm bank will pass to CORPOCA, ICA's relations with PROCITROPICOS have not been quite effective.
  - 9 For the reasons mentioned in footnote 8, PROCITROPICOS relations with ICA have been almost effectless. This situation is bound to change very soon, as CORPOCA will be indicated by MOA the Colombian representative in PROCITROPICOS in the near future. As soon as those conjunctural issues are surpassed, the relations with PROCITROPICOS are likely to strenghten out.
  - 10 Relatively non-active at the present time, since IDRC's financial resources have ended up. The person found comes from CE&DAP and does not represent RINAP in Lima.



**ANNEX 3**

**LIST OF INSTITUTIONS & PERSONS CONTACTED**





## **ANEXO 3**

### **Instituciones y Personas Contactadas**

#### **Costa Rica**

##### **PROCITROPICOS**

<b>Dr. Rafael Vera</b>	<b>Presidente, Comisión Directiva</b>
<b>Dr. José M. Toledo</b>	<b>Presidente, Consejo Científico</b>
<b>Dr. Víctor Palma</b>	<b>Secretario Ejecutivo</b>
<b>Dr. René Billaz</b>	<b>Asesor Científico</b>

##### **IICA**

<b>Dr. Roberto Hernández</b>	<b>Director General Encargado</b>
<b>Dr. Antonio Paulo Mendes Galvão</b>	<b>Director, Area II</b>
<b>Dr. Gerardo Escudero</b>	<b>Coordinador, DIREX</b>
<b>Dr. Fernando del Risco</b>	<b>Director, DIPRAT</b>
<b>Dr. Jorge Ardila</b>	<b>Especialista en Ciencia y Tecnología, Recursos Naturales y Producción Agropecuaria</b>
<b>Dr. Lizardo de las Casas</b>	<b>Director, Área I</b>
<b>Dr. Víctor del Angel</b>	<b>DIREX</b>
<b>Dra. Margarita Castillo</b>	<b>Auditora Administrativa y Financiera</b>
<b>Dr. Finn Damtoft</b>	<b>Director, Servicio Especializado II</b>
<b>Dr. Jaime A. Viñas Román</b>	<b>Director, Servicio Especializado I</b>
<b>Dr. Gustavo Enriquez</b>	<b>Representante del IICA en Costa Rica</b>

##### **CIRAD**

<b>Dr. Jean Laboucheix</b>	<b>Representante del CIRAD para América Latina y Caribe</b>
----------------------------	---

##### **CIAT**

<b>Dr. Raúl R. Vera</b>	<b>Jefe, Programa Tierras Bajas</b>
-------------------------	-------------------------------------

#### **Venezuela**

##### **FONAIAP**

<b>Dr. Tiburcio Linares</b>	<b>Director General, FONAIAP</b>
<b>Dr. Juan Comerma</b>	<b>Junta Administradora</b>
<b>Dr. Iván Angulo</b>	<b>Gerente, Relaciones Institucionales</b>
<b>Dr. Antonio Sánchez</b>	<b>Jefe del Programa RNR</b>

### **FONAIAP/CENIAP**

Ing. Agr. Iraida Rodriguez  
Zoot. Luis Navarro  
Med. Vet. Luis Sabino

Investigadora, Especialista en Pastos  
Investigador  
Investigador

### **FONAIAP/ANZOATEGUI**

Ing. Jesús Peña  
Ing. Lorenzo Velásquez  
Ing. Luis Gil  
Sr. Hector Alibardi  
Sr. José Luis Alvarez

Investigador, Especialista en Transferencia de Tecnología  
Especialista en Suelos  
Investigador, Especialista en Suelos  
Agricultor, Finca de Referencia, Turén  
Agricultor, Finca de Referencia, Acarigua

### **FONAIAP/PORTUGUESA**

Ing. Freddy Quintero  
Ing. Tania Rodriguez  
Sr. Oscar Roldán  
Sr. José Luis Alvarez  
Sr. Eloy Alvarez  
Ing. Maria Teresa de Valenzuela  
Ing. Antonio José Riego  
Ing. Mireya Mireles

Investigador, Especialista en Suelos  
Investigadora, Especialista en Suelos  
Agricultor Directivo ASOPORTUGUESA  
Agricultor, Acarigua, Portuguesa  
Agricultor Directivo ASOPORTUGUESA  
Geneticista/APROSCELLO  
Asistencia Técnica, APROSCELLO  
Investigadora IIAG/FONAIAP

### **FONAIAP/GUARICO**

Sr. Pedro Solano  
Ing. Luis Vilafn

Agricultor, Valle de la Pascua, Guárico  
Investigador, Especialista en Algodón

### **NCA**

Dr. Eduardo Lindarte

Especialista

### **MAC**

Dr. Luis F. Arias

Director General Sectorial - Caracas

## **Colombia**

### **ICA**

Dr. Luis Romano  
Dr. Carlos Silva

Coordinador Internacional, PROCIANDINO  
Recursos Genéticos

## **CORPOICA**

<b>Dr. Jaime Triana</b>	<b>Director Regional 8</b>
<b>Ing. Hernando Suárez</b>	<b>Investigador</b>
<b>Dr. Juan Jaramillo V.</b>	<b>Subdirector de Sistemas de Producción</b>
<b>Dra. Margarita Ramírez</b>	<b>Investigadora</b>

## **Centro de Investigación La Libertad**

<b>Ing. Enrique Prieto</b>	<b>Director</b>
<b>Ing. Alfonso Martínez Garnica</b>	<b>Investigador en Palma y Plátanos</b>
<b>Ing. José Eurípedes Baquero</b>	<b>Investigador en Arroz</b>

## **IICA**

<b>Dr. Edgardo Moscardi</b>	<b>Representante en Colombia</b>
<b>Dr. Alfonso Chirinos</b>	<b>Representante Adjunto</b>
<b>Dr. Absalón Machado</b>	<b>Especialista en Desarrollo Rural</b>
<b>Dr. Ismael Peña D.</b>	<b>Especialista en Capacitación</b>

## **FEDEARROZ**

<b>Sr. Carlos Guzmán Martínez</b>	<b>Director</b>
-----------------------------------	-----------------

## **FENALCE**

<b>Sr. Antonio Duarte</b>	<b>Director</b>
---------------------------	-----------------

## **CORMAD**

<b>Dr. Carlos Gavilanes C.</b>	<b>Director Ejecutivo</b>
--------------------------------	---------------------------

## **Universidad de los Llanos**

<b>Dr. Alvaro Ocampo Durán</b>	<b>Profesor</b>
--------------------------------	-----------------

## **Agricultores**

<b>Sr. Carlos Molina</b>	<b>Agricultor, Villavicencio</b>
<b>Sr. Gonzalo Becerra</b>	<b>Agricultor, Central Arrocería del Llano, Villavicencio</b>

## **CIAT**

<b>Dr. Grant Scobie</b>	<b>Director General</b>
<b>Dr. Gerardo Habich</b>	<b>Associate Director, Institutional Relations</b>
<b>Dr. Peter Jones</b>	<b>Agricultural Geographer, Land Mgt. Program</b>
<b>Dr. Elcio Guimarães</b>	<b>Plant Breeder, Rice Program</b>
<b>Dr. Stanley Wood</b>	<b>Impact Assessment Unit</b>

**Dr. Daniel Debouck**  
**Dr. Joseph Tohme**  
**Dra. Maria Cristina Amézquita**

**Jefe, Recursos Genéticos**  
**Acting Head, Biotechnology Research Unit**  
**Head, Biometrics Unit**

**IPGRI (Oficina en América Latina)**

**Dr. Mikkel Grum**

**Agrónomo**

**Ecuador**

**INIAP**

**Dr. Jaime Tola**

**Director General**

**Estación Experimental Santa Catalina**

**Ing. Jefferson Galarza**

**Investigador**

**INCA**

**Dr. Mario Infante**  
**Dr. Ciro Villamizar**

**Representante en Ecuador**  
**Especialista en Generación y Transferencia de Tecnología**

**CAAM**

**Ing. Luis Carrera de la Torre**

**Presidente**

**UICN**

**Ing. Eduardo Mansur**  
**Ing. Tarcisio Granizo**

**Programa Bosques**

**INEFAN**

**Ing. Jorge Barba**

**Director Ejecutivo**

**PROFORS**

**Ing. Ekkehard Boese**

**Investigador**

**Perú**

**INIA**

**Dr. Manuel Arca B.**  
**Dr. Juan Chávez C.**

**Director**  
**Gerente de Ejecución, Proyecto Transformación**  
**Agropecuaria**

**Ing. Abner Vértiz**  
**Ing. Hector Vidaurre**

**Director de la Estación Experimental en Pucallpa**  
**Jefe Programa Nacional de Investigación en**  
**Agroforestería, Pucallpa**

#### **IICA**

**Dr. Martín Ramírez Blanco**  
**Ing. Manuel Villavicencio**  
**Ing. Francisco Ferrucci**

**Representante en el Perú**  
**Consultor**  
**Especialista en Comercialización Agrícola**

#### **BOSQUE NACIONAL**

**Ing. Mauro Ríos Torres**

**Coordinador, Proyecto Bosque Nacional Alexander Von**  
**Humboldt, Pucallpa**

#### **GOBIERNO REGIONAL**

**Dr. Silos González**  
**Dr. Miguel Ara**

**Presidente**  
**Secretario Técnico, Consejo Transitorio de Administración**  
**Regional, Pucallpa**

#### **MINISTERIO DE AGRICULTURA**

**Ing. Olga Ríos**  
**Ing. Everio Astocarza**

**Directora Regional Agraria, Ucayali, Pucallpa**  
**Director General de Sanidad Vegetal**

#### **TCA**

**Dra. Cecilia Galarreta B.**  
**Dr. César Villacorta A.**

**Primera Secretaria**  
**Coordinador de la Comisión Especial de Medio Ambiente de**  
**la Amazonía (CEMAA)**  
**Coordinador de la Comisión Especial de Ciencia y**  
**Tecnología de la Amazonía (CECTA)**

**Dr. Alfredo Rondón C.**

#### **PROCITROPICOS**

**Dr. Alfredo Riesco**  
**Dr. Enrique Toledo**

**Consultor**  
**Consultor**

#### **CE&DAP**

**Dr. Wilfredo Caballero**  
**Dr. José Gil Delgado**

**Técnico**

#### **CODESU**

**Dr. José M. Toledo**

**Presidente**

#### **FUNDEAGRO**

**Ing. Keneth Reátegui**  
**Dr. José Javier Dancé**

**Investigador**  
**Presidente y Director Ejecutivo**

**INRENA**

**Dr. Jorge Millones Olano**

**Director General de Medio Ambiente Rural**

**IAP**

**Dr. Miguel Valdivieso**

**Director Centro Regional de Investigación, Pucallpa**

**RINAP**

**Enrique La Hoz Brito**

**Secretario Ejecutivo**

**CIP**

**Dr. José Luis Rueda  
Dr. Fernando Ezeta**

**Coordinador, Recursos Naturales Andinos  
Representante Regional, Latino América y El Caribe**

**Bolivia**

**IBTA**

**Dr. Rafael Vera**

**Director General**

**IICA**

**Dr. Benjamín Jara G.**

**Representante en Bolivia**

**PNUD**

**Dr. Alan Bojanic**

**Coordinador, RDS**

**CIAT (Santa Cruz)**

**Dr. Gustavo Pereyra  
Ing. Carlos Manchego L.**

**Director Ejecutivo  
Coordinador Unidades Operativas Zonales**

**PROMASOR**

**Ing. Mamerto Cortéz Gutiérrez  
Ing. Modesto Zaballos**

**Gerente General  
Jefe, Departamento Técnico**

**FEGASACRUZ**

**Sr. Víctor Añez**

**Vica Presidente**

## **COOPERATIVA COLONIAS OKINAWA**

**Sr. Masayuri Kudaka**                      **Gerente General**

## **PRODISA**

**Ing. Carlos Roca**                      **Asesor**

## **CAO**

**Ing. Jorge Suárez**                      **Departamento Técnico Agrícola**  
**Lic. René Vargas**                      **Gerente de Planificación y Gestión**

## **Brasil**

### ***EMBRAPA (Sede)***

**Dr. Alberto Duque Portugal**              **Presidente**  
**Dr. José Roberto Rodrigues Peres**      **Director Ejecutivo**

### **EMBRAPA/CNPQC**

**Dr. Rafael Geraldo de Oliveira A.**      **Jefe Adjunto**  
**Dr. Armindo Kichel**                      **Investigador**  
**Dr. Manuel Claudio Motta M.**          **Investigador**  
**Dr. Jairo Mendes Veira**                  **Investigador**  
**Dr. José Marques da Silva**              **Investigador**  
**Dr. Eduardo Simões Correa**              **Difusión y Transferencia Tecnológica**  
**Dr. Burt Grof**                              **Fitomejorador, Leguminosas Forrageras**

### **EMBRAPA/CPAQ**

**Dr. Camilo Plácido Vieira**              **Difusión y Transferencia Tecnológica**  
**Dr. Julio Salton**                          **Investigador, Suelos**

### **Finca Remanso**

**Ing. Sidnei Tambosi**                      **Técnico**

### **EMBRAPA/CENARGEN**

**Dr. Afonso Celso Candeira Valois**      **Jefe General**  
**Dra. Clara Goedert**                      **Investigadora**  
**Dr. Francisco Ricardo Ferreira**          **Investigador**  
**Dr. Goran Nestic**                          **Investigador**  
**Dr. Eduardo Vaz Melo C.**                  **Investigador**

### **EMBRAPA/CNPAE**

<b>Dr. Homero Aidar</b>	<b>Jefe General</b>
<b>Dr. João Kluthcouski</b>	<b>Investigador</b>
<b>Dr. Itamar Pereira de Oliveira</b>	<b>Investigador</b>
<b>Dr. Luis Carlos Balbino</b>	<b>Investigador</b>

### **EMBRAPA/CPAC**

<b>Dr. Jamil Macedo</b>	<b>Jefe General</b>
<b>Dr. Alexandre Barcelos</b>	<b>Investigador</b>
<b>Dr. Darci Tercio Gomes</b>	<b>Investigador</b>
<b>Dr. Carlos Magno da Rocha</b>	<b>Investigador</b>

### **EMBRAPA/CPATU**

<b>Dr. Emanuel Adilson Souza Serrão</b>	<b>Jefe Adjunto Técnico de Investigación y Desarrollo</b>
<b>Dr. Pedro Celestino Filho</b>	<b>Jefe, CPATU/Altamira</b>
<b>Dr. Antonio Carlos da Rocha</b>	<b>Investigador</b>

### **NCA**

<b>Dr. Carlos E. Aquino González</b>	<b>Director General</b>
<b>Dr. Gilberto Páez</b>	<b>Representante en el Brasil</b>

### **CIRAD**

<b>Dr. François Bertin</b>	<b>Representante en el Brasil</b>
----------------------------	-----------------------------------

### **CIAT**

<b>Dr. Esteban Pizarro</b>	<b>Agrónomo</b>
----------------------------	-----------------

### **LAET/GRET**

<b>Dr. Christian Castellanet</b>	<b>Fitopatólogo Agroflorestral</b>
----------------------------------	------------------------------------

### **SECRETARIA EJECUTIVA DE PROCITROPICOS**

<b>Dr. Víctor Palma</b>	<b>Director Ejecutivo</b>
<b>Dr. René Billaz</b>	<b>Asesor Científico</b>
<b>Sr. Mario Suzuki</b>	<b>Administrador Financiero</b>
<b>Sra. Mónica Tollini</b>	<b>Especialista en Acompañamiento de Proyectos</b>
<b>Sra. Maricén Rojas</b>	<b>Secretaria Ejecutiva</b>
<b>Sra. Joëlle Perricault</b>	<b>Secretaria Ejecutiva</b>
<b>Sr. Raúl Oñate</b>	<b>Auxiliar administrativo</b>



**ANNEX 4**  
**ACRONYM OF INSTITUTIONS**



## ANEXO 4

### Siglas de las Instituciones

<b>CAAM</b>	Comisión Asesora Ambiental, Quito, Ecuador
<b>CAICO</b>	Cooperativa Agropecuaria Integral Colonias Okinawa Ltda, Santa Cruz, Bolivia
<b>CAO</b>	Cámara Agropecuaria del Oriente, Santa Cruz, Bolivia
<b>CE&amp;DAP</b>	Centro de Estudios y Desarrollo Agrario del Perú
<b>CENARGEN</b>	<i>Centro Nacional de Pesquisa de Recursos Genéticos e Biotecnologia (EMBRAPA), Brasil</i>
<b>CIAT</b>	Centro de Investigación Agrícola Tropical, Santa Cruz, Bolivia
<b>CIAT</b>	Centro Internacional de Agricultura Tropical, Cali, Colombia
<b>CIRAD</b>	<i>Centre de Coopération Internationale en Recherche Agronomique pour le Développement</i>
<b>CNPGC</b>	<i>Centro Nacional de Pesquisa de Gado de Corte (EMBRAPA), Brasil</i>
<b>CODESU</b>	Consortio para el Desarrollo Sostenible de Ucayali, Perú
<b>CONIF</b>	Consejo Nacional de Investigación Forestal, Colombia
<b>CORMAD</b>	Corporación de Investigación Agroecológica de la Orinoquía Mal Drenada, Arauca, Colombia
<b>CORPOICA</b>	Corporación Colombiana de Investigación Agropecuaria
<b>CPAC</b>	<i>Centro de Pesquisa Agropecuária dos Cerrados (EMBRAPA), Brasil</i>
<b>CPAO</b>	<i>Centro de Pesquisa Agropecuária do Oeste (EMBRAPA), Brasil</i>
<b>CPATU</b>	<i>Centro de Pesquisa Agroflorestal da Amazônia Oriental (EMBRAPA), Brasil</i>
<b>EMBRAPA</b>	<i>Empresa Brasileira de Pesquisa Agropecuária, Brasil</i>
<b>FEDEARROZ</b>	Federación Nacional de Productores de Arroz, Colombia
<b>FEGASACRUZ</b>	Federación de Ganaderos de Santa Cruz, Santa Cruz, Bolivia

<b>FENALCE</b>	<b>Federacion Nacional de Cultivadores de Cereales, Colombia</b>
<b>FUNDEAGRO</b>	<b>Fundación para el Desarrollo del Agro, Perú</b>
<b>IBTA</b>	<b>Instituto Boliviano de Tecnología Agropecuaria, La Paz, Bolivia</b>
<b>ICA</b>	<b>Instituto Colombiano Agropecuario, Bogotá, Colombia</b>
<b>IIAP</b>	<b>Instituto de Investigaciones de la Amazonía Peruana</b>
<b>IICA</b>	<b>Instituto Interamericano de Cooperación para la Agricultura</b>
<b>INDERENA</b>	<b>Instituto de los Recursos Naturales y del Medio Ambiente, Colombia</b>
<b>INEFAN</b>	<b>Instituto Ecuatoriano Forestal de Areas Naturales y Vida Silvestre, Quito, Ecuador</b>
<b>INIA</b>	<b>Instituto Nacional de Investigación Agraria, Perú</b>
<b>INIAP</b>	<b>Instituto Nacional Autónomo de Investigaciones Agropecuarias, Ecuador</b>
<b>INRENA</b>	<b>Instituto Nacional de Recursos Naturales, Perú</b>
<b>IPGRI</b>	<b><i>International Plant Genetic Resources Institute</i></b>
<b>IVITA</b>	<b>Instituto Veterinario de Investigación de Trópicos y Altura, Perú</b>
<b>LAET/GRET</b>	<b><i>Laboratório Agroflorestral da Transamazônia, Altamira, Brasil</i></b>
<b>MA/UCAYALI</b>	<b>Ministerio de Agricultura, Dirección Regional Agraria de Ucayali. Pucallpa, Perú</b>
<b>PNUD</b>	<b>Programa de las Naciones Unidas para el Desarrollo</b>
<b>PROCIANDINO</b>	<b>Programa de Investigación y Transferencia de Tecnología Agropecuaria para la Subregión Andina/IICA</b>
<b>PRODISA</b>	<b>Programa de Desarrollo de La Provincias de Ichilo y Sara, Bolivia.</b>
<b>PROFORS</b>	<b>Programa Forestal Sucumbíos, Ecuador</b>
<b>PROMASUR</b>	<b>Asociación Nacional de Productores de Maíz, Sorgo, Frijol y Girasol, Santa Cruz, Bolivia</b>
<b>RDS</b>	<b>Red de Desarrollo Sostenible, Bolivia</b>

**SINCHI**

Instituto Amazónico de Investigaciones Científicas (ex COA),  
Colombia

**TCA**

Tratado de Cooperación Amazónica

**UICN**

Unión Mundial para la Conservación de la Naturaleza, Quito, Ecuador





*INSTITUTO INTERAMERICANO DE COOPERACION PARA LA AGRICULTURA  
PROCITROPICOS – SECRETARIA EJECUTIVA  
SHIS QI 05, CONJUNTO 9, BLOCO D, COMÉRCIO LOCAL, CEP 71615-090  
CAIXA POSTAL 02995, CEP 71609-970, BRASÍLIA, DF, BRASIL  
TELEFONOS: (55-61) 248.5477 Y 248.5358, FAX: (55-61) 248.5807 Y 248.5845  
E.mail: < iica@cr-df.rnp.br >*