

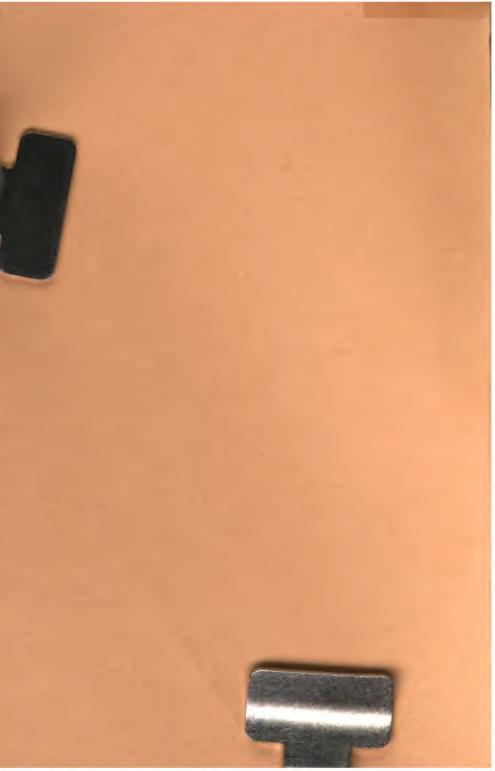


INTER-AMERICAN REFERENCE CENTER FOR AGRICULTURAL INFORMATION



Technical Consortium

Inter-American Institute for Cooperation on Agriculture Headquarters, Coronado, Costa Rica







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FOREWORD

The present document is a preliminary version of the strategic framework for the operation of the Inter-American Reference Center for Agricultural Information (CRIIA). The Technical Consortium is distributing this version to all the units of the Institute, with the request that they study it and submit any comments they deem appropriate, which will be used in preparing the final version.

The document summarizes in four chapters the basic components of the Center. It begins with an introduction on IICA's role in the field of technical cooperation, and on the importance attached to information within the Institute.

Chapter II lays out the strategic framework of the CRIIA, including its mission, vision, objectives and strategy. Attention is drawn to the importance of putting CRIIA into operation with our existing human and technological resources, which will enable us to begin delivering products in the near term.

Chapter III presents the criteria to be considered in the design and operation of CRIIA, the focus of which is decentralization. The RCs and TCAs will play a key role in the operation of the Center; through them, CRIIA will coordinate actions with public and private institutions in the Member States, aimed at deciding which services and products the Member States need and which ones the Institute can offer.

Chapter IV presents the organization of CRIIA, as a unit under the Technical Consortium, describing the basic structure and the responsibilities of the people in charge at different levels.

This document was prepared by the Technical Consortium with support from the Directorate of Informatics and its Director, Marta Alencar. Other contributors include Roman Solera Andara, as General Coordinator; Alfredo Valerio, from the Technical Communication and Dissemination Unit; Mario Pensado, from the Technical Management Unit; Karina Ramirez, from CECADI; Marta Vasquez, from the Venezuela Library; and Franz Martin and Joaquin Arias, from the

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Inter-American Reference Center for Agricultural Information

Area of Policies and Trade. Overall supervision was provided by Dr. Gerardo Escudero, Manager of the Technical Consortium.

I.INTRODUCTION

The Inter-American Institute for Cooperation on Agriculture (IICA), as the specialized agency for agriculture of the Inter-American System, focuses its efforts on helping the countries of the Americas meet the challenges posed by the need to make their agricultural sectors more competitive and Improve living conditions in rural areas.

In order to meet these challenges, IICA provides technical cooperation through six strategic areas, comprising four areas of thematic concentration:

- Policies and Trade;
- Science, Technology and Natural Resources;
- Agricultural Health; and
- Rural Development,

plus two areas which, in addition to being thematic in nature, cut across all the Institute's cooperation actions:

- Training and Education, and
- Information and Communications.

¹ Agriculture: Beyond a Sectoral View. 1998-2002 MTP.

These areas work to fulfill the cooperation needs of the Member States, through direct support; research and studies; training; the dissemination and exchange of information; horizontal cooperation networks; support for forums; technical-scientific, financial and administrative brokerage; documentation and dissemination of experiences; project formulation; and special cooperation with research and educational institutions.

In the field of dissemination and exchanges of technical information, the Institute has acquired information and communications technologies that will make it possible to provide farmers with information they need to take advantage of opportunities offered by markets, and with the technology needed to make the agricultural sectors of the Member States more competitive. The unit developed to meet this challenge is the *Inter-American Reference Center for Agricultural Information (CRIIA)*.

II. STRATEGIC FRAMEWORK

1.The Concept

According to the 1998-2002 Medium Term Plan,² "IICA will consolidate the Inter-American Reference Center for Agricultural Information (CRIIA), which will facilitate the flow of up-to-date information; provide IICA's Member States with important agrosocioeconomic information for decision making by public and private organizations; and provide information to other international organizations on a reciprocal basis."

Therefore, CRIIA is defined as the articulator of a number of network-based information systems in the Americas, from the local to the hemispheric level. It facilitates dissemination and exchanges of information for decision making within public and private organizations in the Member States.

It coordinates replies to requests for information submitted by the Member States; promotes the

² Proposed 1998-2002 MTP

decentralization of same; fosters participation in networks; contributes to decision making; facilitates exchanges of agro-socioeconomic information among countries; respects the autonomy of the participating units; and identifies and shares successful experiences in the operation of technical information systems, based on a philosophy of cooperation with the countries.

It is important to point out that CRIIA does not validate information, which is the responsibility of the administrators of the different data bases and information systems in operation in the countries.³

CRIIA's principal clients comprise the public sector, the private sector, the academic sector, IICA and individual users. These clients can both request from and provide information to CRIIA.

³ <u>Datum</u>. Raw facts or figures that become information when they are transformed for the purpose of communicating an idea or conveying knowledge (Sistemas de Informacion para la Administracion. James A. Senna. Grupo de Iberoamerica).

Data Base. An integrated collection of data, stored in different formats. (James A. Senna)

2.Mission

To project an image of excellence, as a Center which articulates information systems and implements a philosophy of technical cooperation which, recognizing the strategic value of information, seeks to make it available on an equal basis to its public and private clients, enabling them to define investment, production and marketing strategies, and make decisions aimed at enhancing competitiveness and increasing incomes and alleviating poverty, within the context of the sustainable development of agriculture and rural areas.

3. Vision

To take the lead in disseminating and exchanging relevant agro-socioeconomic information and successful experiences in this field, as a form of technical cooperation which, in addition, uses and makes available to the Member States information and communications technology as a contribution to the comprehensive transformation of agriculture in the Americas.

4.Objectives

4.1.General

To make available to our clients the agrosocioeconomic data bases and information systems generated within the Institute and by national, regional and international organizations, as support for decision making by farmers in the Member States.

4.2.Specific

- 4.2.1.To identify the agro-socioeconomic data bases and information systems already in operation, or being developed.
- 4.2.2.To facilitate access to and increase the availability of agricultural information generated at the local, national, regional and international levels.
- 4.2.3.To provide such technical support and training as may be required by the staff of CRIIA.
- 4.2.4.To establish strategic alliances with national and international organizations that generate relevant information.

5.Strategy

In order to ensure success in the implementation, operation and consolidation of CRIIA, we recognize that:

- There is a demand for information
- The need to exchange information is a shared and socially accepted fact
- Its viability will depend on the creation of an alliance with the public and private sectors, which will underpin its institutionalization and consolidation
- All actions programmed must produce results in the short term, without losing sight of the long term, which will facilitate its monitoring and make it possible to introduce changes over time.
- It must become an "intelligent center" if it is to be sustainable in the long term.

Also, we are aware that the process of facilitating the flow of information in the Americas is complex due to existing limitations, and that it is almost impossible for one organization to conduct such a process alone; however, it is necessary to promote the use and exchange of information, taking advantage of existing

initiatives, and to avoid duplication or redundancy with other information centers or systems.

5.1.First Phase

In an initial phase CRIIA will focus on the exchange of agro-socioeconomic information and successful local and regional experiences, as a means of demonstrating the benefits to be derived from sharing the information generated by and communication among the personnel of the institute.

Also, it will use the information technology that has been developed to reach as large an audience as possible and meet the needs of the Member States.

5.1.1. Available Data Bases

CRIIA operates with the data bases and information systems designed by the different areas of thematic concentration and support units, such as the Venezuela and Orton Libraries in Costa Rica, and the Rodrigo Peña Library in Colombia, making them vailable

to the Regional Centers and the TCAs. it will begin operations with the following systems:

The Information System for Policy Analysis, developed by the Area of Policies and Trade, contains a combination of mechanisms that are used to gather data and validate and generate time series on a daily, weekly and monthly basis, depending on whether it is information on production, prices, trade, etc. It offers tools for obtaining analyses of trends, cycles and seasonal prices, as well as analyses of the structure and performance of trade, by source and destination and level of penetration of a product in the international market; and for communicating the results. Include:

Price and market information system. Data bases on trade and wholesale prices in Peru, Costa Rica, Panama, Nicaragua and Colombia; and information on world trade in goods and agricultural products extracted from the data bases of FAO, EUROSTAD and the USDA.

Modei for the analysis of seasonal prices and their projections. Makes it possible to measure seasonal variations in the prices of a number of agricultural products in a given market; also, the model projects prices based on past patterns. Model for the analysis of the competitiveness of agriculture at the farm level. Software that makes is possible to measure competitiveness at the farm level, generate financial reports and calculate the nominal protection of crops planted against an international benchmark price.

Models for the analysis of trade in agricultural products. The model makes it possible to determine the revealed competitiveness of a product in a given market, and calculate the buoyancy of agricultural products on the export market. It also makes it possible to identify the distribution and weight of a country's agricultural products in the external market.

Model for monitoring agricultural inflation. Makes it possible to analyze the trend in agricultural inflation (monthly, annual and accumulated) at the national level, as well as the relative weight of the products within the index of agricultural prices.

Computerized procedure for the analysis of agrifood chains. Software the makes it possible to systematize information compiled in studies of chains.

Electronic Operating System for Commodity Exchange Pits. Software that enables commodity exchange pits to carry out their operations (management of guarantees, mandates, bids and

agreements). It also contains a data base for decision making in trading operations and allows for the electronic transfer of documents.

Electronic Operating System for Commodity Exchanges. Software that enables the commodity exchange to carry out its operations (management of guarantees, mandates, bids and agreements). it also contains a data base for decision making in trading operations and allows for the electronic transfer of documents to commodity exchange pits and a central (regional) commodity exchange.

Electronic Operating System for the Interconnection of Commodity Exchanges. Software that enables a central (regional or national) commodity exchange to interconnect commodity exchanges, to carry out its daily operations (management of guarantees, mandates, bids and agreements) and to maintain a data base for decision making in trading operations.

AGROINFO-Americas This is a hemisphere-wide system of integrated data base servers which contains

information to support agribusinesses in areas such as research, supply, demand, prices, statistics, plant and animal health, policies, calendars of events, forums, etc.

AGROINFO-Americas was developed by Texas A&M University (TAMU), with support from Caribbean Latin American Action (C/LAA) and IICA, which, under an agreement signed in April 1998, pledged to put it into operation and assume the following duties:

TAMU: to make available data base technology on the Web; to provide technical support for set up and maintenance; to develop applications and offer technical support

CLAA: to promote the involvement of the private sector; to provide support in the search for external funding

IICA: to promote the system in the public sectors of the 34 Member States; to provide training for users and to implement the system.

The goal of AGROINFO-Americas is to provide a structure that will ensure that the different organizations in each country have the means and incentives to produce and disseminate reliable, top-

quality information that Is essential to the competitiveness of the agricultural sector. Information can be categorized within a structured system of data base technology for the Web, meaning that the information can be accessed by region, country, product, organization and time period.⁴

Infoagro The Technical Consortium, the Technical Cooperation Agency in Costa Rica (TCA/CR) and the agricultural sector of that country developed and operate the agricultural information network known as Infoagro,⁵ which makes available to public and private institutions geo-referenced information on cities, highways, roads, rivers, climate, soil types, organizations, etc. in each of the agricultural regions of the country.

It also disseminates information on crops, public and private agricultural services, and human resources. It includes information packages on import

⁴ www.agroinfo.org

⁵ Created in Executive Decree 26978-MAG, published in Official Gazette 100, of May 26, 1996

requirements, tariffs, transportation services, trade agreements, sanitary regulations, etc.

it links the national level with the regional and local levels through Rural Information Centers (CRI), which are public or private entities in a position to receive and disseminate information at the local level, so that the clientele, mostly organizations of small- and medium-scale farmers, can use and appropriate the information.⁶

AGRI2000 This is an initiative of the Technical Consortium, through its Technical Communications and Dissemination Unit and the Orton Library. It consists of a metabase of data on agriculture which brings together the best bibliographic data bases specializing in agriculture and related sciences, produced by national and/or international institutions, which can be accessed through Internet on the IICA website?

IICA/SEPSA. Infoagro. An example of the modernization of information systems for the management of agribusinesses. Technical Work in Progress Series-IICA. April, 1998. www.infoagro.go.cr

⁷ www.iiica.ac.cr

Libraries **Agricultural** Network of and Documentation Centers of the Americas With support from the Kellogg Foundation, the Information and Agricultural Documentation System of the Americas will be established through the creation of networks of libraries and information centers, headed by the Venezuela Library, the Orton Library (IICA/CATIE) and the Rodrigo Peña Library, in Colombia, with the participation of the Inter-American Association of Librarians, Documentalists, and Specialists in Agricultural information (AiBDA)

Its purpose is to develop the capabilities of the countries of LAC to administer and operate national information systems that bring together the libraries and documentation centers in the agricultural sector; it also facilitates ongoing access to the scientific information generated in the countries on agriculture.

With this system, CRIIA will strengthen the activities carried out in the field of documental information, taking advantage of the existence and consolidation of AGRI2000, as well as the incorporation

of the documental component in the AGROINFO-Americas and Infoagro networks, to ensure the provision of more services and satisfy the great demand generated primarily by technicians, professionals, researchers, as well as students of centers of higher education and representatives of the small- and medium-scale agricultural enterprises in the countries of LAC.

Models of public-private research foundations. Information on the institutional situation and private-sector foundations that conduct research.

Intellectual property in agriculture. Information on what intellectual property is, the most frequent types in agriculture, situation in the countries of the Americas, and considerations for agricultural trade.

Institutional models in technological innovation at the national level. Capabilities and experience for advising the countries on the design and implementation of institutional models for research and

agricultural technological development, with emphasis on technological innovation.

Technological innovation and development policies. Capabilities and experience for advising the countries on the design and implementation of technological innovation and development policies.

Prospective analysis of agriculture, with emphasis on technology for competitive development. Existing capabilities for the diagnosis and prognosis of the agricultural sector, as input for proposing solutions.

Prototypes of models for reciprocal cooperation in research. Capability and experience in the design and implementation of mechanisms for reciprocal cooperation in research.

Data base on LAC production. Information on production, consumption, yield, exports of agricultural products from LAC through 1995. Data base in Access 97.

Methodologies for prioritizing and evaluating the impact of investment in ex-ante and ex-post agricultural research. Availability of several models and capability and experience in providing advice and applying and strengthening the capability to evaluate and prioritize at the project and strategic levels.

DREAM (Dynamic Research Evaluation for Management) program and manual. Software for exante evaluation of agricultural research. Capable of making three types of evaluations: 1) for small, open economies, 2) open economies with several regions within a single country, and 3) at the farm or post-harvest level.

FORAGRO. The purpose of the Regional Forum on Research and Technology Development is to facilitate cooperation and promote actions for the integration of the Regional Technological Innovation System, including the Hemispheric Agricultural Information System.

Agrosaiud XXI. The objectives of the Inter-American Agricultural Health Network are to coordinate with other technical cooperation agencies and to ensure that all the resources available within IICA's Area of Agricultural Health are used efficiently to support and strengthen initiatives aimed at modernizing the national systems, within the framework established by the WTO and under existing and future regional economic agreements established by the FTAA.

Agrosalud XXI seeks to foster greater communication, coordinate activities and minimize the duplication of efforts, with a view to achieving the greatest possible impact with the resources available, and in this way make available and exchange the information on agricultural health and food safety that is needed to be competitive on the international market.

Foro Rural Net This is an electronic means of communications that forms part of the System for Cooperation in Rural Development (SIDERSO), of IICA's Directorate of Sustainable Rural Development.

its objective is to generate discussion, comments and suggestions on documents being prepared, theses, theories, suppositions and a variety of topics which, if debated, will add to scientific and practical knowledge related to sustainable rural development; as well as to share experiences, disseminate news and report on the activities of the specialists who make up the forum.

The principal themes are the competitiveness of small farmers and rural micro-producers; gender, women, agriculture and rural development; and rural youths. It contains a section offering news, and another for documents offering information from around the world on these topics.

CODES The Sustainable Development Committee (CODES) articulates the activities of the different specialized units of IICA and facilitates the execution of alliances with other specialized institutions. It offers high-caliber technical cooperation, helping the countries to design, consolidate and strengthen their institutional systems, in order to ensure that they embrace the

concept of the sustainable development of agriculture and rural areas.

It facilitates, among other things, the sustainable development of agriculture and rural areas, and promotes alternative forms of sustainable development. It makes available all the information needed to orient future actions and decision making:

Methodology for Estimating the Level of Sustainable Development in Territorial Spaces. Novel methodology, supported by a calculus model, and software that makes it possible to estimate, initially, the level of sustainable development of a given space (country, region, municipality, river basin, etc.) This level is represented by an indicator -S3- which integrates the dimensions included in the analysis and at the same time designs an image called a "biogram." This reflects, in a radial figure, the degree of stability and, therefore, sustainability of the system analyzed. The reading of the reverse of this image also makes it possible to visualize quickly the level of imbalance among dimensions and, through this, shed light on the need to apply corrective instruments (policies).

Spaces. Information System. Practical guidelines for organizing a georeferenced information system whose objective is to facilitate the management of rural spaces (municipalities, regions, river basins, etc.). We consider that, by solving the problem of access, management and analysis of the multidimensional information of rural spaces, capitalizing on the advantages offered by current technology, the actors in the sustainable development of agriculture and its habitat could make better founded decisions.

Software for Generating Data Bases with Indicators of Sustainable Development. User-friendly software that takes the user step by step through the construction of multidimensional data bases. This program complements other meteorological instruments designed by the

Institute, whose purpose is the management of the sustainable development of rural spaces.

CEPPI

Data bases: Data base on IICA experiences, Data base on professional personnel, data base on consultants

Documentation Center. Contains 2758 project documents on investment projects, project profiles, sectoral studies and other information on international institutions and agencies.

Forums and Workshops CRIIA will make available to its clients all information generated in forums and workshops organized by the different areas of concentration of the Institute which is of value in reflecting on and developing a new vision of agriculture for the next millenium.

5.1.2.Available Technology

CRIIA uses the technology developed by the Institute in two basic fields: in the field of informatics, to provide greater coverage and rapid and easy access

for future users and clients; in the field of training, to update the knowledge of the personnel involved.

As regards agro-socioeconomic information, the technological infrastructure of the institute8 is used, which provides the basic tools for gathering, storing, organizing and exchanging information at the institutional level, with TCAs, RCs, and Headquarters, via e-mail, "mailing lists," electronic bulletin boards and data bases. It facilitates the integrated management of documents: mail, fax, workflow, images

In the field of training on information technology, CRIIA relies on both the technology developed by the Institute and the services offered on the market.

The first phase is under way and is expected to be concluded by June 1999, in accordance with the deadlines established and the calendar of activities programmed.

⁸ Technological Platform of IfCA. Directorate of Informatics. Technical Documents. May 8, 1997.

CRIIA. 1999 Plan of Operation, Technical Consortium, San Jose, Costa Rica.

5.2.Second Phase

in the second phase, CRiIA will concentrate its efforts on the consolidation of the national, regional and hemispheric systems, and on the incorporation of any new information systems designed by IICA or outside the institute, through strategic alliances with other national, regional or international entities, provided they offer data bases of use in supporting decision making by farmers in the Member States.

These include public and private organizations, NGOs and cooperation agencies such as FAO, ECLAC, the IDB, etc.

III.CRITERIA FOR OPERATION

1.Design

CRIIA will be designed as a network that facilitates the articulation and shared use of relevant data bases, adds to the success of activities and makes available all the gray literature¹⁰ produced in the Member States. Its operation is founded on the following principles:

Reciprocity: This means to make the data bases and information systems available and to facilitate their exchange among the Member States, in order to meet the needs of a community of users comprising both policymakers, and researchers, educators, operators of agribusinesses, among others, who require information for decision making.

Decentralization: CRIIA will operate at three levels: hemispheric, regional and national, maximizing local autonomy in order to guarantee the operation and

^{*}Gray literature* is information that was never published or was published informally, such as theses, annual reports, surveys, working documents, proceedings, statistical reports, maps, etc.

updating of the system and minimize dependence on the services at Headquarters.

Focus on the mission: CRIIA incorporates data bases and information systems that are related to the sustainable development of agriculture and rural areas, can contribute to efforts aimed at improving competitiveness and living conditions, and include materials related to the effective participation of women and young people in agricultural production chains.

These principles determine, in turn, the limitations and scope of CRIIA; it will be hemispheric in scope and will encompass subjects related to policies and trade; science, technology and natural resources; agricultural health; and rural development."

As for the data bases and information systems of the Institute, CRIIA will define the norms, specifications and standardized procedures for making them available to the Member States.

¹¹ That is, the areas of concentration of IICA

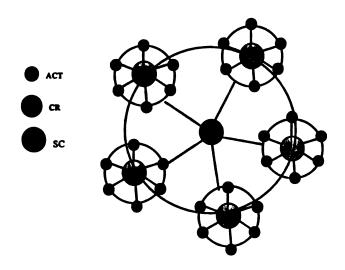
Regarding the data bases and information systems developed by the Member States, CRIIA will foster the coordination of the actions required for their dissemination. Also, it will enter into cooperation agreements and define operating procedures for exchanges.

With regard to the gray literature, CRIIA will coordinate with the TCA and corresponding liaison entity the actions required to develop the data base to be used in disseminating the material compiled, once it has been properly classified and indexed.

For the data bases and information systems developed by the international community, CRIIA will establish strategic alliances that will permit their use by our clients.

2.Operationai ievei

CRIIA will operate at three levels, through the five Regional Centers, their respective Directorates and the 34 TCAs, which will direct and execute activities aimed at achieving the active participation of the different public and private organizations, so they themselves can develop, gradually and on the basis of local needs, their own reference center.



2.1.The National System

At the country level, the development of the system calls for proactive action and support from the organizations themselves, so that they can develop, gradually and on the basis of needs at the country level, their own system.

This system is made up of those public and private data bases and information systems existing in the Member States and which voluntarily wish to join CRIIA.

To do this, the TCA, as coordinator of the process, with support from CRIIA, will be responsible for identifying the public and private organizations that wish to participate in the formation of the national system, learning about work being done in the field of information, identifying the data bases in operation and selecting the entity that will act a liaison in the country.

This entity, in conjunction with the TCA, will program and execute the activities involved in setting up the national system and linking the existing data bases and information systems. A key action for the national liaison entity is the registration of gray literature; that is, those works documented but not registered or published, to be made available to CRIIA.

2.2.The Regional System

The regional system consists of the aggregate supply and demand from the national systems. It will be located at each of IICA's Regional Centers.

2.3.The Hemispheric System

The hemispheric system organizes the data bases and information systems available from the institute, using standardized approaches and systems, in order to avoid the duplication of efforts and promote the coordination of actions, so that there is only one channel for meeting the demand identified by the national and regional systems.

It is the coordinating center, responsible for developing the exchange mechanisms agreed upon with the participants in the network; and for consolidating and distributing the collective data bases.

Also, it defines the mechanisms for establishing strategic alliances that will provide access to external

information systems developed at the national, regional and international levels.

At this level, an inventory is prepared of the data bases and information systems in existence within the borders of the hemisphere, plus those coming from the international community, which, given the importance of their subject matter, are to be incorporated.

Also, it is responsible for providing technical support, training, and advisory services during the process of designing the data bases, and for developing processes for converting, updating and evaluating results.

ORGANIZATION

1.Structure

CRIIA is a unit attached to the Technical Consortium, comprising:

- A steering committee presided by the Deputy Director General, the Manager of the Technical Consortium and the Director of Informatics at IICA.
- A general coordinator, who will be the Manager of the Technical Consortium
- A technical team of professionals linked to information technology in each of the six areas of concentration and in the Directorate of Informatics.

The operating level, where actions are carried out to ensure that data bases and information systems reach the final users, will be under the coordination of the Regional Centers and TCAs, in addition to the national liaison entities appointed by the participating institutions.

2.Duties

2.1.The Steering Committee

It is responsible for defining the policies and regulations that will govern CRIIA; and for the supervision of their execution in the three systems. It must approve the plans of operation and make efforts to secure resources.

2.2.The General Coordinator

He is responsible for drawing up the rules, procedures and operating manuals, and establishing alliances. To coordinate with the RCs and TCAs technical support for the national and regional systems in the definition of their operating schemes. To propose to the Steering Committee the plans of operation.

To perform such administrative duties as may be required in support of the national and regional systems. To prepare, together with the TCAs, a training

program based on the needs identified. To conduct monitoring and evaluation activities.

2.3.Technicai Support Group

Its duties focus on supporting and advising the General Coordinator in aspects related to the current and future technological development of CRIIA systems, and on analyzing and proposing technical solutions to specific problems that arise.

2.4.The Regional Center

It is responsible for consolidating and prioritizing demand, consolidating and prioritizing requests for technical cooperation, with a view to boosting and strengthening national capabilities.

To support the work of the national liaison entities. To supervise the operation of CRIIA at the national level. To identify and enter into alliances or agreements.

2.5. The Technical Cooperation Agency

It is responsible for coordinating with the national liaison entity all the actions programmed in its territory to establish the national system; for coordinating the identification and compilation of gray literature; for identifying training needs; and for promoting CRIIA and monitoring the actions programmed.

2.6. National Liaison Entity

It is responsible for garnering the political support of the agricultural sector, identifying data bases and information systems available at the national level, approving the basic rules of operation, establishing the national operating structure, and identifying training needs.







