

Directorate for Education and Training (CECAP)

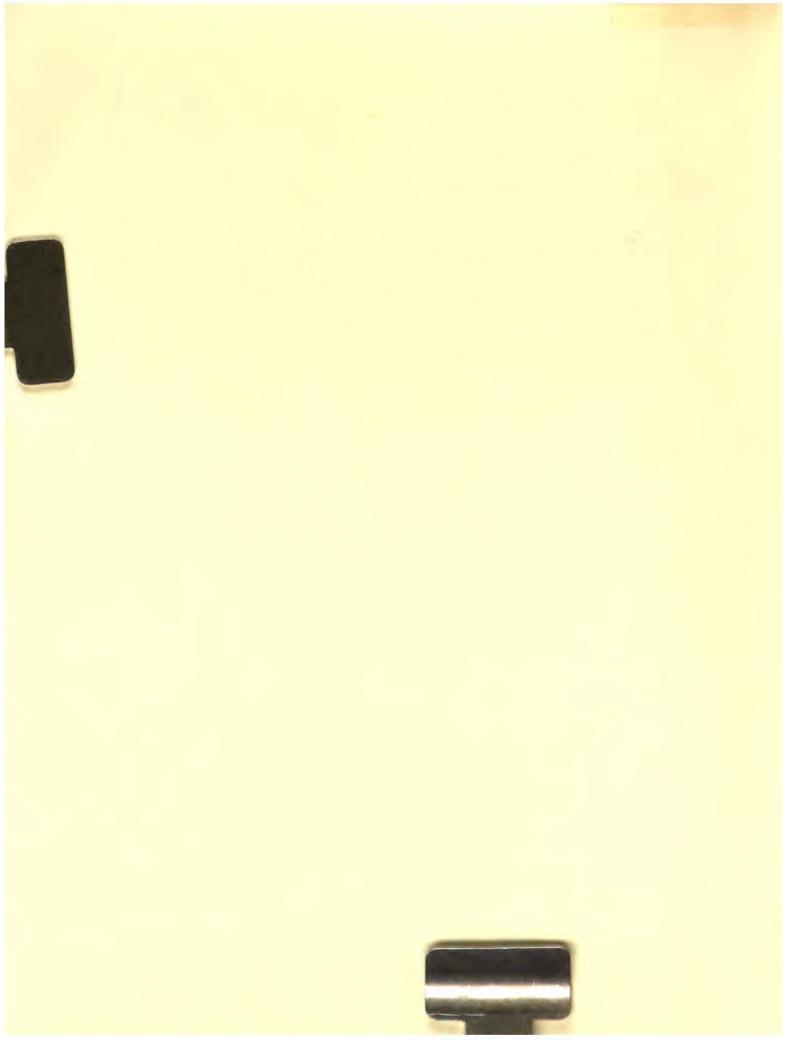
**Technical Consortium** 





Education and Training for competitive and sustainable agriculture

Manual for orienting technical cooperation



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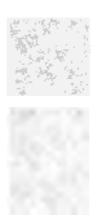
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1	Introduction  Mission of the Directorate of the Strategic Area  "Education and Training for competitive and sustainable agriculture"	1
2	I. Historical background     II. Thematic background     III. International vision     IV. The present status of agricultural education and training	3 6 8
	V. Bibliography	14
2	I. Specialized technical units II. Objectives of cooperation III. Lines of action	16 18 19
3	IV. Types of cooperation activities carried out by the specialized units	22
4	I. Policy framework for cooperation II. General Strategy  Hemispheric level Regional level	25 28
5	I. Organization of institutional action and roles a. Organization b. The role of the specialized units for education and training c. The role of the geographic units d. The role of the other thematic units	32 33 36 37
6	I. Annual evaluation of the technical cooperation in Education and Training	39
7	ANNEXES  I. Form for keeping track of and monitoring the training activities implemented by IICA  II. Internal advisory group on education and training  III. Education and training in the 1998/2002 MTP  IV. List of documents and publications  V. List of organizations with which links exist	46 48 49 52 55
	VI Diskette and slides	





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"We are convinced that Education is essential to the future of the Americas. It should be the foundation of our efforts to overcome poverty and increase the capabilities, intelligence and knowledge of our peoples."

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Second Summit of the Americas, Santiago, Chile, April 1998

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The purpose of this document, prepared by the Directorate for Education and Training (CECAP), is to present for the consideration of the Institute's technical and management units, in the regions and at Headquarters, IICA's policy in the area of education and training, including its political and technical mandates, objectives, lines of institutional cooperation and respective strategies.

"Education and training for competitive and sustainable agriculture" is one of IICA's six strategic areas. This document sets out the Institute's responsibility in this area, i.e., IICA's overall policy and operating framework in the field of education and training. It is promoted, supported and implemented by the institution as a whole, marking a departure from the traditional approach, under which each topic was implemented by a single, specific unit was responsible for implementing each topic.

The material presented is the result of a comprehensive process of consultations carried out both within IICA and with its partners. The process began at the internal level in April 1998, when a group of 14 IICA specialists met in Montevideo to draw up a baseline document that was then enriched and adjusted with the comments obtained via an electronic consultation of 41 officials and directors of the Institute's five Regional Centers and at Headquarters.

IICA's Convention, the resolutions of the IABA, the recommendations of the ministerial and agribusiness fora, and the text of the 1998-2002 Medium Term Plan, provided the frame of reference for the work carried out.

External contributions were obtained by systematizing the information from technical and political reports and declarations, such as the documents of the Presidential Summits, the OAS, the IDB, the

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World Bank, the ministerial and agribusiness fora, and other sources quoted below.

Also taken into consideration were the contributions of agricultural educators, the results of surveys among deans and the senior management of faculties and schools of agricultural sciences, and the opinions expressed at a wide range of regional and national events held in the countries with IICA's support over the last four years.

Finally, we should like to point out that the contents of this document-both the technical aspects and the organizational considerations involved in their implementation- are flexible and subject to constant review, based on the needs of the member countries and the experience acquired in implementing them.

Jaime A. Viñas-Roman Director

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### Mission of the Directorate of the Strategic Area

# "Education and training for competitive and sustainable agriculture"

To coordinate and provide specialized technical cooperation aimed at supporting and implementing efforts to:

- a. promote and facilitate the regional and inter-American dialogue on the integration of education; and
- b. enhance the effectiveness, quality and relevance of processes for the training of human resources for agriculture and rural development.

## Education and Training for competitive and sustainable agriculture

- I. Historical background
- II. Thematic background
- III. International vision
- IV. The present status of agricultural education and training
- V. Bibliography

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### 1. Historical background

IICA has a long history of cooperation with agricultural education in LAC, which began with the implementation of Project 39 of the OAS Technical Cooperation Program entitled "Technical Education to Improve Agriculture and Rural Life" (1951-1966).

At that time, the assessment of agricultural education indicated that the curricula of Latin American universities did not include topics and specialties that were of key importance for the economic and social development of the countries.

Based on the findings of the assessment, Project 39 focused its action on promoting the development of formal education institutions and direct training through national and international courses and inservice training. (Over 10,000 Latin American professionals were trained over the fifteen years that the project was in operation.)

Later, in 1961, the "Regional Cooperative Program for Postgraduate Education" was set up to introduce new teaching methods, orientation for semi-specialization, the diversification of courses, education for graduate students, the integration of education with research and extension, university reform and external financial and technical assistance.

At the Sixth Annual Meeting of the Institute's Board of Directors of the Institute, held in Rio de Janeiro in 1967, there was a decisive refocusing of the IICA's work in this field. It was decided that technical cooperation for the countries should be implemented to complement the direct education that was being provided by the Education and Research Center (CEI) in Turrialba, through "Basic Program 1: Higher Agricultural

Education," whose mission consisted of efforts to strengthen national agricultural education institutions.<sup>1</sup>

Subsequently, in the Institute's General Plan (1971-1980), a strategy was proposed for strengthening institutions and organizations in the rural sector, and a "Program to Strengthen Education Institutions" implemented, targeted at higher and vocational education institutions, and agricultural extension organizations.

Line II, "Education for Rural Development," was established in 1977 in order to support and promote the efforts to transform the education of the host of people who were, or would be, involved at every level and in every area of the agricultural sector.

This line of work consisted of two programs. One was called "Planning of Education for the Agricultural Sector," designed to establish and strengthen agricultural education research and planning mechanisms each country. The other was "Execution of the Agricultural Education Policy," which had five components: policies and programs; evaluation of the programs, institutions and needs of the sector; administration of education; coordination of agricultural education programs and plans; and continuous training for the technical personnel of organizations in the agricultural sector of the countries.

### Withdrawal from, and reentry into, the field

In the mid-1980s, despite the outstanding success and prestige achieved through its cooperation with the countries, IICA formally abandoned its cooperation efforts in the field of education. The argument used to justify this decision was that "training cut across all the Institute' activities" and that formal education was the responsibility of CATIE. This decision, deeply regretted by the education institutions of

<sup>1/</sup> At the end of the 1950s, there were 45 schools of agronomy, veterinary sciences, forestry and animal husbandry; by the end of 1969 there were 155; there are now over 500.

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LAC, brought to an end nearly thirty years of uninterrupted work with the member countries.

When current Director General Carlos Aquino Gonzalez took office in 1994, he received a mandate from the member countries for IICA to once again venture into the field of education and training for agriculture, gearing it toward support for formal and nonformal, professional and technical teaching-learning processes, as a means of improving the skills of human resources in the agricultural sector of the region.

Specifically, it was proposed that IICA contribute to modernizing curricula and strengthening agricultural higher education institutions, in order to meet the new challenges for agriculture posed by the expansion and integration of markets and the need for competitiveness and sustainability.

In the area of training, the 1994-1998 Medium Term Plan called for the implementation of activities in subject areas of priority to the countries, and cooperation with national public and private organizations in designing and implementing training strategies and programs for different actors in the agricultural sectors of the countries.

It is also worth noting that, at its Eighteenth Regular Meeting, held in San Jose, Costa Rica in October 1998, the Executive Committee approved the Institute's Medium Term Plan for the period 1998-2002, which includes Education and Training as a Strategic Area and as a priority topic for cooperation.

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As the twenty-first century beckons, in the Americas and, indeed, the entire world, the production of agricultural goods and services is being driven by increased demand for high-quality, safe, cheap foodstuffs. The growth of national economies and wealth depends on countries possessing and using the know-how needed to meet the demand (and having the capacity to generate it), almost as much as on capital and labor.

In the case of agriculture, there is a direct link between education and development. It is argued that no new, good businesses or enterprises will develop in the agricultural sector, nor will existing ones be able to grow, unless competent agricultural professionals and technicians are available. On the other hand, the generation of employment and the higher incomes necessary to combat rural poverty and ensure the sustainable development of natural resources depend, in large measure, on such new and competitive agricultural enterprises.

This is what makes the development of human capital so important: training citizens, technicians, producers and professionals, equipping them with pertinent, up-to-date know-how and management skills, and the capacity to access the information they need. This the key to, and the most effective means of, raising the competitiveness of agricultural production within a framework of equity and sustainability for present and future generations.

Hence the important new challenge facing formal and nonformal systems and centers of basic, vocational and professional agricultural education. They must train people to take the lead in incorporating technological advances into production, raising productivity and competitiveness, improving business management processes in the public and private sectors, participating in the modernization of the State apparatus, and facilitating the efforts to successfully meet the challenges

posed by the integration processes and globalization, based on equity and sustainability.

This approach has been recognized and advocated at numerous international fora and in many documents. There is unanimous agreement that, without appropriate, pertinent education and training at all levels, no country in LAC is capable of achieving a level of sustainable human rural development compatible with the needs and expectations of the population, with due consideration for the environment, equity and the demands of competitiveness.

International fora, the Summits of Presidents, international financial institutions and the associations responsible for the production and trade apparatuses of the member countries are pooling efforts to improve the living standards of the population and make their products more competitive, using education and training to develop human capital.

The Declaration of Santiago, Chile, signed by the Heads of State and Government who attended the Second Summit of the Americas affirms that:

"...Education is the determining factor for the political, social, cultural, and economic development of our peoples... The Hemisphere's commitment to education is reflected in the sweeping reform processes encompassing all levels of educational systems... Governments will... establish or strengthen national or subnational and, where applicable, subregional systems to evaluate the quality of education..."

With respect to resources, the signatories to the Declaration:

"...request that the IDB establish a special regional fund for education in the Hemisphere... (and) instruct the OAS and request the IDB, the World Bank, and CEPAL... to strengthen regional cooperation in areas such as ... education..." (The World Bank and the IDB agreed to allocate a total of US\$8.3 billion for education over the next three years).

Furthermore, Article 4.a of Chapter I of IICA's Convention states that, in order to achieve its objectives, the Institute's functions will include:

"...to promote the strengthening of national education, research, and rural development institutions, in order to give impetus to the advancement and dissemination of science and technology applied to rural progress."

In his inaugural address at the Ninth Regular Meeting of the Inter-American Board of Agriculture, the Director General stated that:

"We must assume a commitment that will make it possible...to enhance the capability of human resources, who are the essence and target of the sustainable development of agriculture and its effect on the rural milieu."

In the *Declaration of Santiago*, signed by the Ministers of Agriculture at the *Ibero-American Forum on Agriculture* held in Santiago, Chile in August 1996, it was agreed to

"...encourage collaboration actions and establish cooperation mechanisms for the training and development of human resources... for the development of agriculture and education."

At a meeting held April 4-5, 1998, the presidents of the countries of the Andean Community of Nations signed the declaration of Guayaquil, which instructs the Ministers of Education to present a Plan of Action to the Andean Council of Ministers of Foreign Relations, including a study of the measures needed for the recognition of higher education qualifications throughout the Andean Region, in order to facilitate the provision of professional services.

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The Plan of Action of the Second Ibero-American Forum of Agriculture, held in Maturin, Venezuela, in August 1997, stresses the importance of "...promoting training activities in the fields of health, trade and agriculture."

Two recent mandates of the IABA (Resolutions #332 and #329 of October 13, 1997) instructed the Director General to strengthen cooperation in this field, and the Director General himself, at the start of his second term of office, stated that education and training will constitute the "...principal element for revaluing and modernizing the agricultural sector and rural areas of our countries."

Another factor that attests to the wisdom of these decisions are the findings of a hemispheric study carried out by IICA late in 1997. This revealed that, in the view of the organizations of actors who make up the Institute's clientele and of the specialists of the Regional Centers and Technical Cooperation Agencies in the countries, education and training head the list of priority topics that the Institute will be required to address in the new scheme of international cooperation.

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## IV. The current status of agricultural education and training

The quality and relevance required of national vocational and higher agricultural education systems and agricultural training have changed in recent years. They must now be able to respond more rapidly and effectively to the changing thematic needs and competitiveness resulting from technological advances, market opening, the leading role increasingly being played by the private sector and the State's new role, and integration processes.

These needs are changing faster than the traditional capacity of educational centers to adapt to them. Very few centers have the institutional culture and the mechanisms required to keep pace with curricula and research and extension systems that are constantly being updated. It is for this reason that agricultural education is being overhauled at every level, and in almost all of IICA's member countries.<sup>2</sup>

#### a. Education

About 500 educational centers in LAC offer university-level courses in the agricultural sciences. When these are combined with the considerably larger number of vocational and training institutions, it is clear that social investment in the subject is enormous.

Analyses of the current situation have revealed that these institutions are facing a crisis in many areas, including their products, curricula, teaching systems, resources, the quality and capabilities of

<sup>&</sup>lt;sup>2</sup>/ A clarification is in order. The term "training" refers to short, non-formal, teaching-learning processes through which the participants acquire new know-how and skills related to a specific field of work. The term "education," on the other hand, means formal, medium and long-term processes through which knowledge is imparted, accompanied by the shaping of attitudes, habits and values, and the acquisition of expertise and skills.

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teaching staff, researchers and students, extension, the results of research, the market that they serve or should serve, funding and administrative management, and a tarnished public image.

In other words, vocational and higher agricultural education have problems vis-a-vis their relevance to society and the quality of their products, problems whose strategic impact is increasingly significant due to the speed of the globalization. To this must be added the new need for evaluation and accreditation as a result of regional integration, which calls for the standardization of academic norms and the recognition of qualifications so as to permit professionals to work freely in different countries.

The foregoing conclusions are based on information obtained from two sources. Firstly, the Institute analyzed the findings of studies published over the past fifteen years by numerous national and international institutions specializing in agricultural education in LAC, which confirm the existence of the crisis mentioned. The second source entailed direct observation, through cooperation and participation in IICA-organized technical events in 28 western hemisphere countries over the past four years.

### b. Training

In broad terms, agricultural training is often characterized by an absence of national strategies and policies. As a result, it is carried out without a framework of objectives, topics, methods and a target population tailored to the needs of the countries.

In practice, training is geared more to the capabilities and interests of the supply than the needs of the actors in the agricultural production and trade chain. To this must be added the fact that the management of training is often inadequate and flawed in terms of planning, implementation and evaluation.

It is also clear that training is generally based on a traditional concept of the agricultural sector, which fails to take account of critical areas such as agricultural business management, the diversification of production, sustainability, agroindustry, the management of market and price information, international trade, the management and conservation of the environment, gender and equity, etc.

At the operating level, the efforts and initiatives of training institutions are not coordinated, thus reducing their coverage and potential impact. Many institutions focus on providing training in specific geographic areas and topics for specific target groups. On the other hand, there are no institutions that cater to other actors interested in a number of strategically important topics.

Moreover, studies in which IICA has been involved in a number of Central and South American countries reveal that the supply is dispersed and not geared to the demand, that advantage is not being taken of new technological resources, that actions are redundant and overlap, and that, to some extent, the training being provided is obsolete or not relevant.

These needs are changing faster than the traditional capacity of educational centers to adapt to them. Very few centers have the institutional culture and the mechanisms required to constantly update curricula and research and extension systems. It is for this reason that agricultural education and training units are being overhauled at every level, and in almost all of IICA's member countries.

In short, the quality and relevance required of national vocational and higher agricultural and rural education systems and agricultural training have become greater and more complex in recent years. They must now be able to respond more rapidly and effectively to the changing thematic needs and competitiveness resulting from technological advances, market opening, the leading role increasingly being played by the private sector and the State's new role, and integration processes.

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# Education and Training for competitive and sustainable agriculture

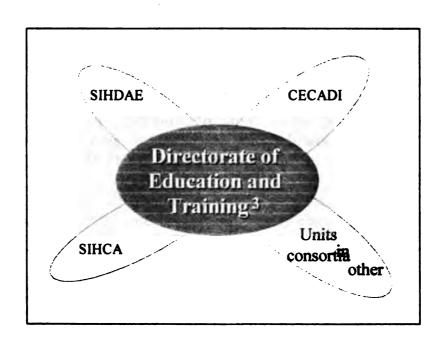
- I. Specialized technical units
- II. Objectives of cooperation
- III. Lines of action
- IV. Types of cooperation activities carried out by the specialized units

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# 1. Technical units specializing in education and training

- Center for Education and Training (CECAP)
- Center for Distance Training (CECADI)
- Hemispheric Training System for Agricultural Development (SIHCA)
- Hemispheric System for the Development of Higher Agricultural Education (SIHDEA)

Diagram 1



<sup>3/</sup> The Center for Education and Training, CECAP, exercises the Directorate of the Strategic Area "Education and Training for competitive and sustainable agriculture."

#### Mission of the Directorate of Education and Training (CECAP)

To coordinate and provide specialized institutional technical cooperation to support and implement efforts aimed at: a) promoting and facilitating the regional and inter-American dialogue for education and integration; and b) enhancing the effectiveness, quality and relevance of the training of human resources for agriculture and rural development.

#### Mission of CECADI

To provide pertinent and high-quality distance education and training in IICA's strategic areas of cooperation, using multimedia and telecommunications technology.

#### Mission of SIHCA

To establish coordination and exchange mechanisms among training institutions; to coordinate the supply of training with the demand through a hemispheric network of training institutions; to coordinate and promote training activities and studies, and the creation and operation of an information system on the subject.

#### Mission of SIHDEA

To promote the creation of a hemispheric network of higher agricultural education institutions and contribute to the coordination of their development efforts, and of their supply of training and technical assistance services with the new demands for the transformation of agriculture.

## 11. Objectives of 11CA's cooperation

To promote the establishment of, and support:

National, regional and hemispheric programs to train human resources for agriculture

Targeted at agribusiness personnel and public and private officials, on strategic topics.

Programs for the modernization of curricula and the organizational development of agricultural training and (higher, vocational and rural basic) education centers.

(Institutional models; modernization of curricula; organizational strengthening for change; study programs and professional profiles; strategic planning; teacher training).

National and regional programs for the evaluation and accreditation of agricultural education

(Promotion of dialogue and facilitation; self-evaluation and accreditation models and systems; working methods; training).

## 111. Lines of action

The Institute has three lines of action in this field: training in strategic topics; the modernization of agricultural education; and dialogue, studies and information. The following tables detail the objectives, strategies, activities and cooperation mechanisms used.

	1. Training in St	rategic Topics	
Objective	Strategic aims	Cooperation activities	Mechanisms
To support training programs for agribusiness operators and the staff of public and private enterprises.  Possible topics:  International trade; integration processes; technology innovation and transfer systems; training; agricultural health; management of agricultural and agroindustrial microenterprises, gender and rural youth; modernization of the institutional framework; rural agricultural extension; others	<ul> <li>To establish a distance training network to provide services to the Institute's member countries.</li> <li>To obtain and transfer distance training technology and electronic media in general.</li> <li>To articulate the supply of training with the demand, through a hemispheric network of training institutions.</li> <li>To systematize and keep track of IICA's supply of training, and its implementation.</li> <li>To use the local resources available.</li> <li>To design courses and workshops tailored to the needs of the clientele.</li> <li>To enter into ad hoc agreements with agribusiness organizations and institutions in the sector.</li> </ul>	<ul> <li>Design of training programs, support for their organization and advisory assistance for their implementation.</li> <li>Design of and advisory assistance with refresher training programs for agricultural professionals and teachers of basic and technical agricultural and rural education.</li> <li>Organize and facilitate services for distance training programs and events and teleconferences.</li> <li>Design and implementation of, and advisory assistance for, teacher training programs and events for agricultural schools and universities.</li> <li>Design of, and advisory assistance for, training programs for rural extension agents.</li> </ul>	Courses Workshops Seminars Teaching materials Advisory assistance Alliances with other organizations

2. Modernization of agricultural education					
Objective	Strategic aims	Cooperation activities	Mechanisms		
To contribute to the modernization of agricultural education in order to improve the relevance and quality of its products.	<ul> <li>To facilitate scenarios for horizontal exchanges and cooperation among educational centers.</li> <li>To promote and support mechanisms for evaluation, accreditation and recognition of qualifications.</li> <li>To facilitate links among educational institutions, regional integration processes and agribusiness associations.</li> <li>To promote and support networks, fora, cooperative programs, consortia, etc.</li> <li>To support refresher training programs for agricultural professionals and teachers from the agricultural and rural basic and technical education system.</li> <li>To strengthen agricultural training mechanisms, systems and institutions (technical and educational aspects, advisory assistance, improvement of technical and administrative processes, links and networks).</li> <li>To establish alliances with other organizations.</li> </ul>	<ul> <li>Studies and advisory assistance for the development of national and regional systems for the accreditation of agricultural education institutions.</li> <li>Design and implementation of training programs and events for academics to initiate and lead processes for the modernization of their institutions. *</li> <li>Advisory assistance for agricultural education centers for activities related to the modernization of curricula.</li> <li>* (Strategic planning; methods for the modernization of curricula; development of teams and methods for managing institutional change; creativity; impact evaluation; leadership; studies of the organizational climate).</li> </ul>	Workshops Conferences Teleconferences Seminars Fora Advisory assistance Exchanges (students and teachers) Alliances with other organizations		

3. Dialogue, studies and information					
Objective	Strategic aims	Cooperation activities	Mechanisms		
To help promote and facilitate regional processes for dialogue and the integration of education. (Information, studies, events)	<ul> <li>To encourage horizontal cooperation among national and regional agricultural education and training institutions.</li> <li>To systematize and disseminate experiences regarding modernization of agricultural education</li> <li>To strengthen networks for exchanges using electronic and conventional methods.</li> <li>To publish and distribute educational textbooks and technical articles.</li> <li>To maintain and make available to users up-to-date data and information on agricultural education and training.</li> <li>To disseminate strategic information among agricultural entrepreneurs in the hemisphere.</li> <li>To establish alliances with other organizations.</li> </ul>	<ul> <li>To organize and facilitate teleconferencing services.</li> <li>To support the publication and distribution of educational textbooks and technical articles.</li> <li>Design and carrying out of case studies of processes for the modernization of agricultural education institutions.</li> <li>To support the conducting of prospective studies on strategic topics for the development of human resources.</li> <li>To promote, organize and facilitate national, regional and hemispheric conferences, seminars and meetings.</li> </ul>	Internet Publications Events Alliances with other organizations		

## IV. Types of cooperation activities carried out by the units specializing in education and training

- 1. Studies and advisory assistance for the development of national and regional systems for the evaluation and accreditation of higher and vocational agricultural education institutions. (CECAP)
- 2. Design, implementation, and advisory assistance for the implementation, of teacher training programs and events for agricultural schools and universities. (CECAP)
- 3. Design and implementation of training programs and events for the management staff and academics of agricultural education institutions, in order for them to initiate and lead processes for the modernization of their institutions. (CECAP)
- 4. Advisory assistance for agricultural education centers with activities for the updating of curricula and management of modernization processes.

(CECAP)

- 5. Design of (in situ and distance) training programs on strategic topics, support for their organization and advisory assistance for their implementation. Targeted at agribusiness operators and the staff of public and private enterprises. (CECAP/SIHCA)
- 6. Design and advisory assistance for the implementation of refresher training programs for agricultural professionals and teachers of agricultural and rural, basic and technical education.

(CECAP/SIHCA/SIHDEA)

- 7. Design of, and advisory assistance in carrying out, case studies on processes for the modernization of agricultural education institutions. (CECAP)
- 8. Design of, and advisory assistance in carrying out, national studies on the supply and demand for agricultural training. (SIHCA)
- 9. Design of, and advisory assistance in establishing, national training systems for actors in the agricultural and rural sector. (SIHCA)
- 10. To organize and facilitate services for distance training programs and events. (CECADI)
- 11. To organize and facilitate teleconferencing services.

(CECADI)

- 12. To promote, support and facilitate regional and hemispheric processes for dialogue and the integration of education. (information, studies, events) (CECAP/SIHDEA)
- 13. To support the publication and distribution of educational textbooks and technical articles. (CECAP/CECADI/SIHCA/SIHDEA)
- 14. To design and provide advisory assistance for the implementation of training programs for rural extension agents. (CECAP/SIHCA)

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# Education and Training for competitive and sustainable agriculture

- I. Policy Framework for Cooperation
- II. General Strategy
  - a. Hemispheric level
  - b. Regional level

### 1. Policy framework for cooperation

Ten criteria were established to serve as the policy framework for the Institute's action in this area.

One. Despite institutional, national and regional specificities, the problem of agricultural education and training is one aspect of the general problem faced by formal and non-formal educational systems in the countries and their social function as a whole. Therefore, initiatives and efforts must be articulated between the ministries of agriculture and education, as well as with them, and with non-governmental organizations and university authorities.

Two. In order to provide sustained support to efforts to modernize education and training, it is necessary to concentrate on how to make the necessary changes and generate socially feasible processes within the educational systems and centers themselves, as well as to overcome resistance and involve actors and interest groups from the surrounding milieu.

Three. Efforts under way to ensure relevance and quality in agricultural education and training are scattered and generally do not have reciprocal linkages with similar undertakings. This, combined with the limited resources available for the task, means that it is of strategic importance to foster the creation of standing forums, cooperative programs and other means of cooperation that facilitate exchanges and joint undertakings and focus the demands for support received by IICA.

Four. In general, educational and training centers are isolated from the environment in which they operate. Thus, it is necessary to improve communication and exchanges between them and with other actors of the agricultural system, including agribusiness associations, representatives of the banking system, legislators and the public sector.

This would facilitate the incorporation of external viewpoints and contribute to overcoming narrow corporate approaches.

Five. In addition to its action in this specific thematic area (support for the modernization of agricultural education and training), IICA will focus efforts on training programs that address strategic issues in high demand in the countries (training --both distance and in-situ-- as an instrument of cooperation).

Six. The supply of institutional training (training as an instrument of cooperation) will be provided through a system-wide organization or through networks, taking into account the action of part or parts of IICA's thematic and geographic units, in coordination with the Directorate of the Strategic Area "Education and Training for Competitive and Sustainable Agriculture" (Diagram 3).

Seven. This organization of networks will be governed by a <u>single</u> institutional policy for the area and the procedures for the programming and allocation of approved resources. It will operate in the form of Consortia-related projects (with resources provided by the Institute's thematic and geographic units in accordance with their differentiated but complementary roles). (Diagram 2)

Eight. Since IICA does not have education and training specialists stationed in the countries but does have a subsystem of specialized units (Diagram 1), funds will be earmarked for "Education and training for competitive and sustainable agriculture." The thematic and geographic units will be able to access these resources in accordance with their differentiated roles and subject to approval of the Consortia-related projects in which they participate.

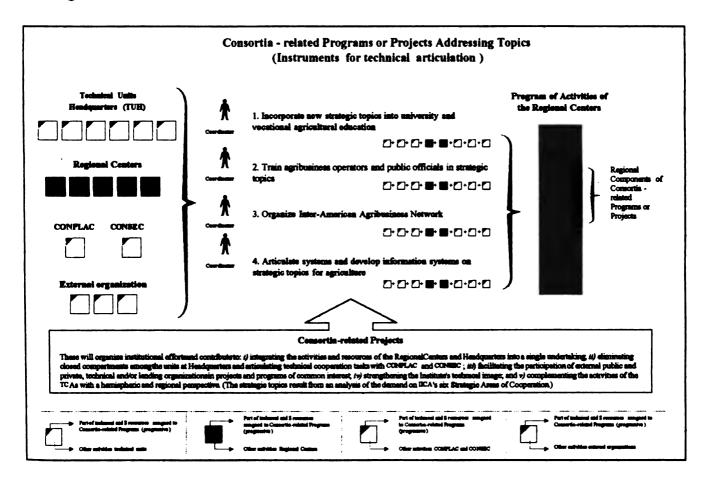
Nine. Advisory groups will be established at the hemispheric and regional levels, composed of agribusiness operators, legislators, specialists, staff from integration systems and others (associations of higher and vocational agricultural education, professional associations,

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etc.), to provide advisory services in this thematic area to the respective IICA directorates.

Ten. Over the past four years IICA has generated strategies, products and experiences that need to be strengthened. IICA's policy of alliances with other international organizations (OAS, UNESCO, FAO, IDB and World Bank) and universities can contribute to generating the basic conditions for working with a rationale of solidarity and integration that makes it possible to multiply capabilities and resources and avoid duplication of actions.

Diagram 2



### a. Hemispheric level

A strategy for hemispheric cooperation will serve to integrate, complement and promote exchanges among regional efforts. Technical support will be provided to the TCAs and the Directorates of the Regional Centers. Efforts will be made to promote institutional modernization programs and the incorporation of new strategic topics into the curricula of higher and vocational agricultural education. Forums and regional and hemispheric networks will be fostered; studies and publications on national and regional experiences will be carried out for use in other situations; and training programs will be offered on topics of strategic importance to agribusiness operators and public sector officials. Mechanisms and continuing education programs will be promoted for updating the skills of agricultural professionals, as will the establishment of an inter-American distance agricultural learning system. Strategies and projects will be designed and implemented to increase funding for processes that contribute to the modernization of agricultural education at all levels.

### b. Regional level

### \* Andean Regional Center

Regional integration processes for agricultural education will be promoted and supported through conferences, forums and mechanisms of exchange and cooperation, taking into account the demands growing out of the operations of the Andean Community. Support will continue to be provided to academic centers in connection with the formulation of strategic plans for improving the relevance and quality of professional products, as well as research and extension activities. Training programs will be

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offered to national rural extension systems and training centers will be strengthened through strategic alliances with training units in the countries, with the aim of building the IICA agribusiness training system on strategic topics. This will include the use of distance learning media.

### Caribbean Regional Center

Support will continue to be provided to the Caribbean Agricultural Council for Higher Education (CACHE) with a view to implementing mechanisms for evaluation, updating curricula, validating materials and recognizing degrees. Advisory services and training programs will continue to be provided to academic centers and national rural extension systems. Efforts will be made to incorporate local distance training units into the IICA system, and training activities will be provided for agribusiness operators and public sector officials.

### Central Regional Center

National and regional forums and networks of higher and vocational agricultural education will be promoted and/or strengthened, and efforts will continue to support processes to conduct regional studies and formulate strategic plans for academic development, curriculum updating and teacher training, including basic agricultural or rural education. Training efforts on strategic topics for agribusiness operators and public sector employees, as well as for extension workers and new members of the agricultural labor market, will be strengthened. The use of distance learning media will be promoted.

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### ❖ Southern Regional Center

National forums on higher agricultural education will continue to receive support and efforts to develop similar mechanisms for the vocational level will be promoted. Collaboration will be provided to the Standing Forum of Agricultural Sciences in support of university evaluation and processes for accreditation. redefining the profile of agricultural professionals and providing training for instructors. A regional post-graduate program will be created and mechanisms for student and academic exchange established. In the area of training, professional programs for updating the skills of public and private employees will be promoted and established, and training for agribusiness operators will be supported, preferably with the use of distance learning media.

### \* Northern Regional Center

Reciprocal collaboration will be fostered with land grant colleges and universities in the United States and Canada that specialize in agricultural education and have ties with LAC. This will take place through exchanges of faculty and students, the preparation of joint working documents, the holding of study forums and the generation of new ideas. Support will be provided, through strategic alliances with specialized organizations in the aforementioned countries and Mexico, to the design of courses and the strengthening of IICA's distance learning system. The efforts of universities and the Mexican Association of Higher Agricultural Education (AMEAS) to transform agricultural education will continue to be strengthened, and reciprocal cooperation will be promoted between Mexican academic and training centers and others in Central America and the Caribbean.

# Education and Training for competitive and sustainable agriculture

- I. Organization of institutional action and roles
  - a. Organization
  - b. The role of the specialized units for education and training
  - c. The role of the geographic units
  - d. The role of the other thematic units

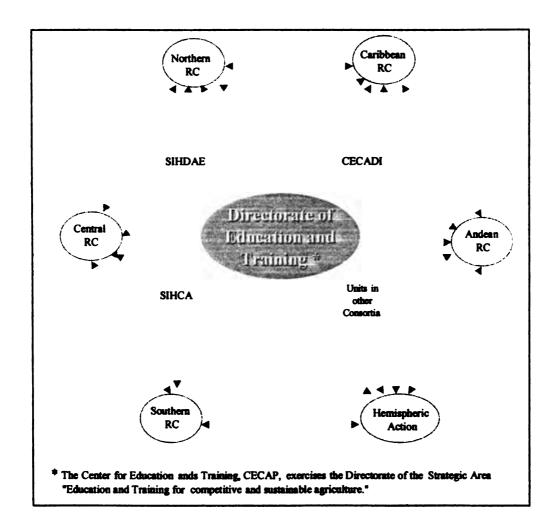
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### 1. Organization of institutional action and roles

#### a. Organization

The technical units at Headquarters (other strategic thematic areas), the geographic units (TCAs and RCs) and the specialized units (CECAP, CECADI, SIHCA and SIHDEA) are all regarded as an active part of, and responsible for, IICA cooperation in this area; hence their inclusion in the diagram that represents the entire organization of the Institute's work in this field.

Diagram 3



#### b. The role of the specialized units for education and training

The Directorate of the Strategic Area of Education and Training (Center for Education and Training, CECAP) is responsible for formulating policy and the institutional strategies for technical cooperation in this field, in consultation with the countries and the Directorates of the Regional Centers and the TCAs. It also supports the activities related to the regional and inter-American dialogue.

In the case of training, the specific thematic objective is to contribute to the design and implementation of training programs for agribusiness operators and the staff of public and private agricultural organizations, to enhance their competitiveness and facilitate their incorporation into international markets.

Achieving this objective entails systematizing methods and experiences, viewing training as both an instrument of cooperation used by all the Institute's thematic areas and units, as well as the topic that is the object of the cooperation. The Institute is thus able to systematize its training as a whole, facilitating its organization and implementation and the measuring of its results and impacts.

On the other hand, given the dispersion, wide thematic spectrum and scope of the training provided by the Institute, this Directorate helps to coordinate, keep track of and monitor the Institute's activities in this area. Additionally, in conjunction with DIREX and the respective technical and geographic units, it designs and executes strategies and projects aimed at increasing external financing in this area.

Its thematic role in cooperation for education consists of coordinating, coordinating, implementing and monitoring actions designed to contribute to the modernization of (technical, basic and higher) agricultural education centers, so as to improve the relevance and the quality of their products.

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CECAP works in coordination with another unit for which it is also responsible, the Center for Distance Training (CECADI). The Directorate of the Strategic Area also coordinates the actions, and serves as the Chair of, the Management Councils of the Hemispheric Training System for Agricultural Development (SIHCA), the Hemispheric System of Higher Agricultural Education (SIHDEA); and the Permanent Technical Secretariat of the Presidency of the Latin American Association of Higher Agricultural Education, ALEAS.

CECADI is a service-provider that acts as a vehicle or instrument for supporting the training and agribusiness development processes of public and private institutions in the member countries; it also facilitates the dissemination of agricultural information among IICA's clientele, as well as institutional management.

It medium-term objective is to support the establishment of a hemispheric agricultural distance training system, organized around, and operationally underpinned by, the distance training units that already exist in the countries.

Its primary suppliers of initiatives and technical input are the directorates and operators of the Institute's thematic areas, with which it collaborates directly.

With regard to distance training, the Institute has a teleconferencing module at Headquarters. It will also have up-to-date information on national capabilities or similar modules that exist and the courses they offer; a program for negotiating the incorporation of other bodies into the system; a procedure for identifying the thematic areas in which training is needed and the size of the demand, and a system for preparing courses to meet it.

The system for preparing courses will be coordinated with universities or institutions that have the expertise required, through strategic alliances such as the ones established with Texas A&M University and the State Distance University, UNED, of Costa Rica.

The Hemispheric Training System for Agricultural Development, SIHCA, and the Hemispheric System for the Development of Agricultural Education, SIHDEA, are decentralized units. IICA operates and manages them jointly with other bodies that provide resources and management and technical personnel in Venezuela and Panama, respectively. They implement hemispheric technical cooperation projects and are run by their respective Executive Secretaries, with work programs approved the Boards of Directors, which are chaired by IICA's Director of Education and Training.<sup>3</sup>

SIHCA is responsible for establishing mechanisms for coordination and exchanges among training institutions in the member countries, and for coordinating the supply of training with the demand, through a hemispheric network of training institutions. It also coordinates and promotes training activities and studies to identify training needs in the countries, including the creation and operation of an information system on the subject of training.

SIHDEA contributes to the coordination of efforts to develop higher agricultural education institutions for the benefit of agriculture. It is responsible for promoting the establishment of a hemispheric network of higher education institutions, and for coordinating the supply of training and the technical assistance services of universities with the new demands of development linked to the transformation of agriculture.

With regard to the line of cooperation Training in Strategic Topics, CECAP and the other specialized units —CECADI/SIHCA/SIHDEA—contribute to the organization of the Program and its methodological aspects, and support its implementation. It also establishes links with

<sup>&</sup>lt;sup>3</sup> / SIHCA is composed of the Ministry of Agriculture and Livestock of Venezuela, represented by the CIARA Foundation, and IICA. The members of SIHDEA are the City of Knowledge Foundation of Panama, the Panama, Santa Maria la Antigua and Technological universities, and IICA. Each has its own Board of Directors, which approves the respective work programs.



"liaison" universities that can provide expertise, professors, bibliographic materials and, in some cases, infrastructure.

It is worth noting that the operating framework of CECAP and the subsystem of specialized technical units for education and training is coordinated with the Regional Centers and Technical Cooperation Agencies through the programming and joint funding of projects with other IICA units.

#### c. The role of the geographic units

The training in strategic topics is intended to meet hemispheric or regional needs in areas of common interest not covered, or only partially covered, at the local level by the Institute's actions in the countries.

This entails: Firstly, activities designed to complement and enhance the activities of the Technical Cooperation Agencies (TCAs) and Regional Centers (RCs). Secondly, the TCAs will continue to carry out the training activities programmed under their local projects, with the support of units at Headquarters, if required.

The RCs and TCAs will help identify the topics in which training is needed, negotiate with the clientele and organize and facilitate the implementation of the training on the ground (the topics to be addressed, the characteristics of the specific clientele, the opportunities available, the types of training that interested parties would be willing to fund).

The Technical Cooperation Agencies, within the frame of action of the Regional Centers and the Institute's strategic and priority topics, will also cooperate with the countries, supporting training programs for national personnel; in other words, using the training as a cooperation instrument.

In coordination with CECAP, the Directorates of the Regional Centers support the horizontal regional cooperation efforts to

modernize agricultural education and integrate institutions for the accreditation and free circulation of professionals.

#### d. The role of the other thematic units

The technical networks of the six strategic areas of cooperation will help identify and determine the strategic topics for training, provide input vis-a-vis their content, and contribute teachers and funding; when required, CECAP will provide didactic support.

With respect to education, they will support efforts to incorporate new topics into the curricula of agricultural science faculties and technical schools.

These units also participate in the identification and programming of the projects involving other IICA units, and provide the Directorate of the Strategic Area for Education and Training (CECAP) with data and information on the work that they program and carry out, to enable the latter to keep track of the Institute's work in this field.

JSM /

MQE: design and layout

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# Education and Training for competitive and sustainable agriculture

I. Annual evaluation of the technical cooperation in Education and Training

### 1. Annual evaluation of the technical cooperation in Education and Training

Year		
Regional Center	 TCA	

#### PRINCIPAL PRODUCTS OR ACHIEVEMENTS BY LINE OF ACTION

#### Line 1: "Training in strategic topics"

Establish a distance training network to provide services to the Institute's member countries.

Obtain and transfer distance training and electronic communications technology in general.

Mesh the supply of training with the demand, through a hemispheric network of training institutions. Establish ad hoc agreements with agribusiness organizations and institutions form the sector. Line 2: "Modernization of agricultural education" Facilitate scenarios for exchanges and horizontal cooperation among educational centers.

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Promote and support mechanisms for evaluation, accreditation and recognition of qualifications. Facilitate links among educational institutions, regional integration processes and agribusiness associations. Promote and support networks, fora, cooperative programs, consortia, etc.

Support refresher programs for agricultural professionals and teachers of agricultural and rural, basic and technical education.

Strengthen agricultural training mechanisms, systems and institutions (technical-teaching aspects, advisory assistance, improvement of technical and administrative processes, links and networks).

#### Line 3: "Dialogues, studies and information"

Foster horizontal cooperation among national and regional institutions.

	Systematize and disseminate experiences related to the modernization of agricultural education.
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	Strengthen exchange networks through electronic and conventional means.
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_	Publish and distribute educational textbooks and technical articles.
_	<del></del>

Make up-to-date data and information on agricultural education and training available to users.

Disseminate strategic information among agricultural entrepreneurs in the hemisphere.

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# Education and Training for competitive and sustainable agriculture

#### **Annexes**

- I. Form for keeping track of and monitoring the training activities implemented by IICA
- II. Internal advisory group on education and training
- III. Education and Training in the 1998/2002 MTP
- IV. List of documents and publications
- V. List of organizations with which links exist

### 1. Form for keeping track of training activities

_	Name							
3.	Origi	n of the init	iative					
4.	Object	ctives						
,	•				•			
	•				•			
		- 1						
<b>5</b> . '	Then	ne of the eve	nt	<del></del>				
6.	Strategic line of work to which it pertains							
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	( ) Di Spon	ialogue, studio	es and intorr	nation				
		•	es and intorr	nation				
		•	es and intorr	nation	•			
		•	es and intorr	nation	•			
7.	Spon • •	•	es and intorr	nation	• •			
7.	Spon  • • Parti	sors	Position		Address, telephone, fax, e-mai			
<b>7.</b> <b>8.</b>	Spon  • • Parti	sors			Address, telephone, fax, e-mai			
<b>7.</b> <b>8.</b>	Spon  • • Parti	sors			Address, telephone, fax, e-mai			
<b>7.</b> <b>8.</b>	Spon  • • Parti	sors						

9. Costs  Total and contributions of each IICA and other units
10. Name and comments of the person responsible for the activity
11. Photographs
12. Person responsible for sending the information

### 11. Internal advisory group on education and training

This operates on two levels: firstly, as a permanent body that prepares materials and proposals, and, secondly, as a mechanism for consultation and validation. Its objectives are to contribute to determining IICA's field of action in education and training; propose working strategies; and define the organization, functions and reciprocal relations among the specialized units, and between these and other Institute units.

The permanent is headed by Dr. Jaime Viñas Roman and is made up of the following colleagues:

- . Juan Caliva
- . Arnaldo Chibbaro
- . Alfonso Chirinos
- . Silvia Delgado
- . Rafael Ledesma
- . Tomas Mulleady
- Carlos Mundt
- · Jose Nagel

- . Edith of Obschatko
- · Jose L. Parisi
- . Reynaldo Perez
- . Rafael I. Quevedo
- . Martin Ramirez
- . Jose Ramirez
- Jorge Sariego (Tech. Sec. of the Group)
- . Guillermo Toro

This group met in Montevideo and proposed modifications to a proposal prepared by CECAP on the topics mentioned in the objectives. These proposals were incorporated into a consolidated document that was distributed among the so called wider "consultation and validation" group, composed of the following persons:

Jaime Acosta, Fabio Bermudez, Juan Caliva, Roberto Casas, François Dagenais, Finn Damtoft, Silvia Delgado, Gustavo Enriquez, Yanko Goic, Mario Infante, Benjamin Jara, Rafael Ledesma, Helio of Macedo, Rafael Marte, Hector Morales, Manuel Otero, Antonio Pinchinat, Jose Ramirez, Gonzalo Stefanell, Ariel Rivera, Juan Jose Salazar, Sergio Sepulveda, and Horacio Stagno.

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# 111. Education and training in the 1998-2002 Medium Term Plan

(...)

During the 1994-1998 period, the Institute attached great importance to professional and technical training and education (both formal and informal) for human resources working in agriculture in the Americas.

More than a priority activity cutting across the other Areas of Concentration, training and education has become a topic of strategic importance whose impact and achievements have placed the Institute in the vanguard in this field. IICA's support to public and private organizations and to universities has received the solid backing of all the countries.

(...)

The Institute's cooperation services are grouped into six Strategic Areas that are, in turn, organized into two complementary groups that strengthen and enrich each other's action. The first includes the four Areas of Thematic Concentration. The second comprises two strategic areas that, in addition to being thematic, are cross-cutting in nature and therefore serve to articulate the Institute's cooperation actions: Training and Education, and Information and Communications.

(...)

The new needs of agriculture also pose a challenge for agricultural education (basic, vocational and professional). The education sector has the responsibility of training well-grounded professionals and technicians capable of working effectively throughout the productive and trade chain, with a business orientation and the ability to learn on their own.

The Institute's cooperation in this area will therefore focus on spawning and supporting processes that promote the evaluation and

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modernization of curricula, teacher training and accreditation as factors important to the process to transform agricultural education, with the aim of improving the quality and relevance of its products.

# Objective

To enhance the capacity of universities and other academic centers in the Member States that educate and train agricultural professionals and technicians, as well as agribusiness producers, to engage in:

- i) strategic planning for academic development, the modernization of curricula and teacher training; and
- ii) the development of mechanisms and networks for exchanges and horizontal cooperation (at the national, regional and hemispheric levels).

(...)

The priority fields for action are a sub-set of the themes covered by the Strategic Areas. The General Directorate will focus its cooperation activities on these fields in order to concentrate efforts and meet the needs of the Member States, providing high-quality services that have a major impact. This will earn IICA recognition as a leading institution, at the inter-American level, providing cooperation for transforming agriculture.

By restricting its actions to these fields, the Institute is implementing its policy of investing its regular resources in a limited number of topics of great importance for agriculture in the Americas.

(...)

Strengthening education and training

 To contribute to the modernization of higher and vocational agricultural education centers, and of

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agricultural training systems and institutions in order to improve the relevance and quality of their products.

- To support training programs for the agribusiness community and for the staff of public and private agricultural organizations in order to strengthen their competitive capabilities and improve their position on international markets.
- To systematize and disseminate experiences on the modernization of agricultural education and training, and to strengthen horizontal cooperation.

(...)

# Types of Cooperation Services

As an effective means of achieving broad coverage, IICA will promote distance training programs and strengthen alliances with universities, technical institutes, and training and education centers. The hemispheric systems for agricultural training and education (SIHCA and SIHDEA) developed and supported by the Institute and the Distance Training Center (CECADI) will play a key role in cooperation of this kind.

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# IV. List of documents and publications

- Calivá, Juan. 1998. Bases para la creación de un sistema de evaluación de efectos e impactos sociales, económicos y ecológicos. Teaching manual.
- Calivá, Juan. 1998. Determinación de efectos o impactos: dilema en la evaluación de proyectos. Technical separata.
- Calivá, Juan et al. (comp.). 1997. Manual para la organización de jóvenes rurales. Center for Education and Training, CECAP, W. K. Kellogg Foundation, Nicaraguan Rural Youth Program. IICA, ISSN 0534-5391; No. A1/SC-97-12 ISBN 92-9039-324 6.
- Calivá, Juan and Ramírez, José. 1997 Nuevas estrategias de capacitación, extensión y transferencia tecnológica para el subsector cafetalero de Centroamérica y República Dominicana: resultados de los talleres. Center for Education and Training, CECAP / IICA, ISSN 0534-5391; No. A1/SC-97-13 ISBN 92-9039-327 0.
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- Delgado, Silvia. 1998. Pautas para el Desarrollo de Procesos de Fortalecimiento Organizacional hacia el Siglo XXI. Teaching manual. At press.
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- Parisí, José Luis. 1997. La cooperación técnica del IICA en procesos de desarrollo curricular de la Educación Agrícola Superior, Center for Education and Training, CECAP / IICA, ISSN 0534-5391; No. A1/SC-97-05.
- Parisí, José Luis. 1997. La participación en los procesos educativos ¿Interacción, o movimiento y juegos?. Technical separata.
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- Ramírez, José. 1996. Estudios de caso: una estrategia de enseñanza-aprendizaje. Technical separata.
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- Vistas, Jaime A. 1998. Transformar la Educación Rural en América Latina y el Caribe. Un Desasso Insoslayable. Conference paper.
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# V. List of organizations with which links exist

# **Argentina**

- Universidad Nacional de Catamarca, Argentina
- Universidad Nacional Mar del Plata, Argentina
- Ministry of Education, Argentina
- Universidad Nacional de Salta, Argentina
- Universidad Nacional de la Plata, Argentina
- Forum of Deans of Agronomy

#### **Bolivia**

- Universidad Autónoma Gabriel René Moreno, Bolivia
- Universidad Mayor de San Simón, Bolivia
- Universidad Técnica del Beni, Bolivia

#### Brazil

- Universidade Nacional do Brasil, Brazil
- Universidade Federal Rural do Pernambuco, Brazil
- Universidade do Estado da Bahia, Brazil
- Universidade Federal de Alagoas, Brazil
- Universidade Federal da Bahia, Brazil
- Universidade Federal do Ceará, Brazil
- Universidade Estadual do Maranhão, Brazil
- Universidade Federal do Pará, Brazil
- Universidade Federal do Piauí, Brazil
- Universidade Federal da Paraíba, Brazil
- Higher School of Agriculture of Mossoró, Brazil
- Universidade Federal do Río Grande do Norte, Brazil
- Universidade Federal do Acre, Brazil
- Universidade de Araripina, Brazil
- Universidade do Amazonas, Brazil
- Brazilian Association of Higher Agricultural Education, Brazil

- Bank of the Northeast, Brazil
- Ministry of Education and Sports, Brazil
- Ministry of Agriculture, Brazil

#### Canada

Inter-American University Organization, IUO, Canada

#### Chile

- Universidad de Chile
- Universidad Iberoamericana de Ciencias y Tecnología, Chile
- Universidad de Concepción, Chile
- Universidad de las Américas, Chile
- Universidad Católica de Temuco, Chile
- Universidad Católica de Chile
- Universidad de La Serena, Chile
- Association of Agronomists of Chile

#### Colombia

- Universidad Nacional de Colombia
- Universidad de Ciencias Aplicadas y Ambientales, Colombia

#### Costa Rica

- Universidad de Costa Rica
- Universidad Nacional, Costa Rica
- Universidad Estatal a Distancia
- Technological Institute of Costa Rica
- Tropical Agriculture Research and Higher Education Center, Costa Rica
- Agricultural School for the Humid Tropic Region, Costa Rica
- University College for the Irrigation and Development of the Dry Tropic Region, Costa Rica
- Central American School of Livestock, Costa Rica

# Dominican Republic

- Universidad Autónoma de Santo Domingo, Dominican Republic
- Universidad Nacional Pedro Enríquez Ureña, Dominican Republic
- Higher Institute of Agriculture, Dominican Republic

#### Ecuador

- Universidad Nacional de Loja, Ecuador
- Universidad Agraria del Guayaquil, Ecuador
- Army Polytechnic, Ecuador

#### El Salvador

- Universidad Centroamericana José Simeón Cañas, El Salvador
- Universidad de El Salvador
- Universidad Evangélica de El Salvador
- National School of Agriculture of El Salvador

#### Guatemala

- Universidad del Valle de Guatemala
- Universidad Rafael Landívar, Guatemala
- Universidad de San Carlos, Guatemala

# Guyana

- Regional Educational Programme for Animal Health Assistants, Guyana
- Queens' College Compound, Guyana
- University of Guyana
- Institute of Distance Education, Guyana

#### Haiti

• Université de Haïti

#### Honduras

- Pan American Agricultural School. ZAMORANO, Honduras
- Regional University Center of the Atlantic Coast, Honduras

#### Mexico

- Universidad Autónoma Chapingo, México
- Universidad Autónoma Agraria Antonio Narro, México
- Mexican Association of Higher Agricultural Education, AMEAS

# Nicaragua

- Universidad Centroamericana, Nicaragua
- International School of Agriculture and Livestock, Nicaragua
- "Francisco Luis Espinoza" School of Agriculture and Livestock of Estelí
- Universidad Nacional Agraria, Nicaragua

#### **Panama**

- Universidad de Panamá
- National Institute of Agriculture, Panama
- Universidad Santa María La Antigua, Panama
- Universidad Tecnológica de Panama
- City of Knowledge Foundation, Panama

# Paraguay

- Universidad Nacional de Asunción, Paraguay
- Universidad Nacional del Este. Alto Paraná, Paraguay



Universidad Católica Nuestra Sra. de Asunción, Paraguay

#### Peru

- Universidad Nacional Agraria La Molina, Peru
- Universidad Nacional Jorge Basadre Grohmann, Peru
- Universidad Nacional Agraria de la Selva, Peru

#### Puerto Rico

University of Puerto Rico, Mayagüez, Puerto Rico

#### Suriname

• Anton de Kom University of Suriname, Suriname

# Trinidad & Tobago

- ACS, Trinidad & Tobago
- Caribbean Fisheries Training and Development Institute
- NIHERST, Trinidad
- Caribbean Council for Science and Technology, Trinidad
- · University of West Indies, Trinidad
- ECIAF, Trinidad

### **United States of America**

• Texas A&M University, United States of America

# Uruguay

- Universidad de la República. Montevideo, Uruguay
- Universidad Católica Dámaso Larrañaga, Uruguay

#### Venezuela

- Universidad Centro Occidental Lisandro Alvarado, Venezuela
- Universidad Nacional Experimental Francisco de Miranda, Venezuela
- Universidad Nacional Experimental del Táchira, Venezuela
- Universidad del Zulia, Venezuela
- CIARA Foundation, Venezuela
- Universidad Central de Venezuela
- Universidad Nacional Experimental Francisco de Miranda, Venezuela
- Universidad Simón Rodríguez, Venezuela
- Universidad de Oriente, Venezuela
- Universidad Rafael Urdaneta, Venezuela
- Universidad Nacional Experimental Rómulo Gallegos, Venezuela

# Virgin Islands

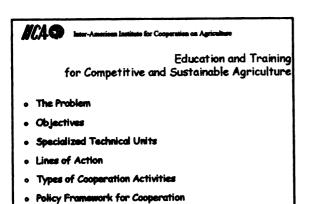
• University of the Virgin Islands, US Virgin Islands

# Other organizations

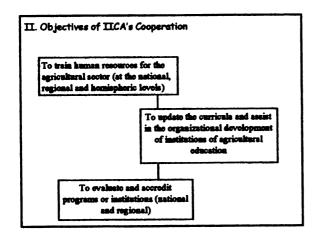
- Organization of American States, OAS
- CRESALC, UNESCO
- Regional Forum of Schools of Agricultural Sciences of the Southern Region (headquarters in Montevideo, Uruguay; includes schools in the MERCOSUR member countries Argentina, Brazil, Paraguay and Uruguay)
- Caribbean Council of Higher Agricultural Education, CACHE (headquarters in Trinidad Tobago; includes universities in Puerto Rico, the West Indies, Trinidad and Tobago, Guyana, Dominican Republic and Haiti.)

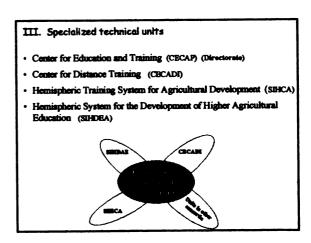
JSM /

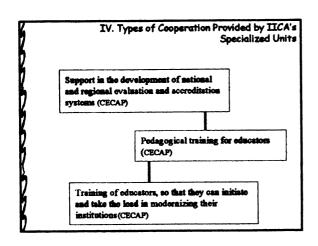
MQE: design and layout

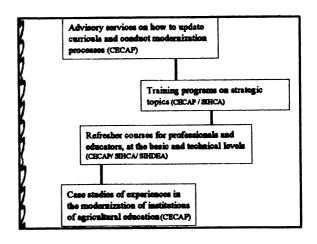


# Agricultural education, at the vocational and university levels, as well as agricultural training, are currently under review in LAC given the need to: O Address new subject areas and to make both disciplines more competitive. O Develop new curricula and relevant and high caliber research/extension systems



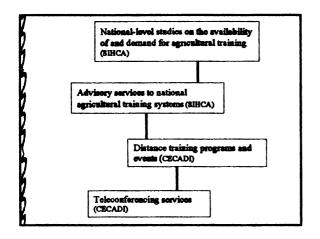


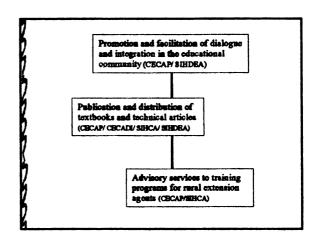




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#### V. Policy Framework for Cooperation



- To promote joint efforts between the ministries of agriculture and education
- 2. To focus on how necessary changes are effected
- 3. To encourage the creation of permanent fora and/or cooperative programs that will facilitate interchanges and joint ventures
- 4. To provide opportunities for communication and exchanges among agribusiness operators, representatives of the banking system, legislators and the public sector



- the countries
- 6. To execute inter-consortia projects (figure 2)
- To create advisory groups comprising agribusiness operators, legislators, specialists, personnel of integration systems and professional associations
- 8. To enter into alliances with other international organizations (OAS, UNESCO, FAO, IDB and World Beak) and universities

