



Harvest Times 2016

SUMMARY REPORT



Our
Commitment:
Results



Inter-American Institute for Cooperation on Agriculture (IICA), 2017



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This publication is also available in electronic (PDF) format from the Institute's Web site: <http://www.iica.int>

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Cover design: Karla Cruz
Printed: IICA Headquarters

Harvest times 2016: summary report / Inter-American Institute for
Cooperation on Agriculture – San Jose, C.R.: IICA, 2017.
60 p.; 21,5 cm X 28 cm

ISBN: 978-92-9248-708-9
Published also in Spanish









1. Agricultural development 2. Technical aid
3. International cooperation 4. Economic competition
5. Innovation adoption 6. Pest control 7. Disease control
8. Rural development 9. Gender 10. Climatic change adaptation
11. Food security 12. Knowledge management I. IICA II. Title

AGRIS
E14

DEWEY
338.1

San Jose, Costa Rica
2017

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About IICA

A story of agricultural and rural transformation began 75 years ago, when the Inter-American Institute for Cooperation on Agriculture (IICA) was founded as the specialized agency of the Inter-American System with the mission to “encourage, promote, and support our Member States in their efforts to achieve agricultural development and rural well-being through international technical cooperation of excellence.”

The delivery of results-based technical cooperation services moves us closer to attaining our ultimate goal, which is to:

“achieve competitive, inclusive and sustainable inter-American agriculture that feeds the hemisphere and the world, while at the same time generating opportunities to reduce hunger and poverty among farmers and rural dwellers.”

The services and products we provide to the 34 member countries that we represent are intended to promote a more robust public institutional framework, proposals for modern policy proposals, concrete projects and actions aimed at the improvement of agricultural productivity, agricultural chains with more business opportunities, rural territories with inclusive developments plans, knowledge management, and the training of more specialized human talent.

IICA’s Headquarters are located in San Jose, Costa Rica. The Institute has delegations in each of its member countries, as well as a Permanent Office in Spain. Its Director General is Dr. Víctor Villalobos, who heads a team of over 300 professionals drawn from every nation in the Americas.

IICA’s work is summed up in the delivery of eleven contributions to its member countries aimed at:

Our eleven contributions

1 Policies and institutional frameworks



Strengthening the capabilities of the Member States at the national, regional, multinational and hemispheric levels to establish public policies and institutional frameworks in order to make agriculture more productive and competitive, improve management of rural territories, adapt to and mitigate the impact of climate change, and promote food and nutritional security.

2 Innovations



Implementing, through public and private institutions, technological, institutional and business innovations aimed at boosting the productivity and competitiveness of agriculture and the production of basic foodstuffs of high nutritional quality.

3 Agricultural health



Increasing the capabilities of the public and private sectors to ensure agricultural health and food safety and thereby improve productivity, competitiveness and food security.

4 Business capabilities



Strengthening the business and associative capabilities of the different stakeholders in the agricultural production chains.

5 Area-based management capabilities



Increasing the capacity for area-based social management among stakeholders in rural territories, especially those involved in family agriculture, in order to improve food security and rural well-being.

6 Water management and soil use



Enhancing the capabilities of different stakeholders of the agricultural production chains and rural territories in the integrated management of water and sustainable use of soil for agriculture.

7 Climate change and risk management



Increasing the capacity of public and private institutions to promote and implement measures for adapting agriculture to climate change and mitigating its effects, as well as promoting integrated risk management in agriculture.

8 Food and nutritional security



Improving the efficacy and efficiency of food and nutritional security programs in the Member States.

9 Food potential



Ensuring that producers and consumers benefit from a greater use of native species, promising crops and native genetic resources with food potential.

10 Less food losses



Improving institutional capacity to address losses of food and raw materials throughout the agricultural chains.

11 Forums and knowledge exchange



Strengthening the Member States' capacity for consensus and participation in international forums and other mechanisms for the exchange of knowledge and mobilization of sizable resources for inter-American agriculture.

Message from the Director General



“Our continent has the potential to become the world’s leading agrifood producer”

Dr. Víctor M. Villalobos Arámbula
Director General del IICA

The Inter-American Institute for Cooperation on Agriculture (IICA) will shortly celebrate 75 years of existence as an organization dedicated to supporting its member countries’ efforts to achieve agricultural development and rural well-being.

There are two main reasons for the Institute’s successful longevity: first, the conviction of IICA’s member countries that international technical cooperation is a particularly important tool for complementing and boosting their individual capabilities; and, second, the Institute’s ability to continuously adapt in order to provide the best possible response to the needs of its Member States as they tackle the challenges of the continent’s ever dynamic and changing agriculture sector.

It is the countries of the Americas themselves that continually set the direction and priorities of the technical cooperation provided by IICA. This responsibility is reflected in IICA’s 34 country strategies, which are prepared together with the authorities. All the actions included in them are designed to achieve productive, competitive, inclusive, and sustainable agriculture, because only then will the countries be able to produce the food and byproducts they require from

the sector, as well as the other benefits it provides.

A number of studies have suggested that our continent has the potential to become the world’s leading agrifood producer. To harness that potential, we must transform the way we produce, achieving greater efficiency while at the same time maintaining a social and environmental commitment consistent with the principles that undergird international cooperation.

In recent decades, the globalization process has thrown up new opportunities for the development of agriculture, to which we as a region have responded positively. We have opened doors that should never be shut again, because the consequences would be disastrous for millions of producers throughout the Americas. On the contrary, we should increase North-South and South-South cooperation, efforts to develop and complement capabilities, knowledge management, and social inclusion.

The economic performance of agriculture has shown that the sector is highly resilient. In fact, on many occasions it has even grown and been key to ensuring the well-being of millions of people during years of economic instability, such as those seen recently. However, if the sector is to continue to

play a decisive role in development, the governments of the countries must lend it every possible support so that, far from being a source of conflicts, agriculture continues to enrich the fertile soil of technical cooperation and collaboration among our peoples.

Seven years ago, the ministers of agriculture identified the four overarching challenges facing the sector. These have not changed and are a) to raise productivity, b) to increase the sector's adaptation to the effects of climate change, c) to reduce poverty and inequality, and d) to achieve food security. Joint work by all the national and international actors involved remains vital to tackle these challenges.

The Institute focuses its actions on the delivery of international public goods designed to contribute to the countries' individual and joint efforts. In 2016, we consolidated our results-based cooperation model by coordinating 12 regional integration mechanisms and implementing 5 inter-American projects, 12 multinational projects, and 31 rapid response actions. We also carried out 208 externally funded projects that called for total expenditure of close to USD 110 million.

Those projects and actions enabled us to strengthen the capacity of public institutions to devise and implement agricultural policies and strategies; modernize research, extension, agricultural health and marketing services; support family farming; improve the meshing of production chains; increase the resilience, health, and market access of agricultural production; guarantee more opportunities for development to those who have had the fewest; and promote

area-based development, innovation, and sustainability as the principal means to improve agricultural production and the well-being of the actors involved.

Presenting an annual report of the work carried out by IICA is more than a commitment to transparency and accountability; it is also a way of acknowledging the progress made by our Member States on behalf of their peoples. What they achieve thanks to the Institute's contributions gives them continued confidence in an organization that, in fact, belongs to them. This report is entitled Harvest Times, reflecting the Institute's achievements since it adopted a results-based technical cooperation model in 2014.

This report on 2016 is especially important for me. It is the last I will be presenting, as my eight-year term at the helm of the Institute draws to an end.

Reflection and an expression of appreciation are therefore in order. The Member States need to reflect on the Institute's future, as the organization requires technical and financial strengthening to enable it to carry out its mission and tackle the complex future challenges of agriculture in the Americas. For my part, I wish to express my appreciation to IICA's member countries for allowing me to guide the work of an exceptional group of professionals committed to the Institute's noble purposes and capable of delivering results despite the serious constraints we face. Thanks to them, we have been able to respond successfully to the confidence placed in us.

This report is an account of our results and of a story we will continue to write in the new times that are approaching. ■



in numbers



208
technical cooperation
projects or actions

funded with external
resources



31
rapid response
actions

financed by IICA and
approved to provide
effective cooperation in
21 countries and in the
Andean, Central and
Southern regions



5
hemispheric
projects

financed with IICA
resources underway
in areas related to
chains, inclusion, family
farming, resilience and
agricultural health



FonTC
12
multinational
projects

operating under the
IICA Technical
Cooperation Fund



34
strategies

by IICA being
implemented in
the countries



Close to
USD 110
million executed

through externally
funded projects



500
partner
institutions

national and
international



21
countries
benefited

from IICA's rapid response
actions to strengthen their
institutional framework
and expand agribusiness



Over
52,000
persons trained

in adaptation to climate
change, innovation,
trade, business, health,
public policies and rural
development



244
scholarship
recipients

in Masters and Doctoral
degree in Mexican
universities under the
CONACYT-IICA program



Financial
contributions

The main financial
contributions came from the
European Union (EU) and
several of its member states,
as well as the U.S., Mexico,
Argentina, and Brazil



12 mechanisms
for technical
cooperation and
regional integration



Year in review



More competitive agricultural chains: More than 3500 people working in various chains (cashew, coffee, cacao, flowers, poultry, vegetables, cattle, sheep, goats, sweet potatoes, bees, bamboo, corn and sugar) in 20 countries are better equipped to access markets, add value to their products, strengthen partnerships, generate new business, and innovate.



[Program: Commercialization Strategies for small and medium-scale agriculture](#) *(Spanish Only)*



Family farming with greater opportunities: Honduras, Peru, Colombia, Paraguay, and Venezuela received proposed policies for improving the performance of family farming (FF), while Chile, Paraguay and Guatemala expanded the capabilities of their FF extension services.



[AgroEnlace: Family agriculture and public policies](#) *(Spanish Only)*



Social inclusion in rural territories: Nine countries have area-based development plans or coordination entities that promote the economic, social and political integration of vulnerable groups in rural territories such as Esmeraldas (Ecuador), Manpoliza (Guatemala), Cariri (Brazil), and Marowijne (Guyana).



[Interview with Ana Maria Echeverri, Rural Development Specialist at IICA](#) *(Spanish Only)*



More resilient agrifood systems: As many as 450 technical officers from 65 institutions were trained to implement plans that integrate climate change management into agricultural programs, while another 60 were trained in risk mapping. At least three platforms for sharing knowledge about climate, insurance, and soil and water are operating for the benefit of IICA member countries.



[A day on the farm. Climate change and agriculture](#) *(Spanish Only)*



Agricultural health and food safety: Timely assessments were carried out of the status of current or potential pests and diseases, such as mollusks (Andean Region), coffee leaf rust (Central America and Jamaica), the carambola fruit fly (Guyana and Suriname), and *Huanglongbing* (Argentina). IICA also designed strategies for strengthening animal and plant health services, collaborated in efforts to prepare officials to participate in international meetings, and helped the countries gain a better understanding of legal frameworks, including the U.S. Food Safety Modernization Act (FSMA), that permit smoother trade between exporting countries.



Reduction in food losses: The updating and application of tools for the analysis of agrifood chains, such as the MECA methodology, are a first step towards the development of strategies for reducing postharvest losses and improving the efficiency of chains in the member countries.



[Food loss and food waste: a challenge to be overcome](#) *(Spanish Only)*



Participation in global and regional events: IICA helps representatives of national institutions prepare to play an effective part in global and regional events on climate change, agricultural health, food safety, and trade, among other subjects, and disseminates timely information prior to such events.



[Program: AgroEnlance, shared knowledge](#) *(Spanish Only)*



Knowledge management: The Institute organized more than 700 training events designed to enhance the expertise of 51,750 people and share knowledge about various subjects: *Codex Alimentarius*, good agricultural practices, climate change adaptation, water management, soil use, renewable energies, food safety, risk management, associative enterprises, financing, and market linkages, among others. Furthermore, some 244 scholarship holders from 18 countries are enrolled in master's and doctoral programs at Mexican universities thanks to the Capacity Building Program to Promote the Development of Agriculture in the Americas, implemented under an agreement between Mexico's National Science and Technology Council (CONACYT) and IICA.



[Capacity building, the IICA/CONACYT Scholarship Program](#) *(Spanish Only)*



2016 Partners. IICA provides most of its cooperation through joint undertakings with important strategic partners, such as the United Nations Development Programme, (UNDP) the United Nations Food and Agriculture Organization (FAO), the Tropical Agriculture Research and Higher Education Center (CATIE), the World Food Programme (WFP), France's Agricultural Research for Development (CIRAD), the Caribbean Agricultural Research and Development Institute (CARDI), the *Deutsche Gesellschaft für Internationale Zusammenarbeit* (GIZ) and the Japan International Cooperation Agency (JICA), among other international and donor organizations. Coupled with those carried out with ministries, research institutes and national universities, these efforts enable us to fulfill our mission to support the member countries' endeavors to achieve agricultural development and rural well-being.



A modern corporate management



Health promotion and disease prevention campaigns

The Institute conducted several campaigns aimed at promoting the long-term well-being of its personnel. It also implemented a nutrition program through which 612 queries from 125 staff members were addressed, meal plans were monitored and health and nutrition lectures were organized.



Institutional continuous training plan

Seventeen (17) staff training activities were organized on a range of different topics (communication, languages, effectiveness, writing, sexual harassment and gender issues, among others), which were considered useful by the 329 staff members who benefited.



The *Esplendor* Program

With the aim of promoting the long-term well-being of its personnel, the Institute implemented the *Esplendor program*, through which 50 individuals who are approaching retirement or will be departing IICA due to their age, learned how to prepare for this new phase of their lives.



Evaluation of technical cooperation

The Institute established an Institutional Evaluation Policy and received continuous coaching from the *Deutsche Gesellschaft für Internationale Zusammenarbeit* (GIZ). This enabled IICA to review concepts related to results-based management and validate its methodology for evaluating cooperation projects and the criteria and instruments needed to evaluate strategic projects. Institute personnel completed self-evaluations for 42 projects and actions that ended in 2016, as part of an internal process of continuous improvement.



Internal Audit

The audit verified satisfactory compliance with institutional rules and the commitments undertaken within the context of externally funded projects. *"In situ"* audits were conducted in eleven IICA Offices in the member countries and four units at Headquarters, while *"extra-situ"* audits were conducted in six offices. The Institute is committed to the prevention, timely identification and mitigation of risks, as well as the continuous improvement of its management processes.



Infrastructure and services

Improvements were made to buildings to adapt them to the current needs of the offices. IICA also continued with its efforts to strengthen its computer systems and equipment. In line with institutional principles, environmental awareness campaigns were organized, which resulted in the application of best environmental practices in the use of water, energy, paper and other inputs.



Unified Institutional Management System (SUGI)

The improvement of the capacities of the SUGI is one of several efforts made to facilitate the fulfilment of IICA's commitment to implementing a results-based technical cooperation model. The SUGI system enabled IICA to plan, program, manage, monitor and conduct self-evaluations of all its projects and actions, as well as closely monitor the level of fulfilment of the annual goals established by its 55 operating units and the updating of their work plans. The SUGI also served as the single source of information for preparing reports on the results achieved by those units. The preparation and evaluation of the Individual Contribution Plan (ICP) was incorporated into the SUGI, enabling the Institute to determine each staff member's contribution to the achievement of institutional objectives and results, link their work to the projects and actions that IICA carries out in a calendar year, and better distribute workloads. Additionally, 607 Institute staff members conducted over 2,000 personnel processes online using the human talent management platform, SAPIENS.



Management of human talent and institutional outreach

The Institute made progress in updating several documents of strategic importance for the institution, including the Evaluation Policy, the Code of Ethics, the Gender Policy, the Policy on the Prevention and Resolution of Sexual Harassment and the Graphic Identity Manual, as well as protocols for the recruitment and selection of human talent, all of which promote a better work environment based on transparency, respect, harmony and equity. In addition, improvements were made to the Procedures Manual for the Procurement of Goods and Services, geared toward improving the effectiveness of institutional investments. Three communications plans were designed for the Institute's technical cooperation efforts: one of hemispheric scope, one for the IICA Office in Costa Rica and another for the IICA Office in Peru. Additionally, several units of the Institute contributed to the development of websites for national and international cooperation projects and initiatives.



Programming, budgeting and control

The Programming, budgeting and control processes of the Institute's resources have been conducted in accordance with the guidelines established in the 2014-2018 Medium Term Plan (MTP), which clearly describes the results-based management model and the dynamics of technical cooperation projects. Monitoring of the action plan's budget execution enabled IICA to improve its operations and take full advantage of institutional capabilities. In addition, strict rationality and austerity measures were applied to mitigate the impact of price increases, and economies of scale were achieved. All of this contributed to making IICA a more efficient institution, characterized by low costs and high impact.



Other important achievements

- Interdisciplinary groups comprising planning, management, technical cooperation, budget and control specialists were established to review annual action plan proposals. This review process ensured that all institutional units received the funds they needed to execute their activities in 2016.
- Corporate management continues to uphold the principle of transparent use of resources, and has therefore complied strictly with U.S. GAAP (U.S. generally accepted accounting principles) international accounting standards in preparing, auditing and approving financial statements.
- The budgetary module of the SAP financial information system operating in all IICA Offices in the member countries, which allows the units to check, in real time, the availability of resources and thereby improve their financial planning.



Productivity and competitiveness

Strategic objective 1



Productivity and competitiveness



Public policies and institutional frameworks

Policies with an impact on agriculture: Argentina, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Honduras, Uruguay, Paraguay, and Peru received support with the design of policies, plans and agreements, administrative processes and international or regional regulations, which benefited 14 agricultural chains. IICA trained officials from 133 institutions and 522 actors in milk regulations, the Food Safety Modernization Act (FSMA), biosafety, and value added, among other subjects. Under the Agriculture Policy Programme financed by the European Union (EU), IICA worked with the Caribbean Community (CARICOM) to improve the policy structures of 15 Caribbean countries. Eight of them also increased their capabilities for implementing national agriculture plans.

Policy monitoring and evaluation: more than 95 officials and technical officers of the agricultural policy units of Argentina, Bolivia, Brazil, Chile, Costa Rica, Paraguay, Peru, and Uruguay increased their knowledge of good practices and lessons learned for following up on, monitoring and evaluating agricultural policies, thanks to joint work with partner institutions in Mexico, Colombia, Chile, Brazil and Canada.



Technological and institutional innovation

High-quality seeds: the EU-financed Regional Program for Research and Innovation in Agricultural Value Chains (PRIICA) enabled the research institutes of Central America to release germplasm of improved cassava, potatoes, avocados and tomatoes for 5314 beneficiaries. Coupled with a large number of training events, this work improved productivity, competitiveness and food security in the region. Furthermore, community seed banks and other mechanisms facilitated access to, and the production of, high-quality seed.



Technological and institutional innovation

Family farming (FF) seal: in Paraguay, the Ministry of Agriculture and Livestock adopted a commercial innovation process based on a strategy aimed at establishing a differentiating seal for FF, which was designed with technical personnel and social organizations. The objective is to raise the profile of FF products in the marketplace.



Promotion of innovation: within the framework of the Network for Innovation Management in the Agrifood Sector (Red Innovagro), which is made up of 82 public and private institutions in 16 Latin American and European countries, the following three technological innovation processes were implemented: a) method for the biological control of the olive-tree fly in Spain, b) a state-of-the-art adjuvant for vaccines for production animals in Argentina involving the use of nanoparticles in an aqueous solution; and c) an app for determining the fertilization needs of rice crops in Uruguay. Seminars, video conferences, and workshops were organized to enhance the expertise of 3500 people.

Program for Regional Agricultural Research Consortia: under this program, financed by the United States Department of Agriculture (USDA) and implemented by IICA, research topics for 18 agricultural chains were prioritized by mapping actors and conducting assessments in the Guatemalan departments of Alta Verapaz, Quiché, Chiquimula, Zacapa, Quetzaltenango San Marcos, and Huehuetenango.

Modern market information systems: the Market Information Organization of the Americas (MIOA), which has 33 active member countries, provided IICA with an opportunity to develop a new study program on agricultural market information and analysis with universities in Brazil, Costa Rica, Honduras, and Trinidad and Tobago; prepare a catalogue of 39 commercially important products in Central America; and exchange good practices and innovative experiences on price information management.



Agricultural health and food safety (AHFS)

Strategies for animal health and plant protection

services: use of the Performance, Vision and Strategy (PVS) tool developed by IICA made it possible to define strategic actions for the plant protection services of Ecuador, Argentina, and El Salvador; determine the emergency response capacity in Uruguay and Chile; and strengthen the veterinary and food safety service of Ecuador.

Compliance with international standards: IICA was instrumental in increasing implementation of good agricultural practices in the region to facilitate compliance with the U.S. FSMA, in raising awareness of the act among public and private actors, and in certifying 45 food safety professionals in Antigua and Barbuda, Barbados, Grenada, Jamaica, Saint Lucia and Trinidad and Tobago as lead instructors.

Institutions in the member countries of COSAVE strengthened their technical capacity in plant health and have at their disposal tools for general phytosanitary monitoring.

New plant health capabilities: institutions in Argentina, Brazil, Bolivia, Chile, Paraguay, Peru and Uruguay, all members of the Plant Health Committee (COSAVE), strengthened their technical capabilities in plant health and have tools for carrying out general phytosanitary surveillance processes. In addition, their plant health inspectors were enrolled as students in the International Module of the Regional Virtual School for Food Inspectors, in order to prevent the entry of pests and guarantee safe trade in agricultural products. Venezuela, Guatemala, Honduras, Colombia and Ecuador participated in programs to strengthen plant health management.

Economic impact studies in Argentina: IICA contributed to national decision-making on sanitary matters by conducting studies with the National Health and Agrifood Quality Service (SENASA) on the economic impact of *Huanglongbing* on citrus fruits and *Lobesia botrana* on vines.



Agricultural health and food safety (AHFS)

Impact of animal health programs: as members of the Standing Veterinary Committee (CVP), the six countries that make up the Southern Region have a methodology for evaluating the economic impact of their programs.

Practices in chicken production in Venezuela: in this country, 100 public and private interest groups were trained in good agricultural practices for chicken production, and a study was carried out in order to create guides on good poultry practices.



Business and associative development of chains

Competitive chains: IICA strengthened the competitive, sustainable and inclusive management of several chains: coffee and cocoa in Panama, flowers and sheep in Paraguay, fruits in El Salvador, dairy goats in Trinidad and Tobago, poultry in Venezuela, vegetables in Argentina and sweet potato in Jamaica. This was accomplished through the establishment and strengthening of collaborative roundtables, the use of manuals and the drafting of business plans. A total of 1,900 chain stakeholders received training in technological options for milk management, postharvest of fruits, bio-inputs for ornamental plants, sweet potato farming, pest and disease control, economic and risk evaluations, cadmium management, and carbon footprint, among other topics.



Preparation of fried yuca flakes to diversify yuca consumption

(Spanish Only)



Material produced by the Regional Program for Research and Innovation in Agricultural Value Chains (PRIICA), a program of the European Union and IICA the goal of which goal is to strengthen the food and nutritional security of farmers in the region through technological innovations in agriculture.

Watch video: <https://goo.gl/YttEBV>



Business and associative development of chains



500 small-scale producers improved their capacities in marketing, associativity, leadership, strategic planning, value added, project development, and fair trade standards.

Defining the potential of avocado in Honduras: As a result of activities carried out within the framework of PRIICA, 195 stakeholders of the avocado chain in Honduras now have an inventory of farming areas, as well as a certification manual for nurseries. This will enable the sector to understand its potential, guarantee the production of high-quality avocado plants, and increase the productivity and performance of avocado plantations.

Fair trade certification: Five hundred small-scale producers, who form part of 47 organizations that are certified, or are in the process of becoming certified, improved their marketing, association, leadership, strategic planning, value-adding, project design and fair trade capabilities. Twenty-five of these organizations have contacted buyers who are interested in coffee, cacao, chocolate, pineapple and banana, among other products.

Promotion of agrifood businesses: IICA consolidated the Platform for the Promotion, Knowledge Management and Prospects for Agribusiness in South America (AgroSur Network), which enables nine countries in the Andean and Southern regions to analyze new trade and agrifood investment scenarios.

Increased trade with the United States: The plantain, cassava and coffee chains in El Salvador, the Dominican Republic and Peru, respectively, identified the challenges that must be overcome in order to strengthen trade with the United States, following the participation of 80 representatives of 50 government agencies and businesses in training activities organized by IICA.



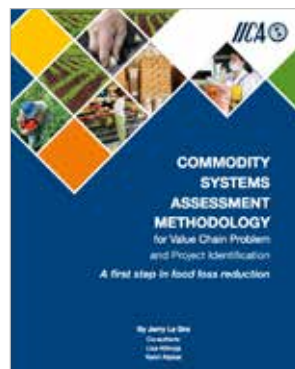
Reduction in food losses

Chain analysis and efficiency: The Commodity Systems Assessment Methodology for Problem and Project Identification (CSAM) was updated with support from the original authors and the Postharvest Education Foundation. This methodology allows for identifying weaknesses throughout chains that result in food losses, as well as developing solutions to problems identified. The methodology was applied in Peru in the hard yellow corn chain, which support from the Ministry of Agriculture and Irrigation (MINAGRI), the Agraria Norte Chico cooperative (COOPANORTE) and the Ecumenical Center for Promotion and Social Action (CEDEPAS Norte). It was also applied by Uruguay in the lettuce chain, with support from the Mercado Modelo (Model Market) and the General Directorate of Farms (DIGEGRA) of the Ministry of Livestock, Agriculture and Fisheries (MGAP).

Reduced food decomposition: In St. Kitts and Nevis, 31 agro-industrial specialists, professors and farmers received training in food management, health and safety, value-added and sustainability of their businesses. As a result, mango decomposition and waste were reduced.

Reduced losses in Grenada's banana chain: Together with the Grenada Marketing and National Importing Board, IICA trained producers and extension workers in techniques for improving the quality of bananas and reducing losses in the harvest, selection, treatment and packaging processes.

Improved management of roots in Dominica: With support from CARDI, the Caribbean Farmers Network (CAFAN), the Dominica Bureau of Standards (DBOS) and the Dominica Export Import Agency (DEXIA), 25 producers, packagers and exporters received training in postharvest management, quality and traceability as it relates to roots.



CSAM helps to identify weaknesses along the value chains that could prompt food losses and seeks solutions to this problem.



Use of
native species

Sweet potato and cocoa industries in Jamaica: The competitive capabilities of the sweet potato industry in the St. Mary, St. Andrew and Portland communities were improved, which facilitated greater use of this native species. Additionally, the Partnership for the Development of the Cocoa and Blue Mountain Coffee Sectors allowed for taking greater advantage of cocoa to create value-added products, such as chocolate-coated Blue Mountain coffee beans.



Agriculture in the south, a diverse reality



A journey to the south of the continent to learn about the agriculture of a region known as the "world's granary." Covering a vast and diverse area, the interior of this region contains a multiplicity of landscapes and types of agriculture. Manuel Otero, IICA consultant and former Representative of the Institute in Brazil and Uruguay, is our host on this journey to the Southern Region of the Americas. Also with Diego Montenegro, Director of Management and Regional Integration at IICA.

Listen to audio (Spanish only): <https://goo.gl/YXyYEB>

Better-informed quinoa producers: The Ministry of Rural Development and Land (MDRyT) of Bolivia possesses an information, knowledge and communication system focusing on different aspects related to quinoa production, commercialization, distribution and consumption, which seeks to improve the situation of stakeholders involved in quinoa production, primarily those who are the most vulnerable.



Information system made available to improve the situation of quinoa producers.



Interaction with
and participation
in international
forums



More than 20 countries participated in the 7th International Seminar on Good Agricultural Practices in the Mercosur Region and the 2nd National Seminar on Good Agricultural Practices in Argentina.

Coordination of topics in the Southern Region:

Relationships with and among member countries of the Southern Agricultural Council (CAS) were strengthened through the signing of a cooperation agreement in which the ministries of agriculture of Argentina, Bolivia, Brazil, Chile, Paraguay and Uruguay reaffirm their commitment to working together on topics of regional interest, especially the production of regional public goods related to AHFS, agricultural sustainability and FF. IICA coordinated the actions undertaken by the secretariats of the Cooperative Program for Agrifood and Agroindustrial Technology Development in the Southern Cone (PROCISUR), the CVP and COSAVE.

Participation in AHFS events: Over 20 countries improved their ability to access markets following their participation in the Seventh International Seminar on Good Agricultural Practices in the Mercosur Region, the Second National Seminar on Good Agricultural Practices of Argentina, the Twenty-third Conference of the Regional Commission for the Americas of the World Organization for Animal Health (OIE), the Ninth Meeting of the Working Group on Fruit Flies of the Western Hemisphere of the North American Plant Protection Organization (NAPPO), the regional meeting of representatives of the seven CVP member countries, the Ninth Meeting of the Capacity Development Committee (CDC) of the International Plant Protection Convention (IPPC) and the Twentieth Meeting of the FAO/WHO Coordinating Committee for LAC.



Interaction with and participation in international forums

International agenda on biotechnology: Together with public and private institutions in the region, IICA organized 17 training and accompaniment activities related to biotechnology and biosafety, which provided participants with an objective vision based on scientific principles for technology and technical arguments, with the aim of facilitating discussions and decision-making on this topic. Relevant activities included:

- I Seminar on Synthetic Biology for Biotechnology Decision-Makers of the Americas, organized together with the USDA.
- Seminar on Biotechnology and Biosafety for Lawyers and Judicial Branch Members (Mexican Bar Association).
- Series of seminars on biotechnology, biosafety, bio-inputs and their application in the agricultural sector (INIA, Peru).
- Seminar on the Status of Bolivian Agriculture and Progress Achieved in the Area of Agro-biotechnology (IBCE, Bolivia).
- Discussion session: The Use of Biotechnology in the Future of Agriculture, held in Nicaragua with support from the USDA.
- Meeting of the Central American Initiative on Biotechnology and Biosafety.
- High Level Policy Dialogue on Agricultural Biotechnology (HLPDAB) of the Asia-Pacific Economic Cooperation (APEC) forum, held in Peru.



IICA promotes sustainable agriculture in which decisions are science-based.



Research and innovations in the countries



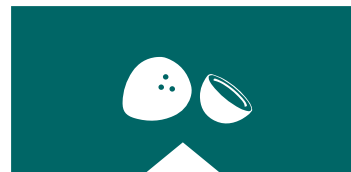
Beekeeping

In Barbados, 30 perone beehives were constructed, distributed, and installed to strengthen the Barbados Apiculture Association. In Trinidad and Tobago, an inventory of active apiaries was carried out using global positioning systems (GPS). In Saint Lucia, 35 beekeepers were trained in the use of inexpensive technologies and the adding of value to products obtained from honey and pollen.



Packaging

In Dominica, 17 agro-processors improved their packaging technology skills and capacity to comply with packaging requirements and standards within the framework of the EU-financed Agriculture Policy Programme. In Ecuador, the Ministry of Agriculture, Livestock, Aquaculture and Fisheries developed a series of model types of packaging for ten perishable items sold wholesale.



Coconut

With assistance from the Yucatán Scientific Research Center and the Government of Mexico, IICA contributed to the delivery of resistant, high-yield coconut plants to Grenada. The Institute also worked with Mexico to make plant material available in Saint Vincent and the Grenadines, and trained farmers in coconut micropropagation.



Rice

IICA made available an agroecological methodology known as the Intensive Rice Growing System, designed to make rice production systems more resilient. The methodology was applied in Venezuela by 60 producers in the state of Guárico, who reduced their costs and increased their yields.



Energy-efficient stoves

Under the Energy and Environment Partnership (EEP) financed by the Government of Finland, IICA and private institutions in Colombia implemented technological innovation processes aimed at improving the quality of life, the efficient use of energy, and the reduction of greenhouse gas emissions through the installation of 297 wood stoves in Santander and Antioquia.



Thermal renewable energies

The Fund for Sustainable Access to Thermal Renewable Energies, set up as part of the GIZ's EnDev Peru Project, and the EEP, financed by Finland, afforded 3342 producers access to the technologies and allowed 220 tambo operators to learn about the benefits of solar energy.



Energy for agro-processing

In partnership with Brazil's Electrobras, 12 books were published on the application of innovative techniques in rural communities within the framework of the community production centers. The books deal with techniques for the production of coffee, fish, sugar, milk, cassava, honey and fruits.



Mobile telephones

As part of the digital information management efforts spearheaded by the MIOA, four case studies were systematized on the use of short message services (SMS) in wholesale markets in Costa Rica, Ecuador, Trinidad and Tobago, and Uruguay. The lessons learned and good practices identified were made available in an online publication.



Drones

The Policy and Statistics Unit of Belize's Ministry of Agriculture and Fisheries has new knowledge regarding the use of drones by its extension services to collect more accurate field data.



Worm breeding

IICA worked with the Ministry of Agriculture, Lands and Fisheries and Grandad's Garden in Antigua and Barbuda on experiments with worm breeding, which made it possible to collect data on useful byproducts for agricultural production.



Digital apps

Developed in Suriname, a mobile app on compost allows producers, mainly young people interested in organic agriculture, to determine and calculate the nutritional content of biofertilizers produced through composting.



Vertical agriculture in Panama *(Spanish Only)*



Products with high nutritional value, controlled growth, without pests or pesticides.

Watch video: <https://goo.gl/BZgAV3>



Aeroponic systems for the production of potato tubers *(Spanish Only)*



Material produced by the Regional Program for Research and Innovation in Agricultural Value Chains (PRIICA), a program of the European Union and IICA the goal of which is to reinforce the food and nutritional security of farmers in the region through technological innovations in agriculture.

Watch video: <https://goo.gl/3zoXhm>



Fish for Life. Impactful Innovation



The determination of fifteen female farmers made it possible to develop a fish farming project to improve the financial situation and food and nutritional security of hundreds of families in Bolivia. Sonia López, President of the Asociación de Piscicultores del Norte Integrado; APNI; Widen Abastoflor, Director General of the NGO Centro de Promoción Agropecuaria Campesina, CEPAC; and Priscila Henríquez, IICA Specialist in Innovation Management in Agriculture, of IICA, discuss this topic.

Listen to audio (Spanish only):
<https://goo.gl/6h2Dfx>



Climate change adaptation, a safeguard against adversity



In Rio Negro province, Argentina, the intensification of climate phenomena and volcanic ash fall threatened the food security of rural families. A project based on the use of local genetic resources provided a solution to the emergency and demonstrated a successful case of innovation and adaptation to climate change in family agriculture. These families took the opportunity to share their experience.

Listen to audio (Spanish only):
<https://goo.gl/KTok4D>



Actions to deal with pests and diseases



Giant snail

In Puerto Suárez and Puerto Quijarro, in Santa Cruz, Bolivia, the National Agricultural Health and Food Safety Service, with support from IICA, implemented actions to control of the giant African snail (*Lissachatina fulica*). Talks were also given on the risks posed by the pest and another 1500 people were briefed directly.



Ticks, bovine piroplasmosis, and paratuberculosis

In Uruguay, animal health capabilities were strengthened by holding technical events on these pests and diseases. Support was also provided to increase surveillance systems, characterize emergency response capabilities, and carry out risk analysis. Assistance was received from Minnesota, Davis, Texas Tech, Texas A&M, Ohio State and other U.S. universities.



Frosty pod rot disease

CAB International confirmed the presence in Jamaica of *Moniliophthora roreri*, a fungus that causes frosty pod rot in cacao. In response, a training program was organized involving the Cocoa Industry Board and several entities of the country's Ministry of Industry, Trade, Agriculture and Fisheries. Support was provided by the Tropical Agriculture Research and Higher Education Center (CATIE) and Peru's SENASA, which helped to identify and develop strategies for protecting national and regional cocoa production.



Highly pathogenic avian influenza

More than 500 people in the Caribbean participated in workshops held to promote biosafety on farms, to reduce the risks of avian influenza in the region.



Carambola fruit fly

Authorities in Guyana, Suriname, and Brazil exchanged knowledge related to continuous surveillance plans for the carambola fruit fly, and discussed new projects to continue monitoring the situation along the three countries' common borders.



Mollusk pests

Urban, peri-urban and rural communities in the Andean Region, Argentina, and Brazil affected by mollusk pests have more knowledge about their impact and methods for controlling them.



Red palm weevil (*Rhynchophorus ferrugineus*)

Professionals in Jamaica, the Cayman Islands, Belize and the Turks and Caicos Islands were trained in surveillance and control techniques for this large weevil that affects crops such as coconut.



Coffee leaf rust

The Central American Programme for Integrated Coffee Leaf Rust Management (PROCAGICA) was launched. Costing 16 million euros and financed by the EU, it will benefit 6000 small coffee producers.



Coffee leaf rust *(Spanish Only)*



In this video, the steps the producer must follow to successfully control this disease are presented.

Watch video: <https://goo.gl/d4v7Xg>



Agro-ecological practices in vegetable production *(Spanish Only)*



Join us for "A Day on La Socola Farm", an organic farm that, through agro-ecology, has adapted to climate change and gained many benefits from its strategies.

Watch video: <https://goo.gl/RmDhP9>



Development of rural territories and rural well-being

Strategic objective 2



Development of rural territories and rural well-being



Public policies and institutional frameworks

Policies to improve the performance of family farming (FF):

Honduras, Peru, and Colombia consolidated their knowledge of the specific characteristics of FF, reflected since in the inclusion of the issue in public agendas. In Honduras and Colombia, IICA drafted proposed policies that were presented to the pertinent authorities. Moreover, information about Peru's national FF strategy was disseminated among two mancomunidades (indigenous communities). Leaders of national FF committees, government officials, researchers and specialists from Central America, Dominican Republic, Trinidad and Tobago, Brazil, Bolivia, Mexico, Uruguay, and Spain identified opportunities for improving policies, services, and modes of organization for FF.

Regulatory frameworks for inclusive territorial development:

in Brazil, Colombia, Costa Rica, Ecuador, Guatemala, Guyana, Honduras, Mexico, and Suriname, IICA worked with 147 national and subnational government institutions to enhance their capabilities for the design, implementation and participatory management of institutional frameworks, policies and instruments for the promotion of inclusive area-based development. The institutions concerned work in a wide range of areas, including agriculture, rural and community development, social development and inclusion, women, youth, indigenous populations, planning, natural resources and the environment, agricultural research, education, and health. As many as 562 technical officers took part in 77 national events and 62 events at the territorial level. IICA's cooperation efforts led to concrete results in a number of countries. In Costa, Rica the government endorsed the public policies for area-based development and inclusion; in Ecuador, the Provincial Strategy for Social and Productive Inclusion was adopted; and Mexico approved the Regional Community Ecotourism Strategy.



Public policies and institutional frameworks

Master Plan for the Western Region of Panama: this plan, developed jointly by the public and private sectors, is an innovative model that will be financed with USD 557 million in national resources and a USD 157 million loan from the Development Bank of Latin America (CAF). Designed to promote the recovery of the agricultural sector in the Western Region, it will benefit 15,000 Panamanian producers.



Technological and institutional innovation

Rural extension for FF: the technical assistance and extension services of Paraguay, Venezuela and Honduras received proposals for improvements that are now being implemented, while rural extension management capabilities were boosted in Guatemala and Chile.



Business and associative development of chains

Associative encounters: Through the application of an IICA methodology on associative encounters and internships in family farming, 65 organizations in Colombia, Guatemala, Honduras, Nicaragua, Uruguay, Chile, El Salvador, Venezuela and Ecuador strengthened their associative management capabilities to improve their performance, access to services and commercial linkages.

One Village, One Product (OVOP): Together with the Japan International Cooperation Agency (JICA), the OVOP strategy was applied in order to build the capabilities of small and medium-scale producers in the Costa Rican communities of Turrialba, Dota and Zarcero, and, in this way, facilitate their access to local markets.

Greater marketing and entrepreneurial capabilities: Within the framework of the EU-funded Agricultural Policy Program, 150 producers from 15 Caribbean countries benefited from training activities and new marketing, finance, entrepreneurship and governance tools. The governance capabilities of 30 groups in eight of those countries were also improved.



Improved social management capabilities: A total of 501 persons from 18 countries successfully completed four virtual peer-learning modules, of 30 to 40 hours each, on FF territorial systems and social management methodologies for the development of rural territories. Additionally, 125 technical specialists from Guatemala, Paraguay and Colombia strengthened their capabilities in social management of development, through their participation in four in-person, 16-hour workshops led by IICA. As a result, 25 territorial management organizations and ten local, inter-municipal and sub-national governments strengthened their capabilities in social management of territories.

More solid production systems: Fifty family farmers, technical specialists and authorities from Mexico, Brazil, Colombia, Ecuador, Guatemala, Honduras, Paraguay and Peru broadened their knowledge of public policy strategies that can be implemented to promote rural development and FF, as well as innovative practices geared toward improving management of production systems, food availability and product marketing. In Saint Vincent and the Grenadines, Jamaica, Haiti and Guyana, FF dynamics and production strategies were described.



Provincial agro-productive agenda of Sucumbios
(Spanish Only)



The agenda identifies priority agricultural production chains for the territory, and establishes strategic alliances that help to define key actions to meet the demands of producers. This effort will be carried out through a project portfolio to be implemented in the short, medium, and long term, with the aim of improving the economic and social conditions of farmers without damaging the natural resources of the region.

Watch video: <https://goo.gl/RxX6Nm>



Social management
of territories



50 family farmers improved their knowledge of innovative practices to enhance their management of production systems, food availability, and commercialization of their products.

Broadened inclusion opportunities: Through their participation in eight meetings focused on area-based coordination, dialogue and consensus-building, 68 government institutions, 19 non-governmental organizations and 104 FF organizations in Brazil, Colombia, Costa Rica, Guatemala, Honduras, Mexico and the Dominican Republic improved their capabilities in the areas of organization, planning, social management, collective action and political advocacy. To this end, different activities were carried out to provide training, share experiences and practices, territorialize policies, create territorial plans, prepare participative management instruments, and implement initiatives related to economic and production aspects.

Inclusion through capacity-building: Over 1,500 people (40% women and 27% young persons) from selected territories in Brazil, Colombia, Costa Rica, Ecuador, Guatemala, Guyana, Haiti, Honduras, Mexico, the Dominican Republic and Suriname strengthened their capacities in topics related to empowerment, such as self-esteem, leadership, assertiveness, conflict management, associative undertakings and political advocacy.



Rural families included in development: Through affirmative actions and good inclusion practices, around 1,450 families broadened their participation in decision-making processes undertaken by coordination and consensus-building entities for area-based development. Among other things, the families developed inclusive criteria to foster the participation of vulnerable groups; created networks, associations and cooperatives for women, youth, family farmers, artisans, disabled persons, indigenous peoples, people of African descent and the elderly; assisted in the creation of business plans and the implementation of entrepreneurship projects geared toward generating income and promoting food security; received training in topics related to the specific needs of excluded groups; and established agricultural credit banks and trade fairs to improve the quality of life of rural farmers.

More than 200 rural leaders improved their capabilities in collaborative and entrepreneurial leadership through a methodology developed by IICA, as an international public good.

Organization and leadership in territories: Over 98 FF economic organizations in Brazil, Colombia, Costa Rica, Guatemala, Guyana, Honduras, Mexico and Suriname strengthened their organizational capabilities, as well as the leadership capabilities of over 760 officers and leaders through their participation in activities focused on economic organization, production certifications, administration of agricultural credit banks, commercialization, rural tourism and ecotourism, among other topics.



Youth and roots.
Parts 1 and 2 (Spanish Only)



Video series "Sin fronteras" (No boundaries), a joint production by IICA, UCAR and FIDAMERCOSUR.

Watch video: <https://goo.gl/CFr9E1>



New generation of rural leaders: Over 200 rural leaders in Colombia, Mexico, El Salvador and Honduras developed their collaborative and entrepreneurial leadership capabilities through interactive training processes carried out using the “Unleashing Local Energies” methodology developed by IICA as an international public good. This process was funded using IICA resources as well as resources from European Commission projects in Colombia, the World Bank in El Salvador, the Spanish Agency for International Development Cooperation (AECID) in Mexico and counterpart national institutions in the participating countries.

Support for rural youth: Central American countries and the Dominican Republic established a regional network and support plan for rural youth, with representatives from the Presidency, Agriculture and Rural Development ministries; national institutions responsible for this topic; and national youth networks in the eight countries that form part of the Central American Integration System (SICA).

Knowledge management for inclusive area-based development: The Strategic Management System for Area-based Development and Family Farming (SiGET), a hemispheric tool that provides access to systematized information on area-based development and social inclusion, enabled countries to take advantage of a validated methodological proposal for social management of inclusive area-based development, six conceptual and methodological book chapters on FF area-based systems, learning materials and other capacity-building materials and resources that provide technical assistance in inclusive area-based development processes.



AgroEnlace, a bridge for sharing knowledge



Throughout the year many voices allowed us to travel through the Americas and discover experiences that encourage us to consider fundamental issues for the construction of a sustainable, competitive and inclusive agriculture. This last encounter of 2016 allows us to thank participants for the wide-ranging and generous exchange of knowledge that we have shared.

Listen to audio (Spanish only): <https://goo.gl/nAQ9Ty>



Inclusion of women in agriculture

Within the framework of the Central American Agricultural Council (CAC), technical personnel representing ministries of agriculture, territorial stakeholders and strategic partners promoted gender mainstreaming in the implementation of the Central American Strategy for Rural Area-based Development (ECADERT), through the development of workshops, meetings and seminars as well as the provision of technical assistance. Additionally, the pilot experience of the project entitled “Building Multicultural, Rural Area-based Development for Central American Women,” was systematized through the creation of methodologies for empowering rural women and communication efforts as well as the systematization of lessons learned regarding gender mainstreaming in area-based development.

In Chile, IICA supported the inclusion of women and youth in discussions of public policy for the rural world and FF, by generating coordination opportunities such as the National Roundtable of Rural Women. The Institute also co-organized the South American Meeting of Rural Youth.

In Suriname, 45 members of the Network of Rural Women Producers improved their capacity to comply with food quality and safety standards, specifically those

pertaining to the cassava agro-industry, which receives support from the EU-funded APP project. In Trinidad and Tobago, the Institute collaborated with women bread and pastry producers, who now have new ovens and mixers.

In Antigua and Barbuda, over 25 women producers learned about different mango products and participated in a competition organized by the mango agro-industry, during which 20 sub-products were assessed.



Rural women and their role in food security

(Spanish Only)



Join us for “A Day on La Anona Farm” and learn how this family, led by Ana Molina, has carried out an environmental friendly project for the production of free-range eggs.

Watch video: <https://goo.gl/5aKXWE>

Climate change adaptation

and better use of natural resources

Strategic objective 3





Climate change adaptation and better use of natural resources



Public policies and institutional frameworks

Policies for resilient agriculture: Colombia's Sustainable Livestock Group, the technical forums for the bio-input sector created in Ecuador and Colombia, and the agreement that the Institute signed in Peru with the National Agricultural Health Service (SENASA), the National Meteorology and Hydrology Service (SENAMHI) and the National Coffee Board are examples of IICA cooperation aimed at working with the authorities in those countries to generate consensus-building and coordination mechanisms to support decision making and the development, implementation and management of public policies for resilient agriculture.



Technological and institutional innovation

Plantations with an agroecological approach: nine procedures for the integrated management of avocado, potato, and tomato crops, including fertilization, soil and water practices, pruning and grafting, demonstrated the capacity of the PRIICA beneficiary countries in Central America to care for the environment and protect the health of their producers. In the Central Region, 1625 beneficiaries applied good agricultural practices.



Avocado grafts
(Spanish Only)



Video produced by the Regional Program for Research and Innovation in Agricultural Value Chains (PRIICA).

Watch video: <https://goo.gl/5NGwrT>



Technological and institutional innovation

Forestry innovations: in the Andean Region, IICA strengthened farmers' knowledge of the sustainable use of biodiversity through a course that drew on the experience of the Sustainable Forest Management Programme financed by Finland's Ministry of Foreign Affairs. The course material is available online at www.mfsandina.net.

Biotechnology and biosafety in Guatemala and Honduras: in Honduras, cooperation from IICA facilitated a review of the biosafety regulatory framework and the drafting of proposals for the use of living modified organisms. In Guatemala, 24 government spokespersons and members of the press corps received training in biotechnology and biosafety.

Improved handling of breeding material in the Caribbean Region: as part of the EU-funded Agriculture Policy Programme, IICA worked with the Caribbean Agricultural Research and Development Institute (CARDI) to improve germplasm management facilities in eight countries and animal reproduction facilities in three. These actions facilitated wider distribution of materials throughout the Caribbean.



Agricultural health and food safety (AHFS)

Integrated risk management plans: with cooperation from IICA, several countries were able to enhance their capabilities for the design and participatory management of public policies and strategies for the integrated management of health risks associated with climate change. Cases in point are the national plan formulated in Costa Rica to handle emergencies in the poultry and hog sectors, the Action Plan of Brazil's Animal Welfare Commission, and the preparation of a manual on the implementation of good crop and livestock production practices for resilient agriculture, which has already been used by 389 technical officers in ten countries.



Germplasm facilities improved in eight countries and three improved their animal husbandry facilities.



Capabilities for integrated water management and sustainable soil use

Efficient water use in production: Two studies and two virtual courses on the water footprint methodology, which benefited over 3,000 persons in 28 countries, allowed for promoting the use of indicators to assess the quality and quantity of water used in agriculture.



Innovation and water management for development



Presentation of the results of a research and analysis project showing the progress achieved in innovation and water management for the sustainable development of agriculture in the countries of Latin America and the Caribbean. With Carlos Pomareda, international consultant, and Diego Montenegro, IICA's Director of Management and Regional Integration.

Listen to audio (Spanish only): <https://goo.gl/oBpNhu>



Sustainable Intensification *(Spanish Only)*



Join us for "A day on Retes farm". Juan Manuel Cotera, a farmer and cattle rancher, explains to us the eco-friendly strategies and practices implemented to increase the efficiency of agricultural production.

Watch video: <https://goo.gl/ft7VsY>



Climate Smart Dairy Production. Parts 1 and 2 *(Spanish Only)*



Join us for "A day on the farm at CATIE" and learn how they have transformed their pastures into an agricultural ecosystem that is more resilient to climate change and how that has influenced the handling and organization of their dairy cattle.

Watch video: <https://goo.gl/RN7215>



Capabilities for integrated water management and sustainable soil use



Water harvesting in El Salvador: The National Council on Environmental Sustainability and Vulnerability (CONASAV) received horizontal cooperation to harvest and collect water using reservoirs and roofs, as is done in the Paraguayan Chaco region. Use of fertilizing irrigation system was also promoted among Salvadoran producers, who were able to reduce their water consumption.



Water management strategies in Venezuela: In the Agua Negra community, 300 horticultural producers are implementing a comprehensive water management strategy that was designed in a participatory manner by the mayor's office of the Jiménez municipality, the Ministry of Popular Power for Ecosocialism and Water, and IICA. A total of 320 stakeholders from the Lara, Mérida and Trujillo states strengthened their capabilities in water conservation and harvesting, irrigation systems and watershed management.



Restoration of degraded soils: In the Caribbean, IICA validated a regional training module on management of degraded soils, which included the participation of 40 extension workers from Haiti, Jamaica, Antigua and Barbuda, Suriname and Guyana. The Institute also held virtual forums in which 1,383 participants interacted, and offered several courses taught by specialists in soil management and efficient water use, enabling 575 participants to strengthen their capacities in those topics.



Sustainable soil use in Antigua and Barbuda: Public and private sector authorities responsible for soil management improved their technical capabilities related to climate change adaptation in agriculture. Soil samples were sent to the United States for analysis.



Capabilities for
integrated water
management
and sustainable
soil use

Development of tools for digitally analyzing soils:

IICA member countries now have access to instruments that facilitate the operation of national soil information systems, data digitalization, the prioritization of actions and the creation of strategies for sustainable soil and water management. These instruments include a digital soil map for Costa Rica, a document on good practices for the preparation of digital soil maps, and procedures for the creation of water erosion maps.



Living soils, the basis of a low-carbon agriculture
adapted to climate change *(Spanish Only)*



Join us for "A day on La Danta Farm", where they show us that it is possible to produce organic pineapple without using pesticides or damaging the soil. At La Danta farm, waste is not burned, cover soil is used, and production is based on natural inputs that do not harm the environment.

Watch video: <https://goo.gl/o6AjCi>



Climate change
adaptation and
mitigation, and risk
management in
agriculture

Agriculture and Climate Platform: Under the leadership of CAC, authorities in Central American countries were informed in a timely manner of the outlook for climate, the evolution of the El Niño-Southern Oscillation (ENSO) phenomenon and other topics, such as climate change, climatic variability and risk management.



El Niño-Southern Oscillation (ENSO) phenomenon
(Spanish Only)



It is a climate phenomenon in which the waters of the eastern Pacific Ocean undergo unusually high warming, causing drought in the Pacific and flooding in the Caribbean. This, in turn, affects both crops and livestock in both areas.

Watch video: <https://goo.gl/QGGrN>



Climate change adaptation and mitigation, and risk management in agriculture

Agricultural planning and climate change: Over 60 institutions in IICA member countries are now better able to develop plans for climate change adaptation in agriculture, thanks to the participation of 450 technical specialists in training sessions on integrating climate change adaptation into agricultural planning processes. Most notably, 13 technical specialists from Chile, Argentina and Paraguay enabled those countries to validate the integration methodology and define follow-up actions that involve extension services.



Adapting mango crops to climate change (Spanish Only)



Drought and strong wind could affect tropical fruit production. Join us for "A Day on the Farm" of Manga Rica S.A. and discover how they have adapted to an adverse climate and improved their production.

Watch video: <https://goo.gl/amvidi>

Risk maps: National strategies for the preparation and use of agro-climatic risk maps were developed in Colombia, Ecuador and Paraguay and made available to ministry of agriculture departments responsible for this topic. Additionally, in Trinidad and Tobago, Suriname and Guyana, 60 officers from public entities, including the ministries of agriculture, as well as private entities, received training in the creation and use of disaster risk maps as well as communication of those risks.

Platform for discussing climate-smart agriculture: For the third year in a row, the Caribbean Forum on Climate-Smart Agriculture was held, allowing 150 Caribbean technical specialists to share information on the Paris Agreement, nationally determined contributions of Caribbean countries, access to the Green Climate Fund (GCF), integrated management of water resources, and success stories related to resilient agricultural systems in the region. The forum succeeded in attracting new partners, such as the Caribbean Community Climate Change Centre (CCCCC), the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS), the *Deutsche Gesellschaft für Internationale Zusammenarbeit* (GIZ), the United Nations Development Program (UNDP) and the embassies of Mexico and Morocco in Saint Lucia. The forum also facilitated the creation of an inventory of policies and actions related to climate change in the Caribbean.



Climate change
adaptation and
mitigation, and risk
management in
agriculture



Climate Smart Agriculture *(Spanish Only)*



Climate-smart agriculture contributes to three fundamental elements: food security, adaptation of agro-ecological systems and mitigation. By combining those 3 elements, climate change in agriculture can be addressed in the best possible manner.

Watch video: <https://goo.gl/iChv29>

Community of Practice on Climate Change Adaptation in Mesoamerican Agriculture: With support from the Inter-American Development Bank (IDB), this virtual platform led by IICA increased the sharing of information on climate change adaptation in agriculture. A total of 667 users registered on the platform, six seminars with an average of 100 participants were organized, and a specialized library was made available to users.



Climate change resilience in coffee cultivation
(Spanish Only)



Join us for "A Day on Aquiares Farm" and learn how they have adapted their crops to severe weather conditions while reducing greenhouse gas emissions.

Watch video: <https://goo.gl/Bz5xZy>

Agro-meteorological network for Costa Rican sugar: IICA assisted the Sugar Cane Industry Association (LAICA) in setting up an agro-meteorological network, which provides sugarcane producers with new criteria that enables them to become more resilient.



Climate change adaptation and mitigation, and risk management in agriculture

Knowledge management related to agricultural risks and insurance:



The establishment of the Risk Management and Agricultural Insurance Observatory of the Americas, an effort undertaken together with the Latin American Association for the Development of Agricultural Insurance (ALASA) and the Inter-American Federation of Insurance Companies (FIDES), has allowed for collecting, analyzing and disseminating relevant information, instruments and indicators related to management of agricultural risks. Additionally, 150 professionals from 15 LAC countries received training through a long-distance course on risk management and agricultural insurance, which included the participation of ALASA, the National University of the Littoral (UNL) of Argentina, the Research Center for the Management of Agricultural and Environmental Risks (CEIGRAM) of Spain, the Study Group on Insurance and Risks (GESER) of the University of São Paulo (USP) in Brazil, the National University (UNAL) of Colombia and the World Bank, among other organizations.

Intensive climate change training program: Over 4,000 professionals from public and private institutions, and producers from 29 countries, increased their knowledge of the development and implementation of climate change adaptation plans, good livestock practices for addressing climate change, management and restoration of organic material in soils, water management, biogas use and production, efficient use of water and soil resources at a small scale, greenhouses, irrigation and fertilizing irrigations systems, and compost production and use, among other topics.



Reduction in food losses

Use of bio-inputs in the production of raw materials:

In Ecuador, technical specialists of the National Institute of Agricultural Research (INIAP) and the Ecuadorian Agency for Quality Assurance in Agriculture (AGROCALIDAD) received training in methodologies for the use of bio-inputs, in order to utilize wastes to produce raw materials.



Use of native species

Germplasm exchange and preservation of agro-biodiversity: Within the framework of the Genetic Resources Network of the Cooperative Program for Agricultural Research, Development and Innovation in the South American Tropics (PROCITROPICOS), program members, personnel from various institutions and stakeholders from countries in that region were trained in plant germplasm use and exchange, as a way of fostering the sustainable preservation of agro-biodiversity. Specifically, the Latin American Network for the Implementation of the International Treaty on Plant Genetic Resources for Food and Agriculture (LANIIT), an initiative led by FAO and IICA and implemented in Brazil, Paraguay and Uruguay to improve food security, contributed to increasing knowledge of new strategies for utilizing and exchanging plant germplasm, with the aim of sustainably preserving agro-biodiversity.



Members of the PROCITROPICOS program, officials in institutions, and stakeholders in countries of the region were trained in the use and interchange of plant germplasm.



Interaction with and participation in international forums

Global climate change discussions: IICA continued its participation in four global initiatives on climate change within the framework of the United Nations Framework Convention on Climate Change (UNFCCC): the Technology Executive Committee, the NAP Expo (Bonn, Germany), COP22 (Morocco) and the Global Alliance for Climate-Smart Agriculture (GACSA). The latter event provided an opportunity for IICA member countries to share the problems they face as a result of climate change as well as their outlook on this topic, and also increased IICA's visibility, in order to take better advantage of technical and financial opportunities in this area.

A close-up photograph of a young man and woman smiling and eating together. The woman is on the left, looking towards the man on the right. They are both wearing blue tops. In the foreground, there is a white plate with a salad of lettuce, tomatoes, and shrimp. The background is softly blurred, showing a dining table with another plate of food.

Food security

Strategic objective 4



Food security



Agricultural health and food safety (AHFS)

Harmonization of food safety controls: as many as 479 inspectors successfully completed the food inspection and food audit courses run by the Regional Virtual School for Food Inspectors in Central America and the Dominican Republic, which has also made it possible to consolidate a network of experts on the subject.

Strengthening of sanitary measures in the Caribbean: a series of IICA efforts, coupled with actions by partners such as the EU, strengthened plant health capabilities in the Caribbean Region, mainly in the areas of plant virology, communication, pest diagnosis and quarantine. The validation of model legislation on plant protection, animal health and food safety by the Caribbean Forum (CARIFORUM) countries served as the basis for formulating a harmonized legislative framework, creating regional coordination mechanisms and achieving a 60% increase in the countries' participation in international AHFS meetings. Furthermore, 1350 public and private actors were trained in AHFS requirements, making it possible to improve safety systems for more than 25 private companies.

Codex capabilities: a number of actions, including the participation of 19 countries in nine *Codex* committee meetings, the organization of events involving the *Codex Alimentarius* Coordinating Committee for Latin America and the Caribbean (CCLAC) and the *Codex Alimentarius* Coordinating Committee for Africa (CAfrica) and the implementation of five twinning projects, benefited more than 1000 people and strengthened the capabilities of Latin American and Caribbean (LAC) institutions.

1350 public and private actors were trained in AHFS requirements, making it possible to improve safety systems for more than 25 private companies.



Agricultural health and food safety (AHFS)

Improved laboratory techniques: IICA increased the technical capabilities for detecting maximum residue levels of a number of laboratories that submit data to *Codex Alimentarius*. The aim in doing so was to improve access to, and the stability of, banana markets in Costa Rica and Guatemala, the pineapple market in Panama, and the avocado market in Colombia.

Incidence of salmonella in chickens in the Caribbean: under the “Regional study of microbial resistance” project, it was possible to determine the bacterium’s incidence in chickens and its level of resistance, and to enhance the capabilities of seven Caribbean countries for conducting microbial resistance testing.



Social management of territories

Greater income, market access and food availability: At least 96 economic projects or business plans were prepared based on the AT-SIAL, LINK/CIAT and CANVAS methodologies in Brazil, Colombia, Costa Rica, Ecuador, Guatemala, Honduras, Mexico and Suriname. The objective was to address the business undertakings and production demands of over 1,400 excluded family farmers (women, young people, indigenous peoples, populations of African descent and men) in different areas of interest, such as the diversification of production, food security, ecotourism, livestock and farming of cocoa, coffee, vegetables, greens, tubers, coconut and medicinal plants, among other crops.



Improving incomes by caring for the land.
Parts 1 and 2 *(Spanish Only)*



Video series “Sin fronteras” (No boundaries), a joint production by IICA, UCAR, and FIDAMERCOSUR.

Ver videos: <https://goo.gl/jiEMoN>



Food and nutrition security

Source of protein for Haitian families: With support from Caritas nuns and IICA, a poultry farm project in Arreguy, Haiti, was expanded through the addition of 500 chickens, allowing low-income children, the elderly and farmers to improve their diet at a low cost. Additionally, the project promoted the administration of farms by local women, and contributed to generating additional income through the sale of eggs to neighboring communities.

Diversification of food options in Central America:

Twenty-four local consortia for the cassava, potato, avocado and tomato chains, established through PRIICA, played a fundamental role in improving food availability and access for project beneficiaries, who were informed of the results of different research projects and also participated in training events and fairs that enabled them to learn new ways to prepare and consume their crops. Relevant activities included delivery of the cassava seed to producers in Guatemala, cultivation of the ICTA Izabal variety in 890 smallholdings, the generation of 13 technologies in Costa Rica, and production of 35 new cassava genotypes in Nicaragua.



PRIICA, working together, sharing achievements.
Parts 1 and 2



The work carried out by local agricultural research and innovation consortia and regional networks has served to improve food availability and access for small-scale producers in Central America. The Regional Program for Research and Innovation by Agricultural Value Chains (PRIICA), is an initiative of the European Union and IICA, which promotes collaborative work to address common challenges by working together and sharing knowledge.

Listen to audio (Spanish only): <https://goo.gl/iUCQGZ>

Greater income for fish farmers in the Dominican Republic: IICA contributed to increasing income and improving food security for 80 small-scale fish farmers in the Monte Plata province. The farmers adopted feeding technologies using natural products, allowing them to reduce the use of imported materials.



Food and nutrition security

Family farmers with greater access to food: In Paraguay, Peru and Guatemala, IICA promoted the creation and implementation of strategies and plans for managing sustainable FF production systems. In Bolivia and Venezuela, on the other hand, the Institute fostered the strengthening of technical capabilities for formulating and implementing water and irrigation management plans. Both actions allowed for improving the management of natural and productive resources, guaranteeing good nutrition, and reducing malnutrition levels in those countries.



Family agriculture: Think of the past, look at the present, change the future. Parts 1 and 2



Through its protagonists, this video examines Central American experiences that contribute to the food security of producers and small-scale farmers through participatory research processes and technological innovation in agriculture: the Regional Program for Research and Innovation by Agricultural Value Chains (PRIICA). An initiative of the European Union and IICA that promotes collaborative work to address common challenges by working together and sharing knowledge.

Listen to audio (Spanish only): <https://goo.gl/RveqUb>



Use of native species

Recovering local knowledge: In Nicaragua, Venezuela, Ecuador, Guatemala, Paraguay and Bolivia, FF knowledge was documented, specifically through the systematization of local knowledge and ancestral practices geared toward making greater use of native species and native genetic resources with food potential. Over 250 farmers and technical specialists shared local knowledge related to quinoa and quañawa, which allowed for reevaluating the use of these products in national production systems.



The Andean Region, where the traditional and the modern coexist



From the high peaks of the Andes we begin a journey down to the coastal lowlands and the Amazonian plains. We visit the Andean Region of America to explore its diverse agriculture, where traditional knowledge and customs coexist with the most modern technologies. A journey full of colors, flavors and knowledge.

Listen to audio (Spanish only): <https://goo.gl/a8Y35i>

A man with short brown hair, wearing a bright green polo shirt, is looking down at a small white notebook he is holding. He is holding a black pen in his right hand and appears to be writing. The background is a blurred field of green plants with small red fruits, possibly strawberries, under bright daylight. A semi-transparent horizontal bar is overlaid across the middle of the image, containing the text.

Knowledge-intensive agriculture

As a result of 745 events, close to 52,000 persons became involved in IICA training or knowledge-sharing programs, and over 500 partner institutions are promoting better practices in agriculture, innovation, health, trade, soil and water management, and development opportunities for rural stakeholders. Noteworthy achievements included the following:

2,000 agricultural chain stakeholders

received training in technological options for



Producing milk in Trinidad and Tobago



Fruit postharvest in El Salvador



Biological control of bio-inputs for ornamental plants in Paraguay



Sweet potato production in Jamaica

As well as good practices for control of pests and diseases, economic and risk evaluations, cadmium management and carbon footprint.



982 stakeholders

from 44 institutions strengthened their knowledge of trade agreements, the FSMA of the United States, and other topics, as a result of their participation in forums organized by the World Trade Organization (WTO), the International Regional Organization for Plant Protection and Animal Health (OIRSA), the Pan American Health Organization (PAHO) and *Codex Alimentarius*, among other organizations.



Over

1,000 participants

from 230 institutions in 20 countries shared knowledge related to business, association and commercial management, as well as value-added.

880 service providers, rural youth and family farmers from El Salvador, Nicaragua, Honduras, Guatemala, Paraguay, Chile, Uruguay, Venezuela, Antigua and Barbuda, St. Lucia, St. Vincent and the Grenadines, Grenada and Suriname improved their knowledge of



Food management



Soil and water management



Postharvest losses



Vermiculture



Beekeeping



Planning, leadership and entrepreneurship

700 stakeholders
from over 20 countries
strengthened their capabilities in



Good
agricultural
practices



Detection of
veterinary drug
residues



Safety
regulations



AHFS
requirements

Over

10,000 stakeholders to learn about

the status of and **outlook for agriculture and rural life in the Americas**, the challenges that must be overcome to add value in agriculture, and the future of agricultural trade in the region. The joint publication by ECLAC, FAO and IICA, is enabled is available at <https://goo.gl/rbZjB1>

The Outlook for Agriculture
and Rural Development in the Americas:
A Perspective on Latin America
and the Caribbean
2015-2016

IICA's Virtual Campus

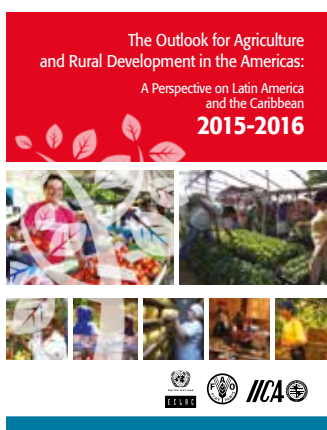
was modernized, an online education platform,
for the benefit of technical personnel,
professors and producers associated with the
agricultural sector.



The capabilities and scope of
audiovisual production
and migration services were broadened through
the use of a full HD multimedia platform,
through which audiovisual materials were
viewed 57,000 times.



IICA Knowledge Products



Outlook for Agriculture and Rural Development in the Americas

The United Nations Food and Agriculture Organization (FAO), the Economic Commission for Latin America and the Caribbean (ECLAC) and IICA produce this report every two years, to provide input for policies designed to address the main challenges and needs of the agricultural and rural sectors of the Americas. Detailed presentations of the report, which covers the period 2015-2016, were made to the IABA and representatives of the public and private sectors in Argentina, Canada, Chile and Uruguay.



AgroEnlace: Outlook for Agriculture 2015-2016

Listen to audio (Spanish only): <https://goo.gl/rbZjB1>



We present the report entitled "Outlook for Agriculture and Rural Development in the Americas: A Perspective on Latin America and the Caribbean 2015-2016." The report presents the findings of a study conducted by IICA, FAO and ECLAC since 2009.

Grants for agricultural studies in the Americas

244 scholarship recipients from 18 different countries are pursuing master's and doctoral degrees at Mexican universities, thanks to an agreement between the National Council on Science and Technology (CONACYT) of Mexico and IICA.



Number of scholarship holders studying for master's and doctoral degrees at Mexican universities under the CONACYT-IICA 100 scholarships program (class of 2016)

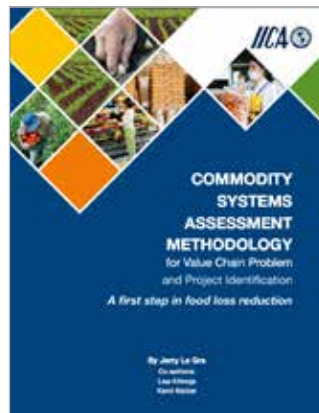
Argentina	12
Belize	2
Bolivia	6
Brazil	4
Chile	10
Colombia	128
Costa Rica	5
Ecuador	21
El Salvador	7
Guatemala	3
Haiti	6
Honduras	4
Nicaragua	5
Panama	2
Paraguay	2
Peru	8
Uruguay	5
Venezuela	14



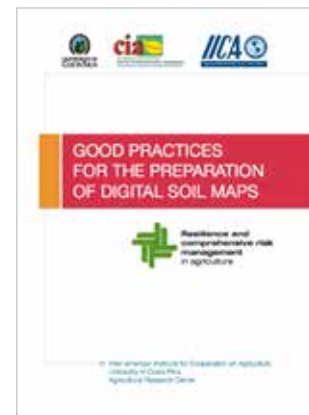
Main publications available online



Las agriculturas familiares y los mundos del futuro



Commodity Systems Assessment Methodology for Value Chain Problem and Project Identification



Good Practices for the Preparation of Digital Soil Maps



www.iica.int

In 2016, IICA published 45 books and technical documents, all available in digital format and under the system of Creative Commons Licenses.



Information resources

<http://www.iica.int/en/information-resources>



Alliance of Agricultural
Information Services
SIDALC

www.sidalc.net

The alliance, comprised of 175 national institutions in 22 countries, facilitated access to 3 million references and 238,095 full-text documents archived in 345 databases, which had 3.7 million one-time visitors and 1.3 million recurrent users. Users shared 59,072 articles and documents, which represented the mobilization of over USD 2.3 million through knowledge-sharing.



Collection of information
management resources -
IMARK

www.imarkgroup.org

Together with FAO and other international organizations, additional free courses on the Capitalization of Experiences for Continuous Learning as well as Scientific and Technical Writing were included.

Agriperfiles

<http://agriperfiles.agri-d.net/>

In LAC, the Institute spearheaded the adaptation and operation of the VIVO system, whose database of agricultural professionals and specialists in the Americas was broadened. Currently, 2,054 profiles of professionals can be accessed, related to more than 1,762 organizations.



INNOVAGRO

Network for the
Management of Innovation
in the Agrifood Sector
INNOVAGRO Network

www.redinnovagro.in

This network provided content to train at least 3,500 people in innovation, food security and climate change. It also facilitated the sharing of experiences in three technological tours and documented 42 successful experiences of the Mexican agricultural sector. The network's web portal registered 64,684 visits, and its social networking profiles on Twitter and Facebook registered 4,039 and 1,265 followers, respectively.



Gestión integral de riesgos y seguros agropecuarios

Risk Management and
Agricultural Insurance
Observatory

[http://apps.iica.int/
observatorio-girsa/](http://apps.iica.int/observatorio-girsa/)

Together with the Latin American Association for the Development of Agricultural Insurance (ALASA) and the Inter-American Federation of Insurance Companies (FIDES), the Institute developed the conceptual framework, structure, content and sustainability measures of this observatory. Performance indicators for the insurance market in Southern Cone countries were also updated.



Results by country

The strategies employed by IICA in the countries demonstrate its efforts in technical cooperation. The following are examples of the main results achieved in each country:



Northern Region



Central Region



Caribbean region



Andean Region



Southern Region





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