Harvesting Results

2015
SUMMARY REPORT
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What is IICA?

For more than seven decades, the Inter-American Institute for Cooperation on Agriculture (IICA) has been the agency of the Inter-American System specializing in the promotion of agricultural development and rural well-being in the Americas. Its aim, through technical cooperation, is to achieve competitive, inclusive and sustainable agriculture that feeds the world and creates opportunities for reducing hunger and poverty.

Its mission is 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.”

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.
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**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.**

**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.**

**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.**

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

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

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

**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.**
The countries of the Americas have assumed the commitment of growing better and producing more. We are convinced that the Americas are ideally placed to feed the world, and should take advantage of the opportunity to do so. If such efforts are to be successful, the people responsible for agriculture in each country need to understand the importance of finding sustainable ways to increase productivity and reduce food losses, and thus meet the dietary needs of all the continent’s inhabitants.

In 2015, the Inter-American Institute for Cooperation on Agriculture (IICA), as the specialized agency for agriculture of the Inter-American System, implemented a series of actions to support its member countries’ efforts to achieve agricultural development and rural well-being that are detailed in this annual report.

All the work we did last year enabled us to consolidate the Institute’s new technical cooperation model, designed to deliver impactful results to the countries and, in particular, to bring about the transformations needed to achieve productive, sustainable and inclusive agriculture.

We realize that tackling the major challenges facing the agricultural and rural sectors, which include increasing productivity, adapting agriculture to climate change, reducing poverty and inequality, promoting plant and animal health protection, and achieving food security, calls for the cooperation of all the national and international stakeholders involved in the sectors concerned.

Hence, the Institute has focused its work on very specific contributions in its member...
countries, by means of more than 250 technical cooperation projects and actions.

For example, it supported national efforts to strengthen the institutional framework linked to the agricultural and rural sectors, and promoted knowledge-intensive agriculture. It also helped to make the countries more productive by promoting the strengthening of innovation systems and health and food safety services; and more competitive by fostering the development of business skills and associative capabilities in production chains, especially among family farmers.

To meet the challenge of sustainability, IICA worked on integrated water management and sustainable soil use. It also promoted the development of a culture of risk management, as part of which it collaborated in efforts to adapt agriculture to climate variability and mitigate the effects of climate change.

All the Institute's member countries are engaged in bold efforts to reduce poverty and inequality. Since the majority of poor people live in rural areas, IICA has prioritized the development of those territories where agriculture continues to be the predominant activity, with a view to achieving full social inclusion. This work produced very concrete results with respect to the insertion of women and young people into farming, which in many countries is the most important production activity.

Agriculture is the cornerstone of food security. However, increasing the availability of food is not enough. Access to foodstuffs must also be improved, as well as the use made of them. To achieve this, IICA supports the countries with actions aimed at increasing productivity through the use of the technological tools available and the use of native species, as well as others designed to improve agricultural health, promote food safety, and reduce food losses.

This is just a small sample of the implementation of all the cooperation instruments established in the 2014-2018 Medium-term Plan (MTP) approved by the Member States. That plan was designed to bring about an evolution in the Institute's technical cooperation model, gearing it toward the achievement of results.

My administration is strongly committed to the efficient, effective and transparent use of the resources that the countries place at the Institute's disposal. For that reason, we have focused our technical cooperation on the achievement of results and promoted a culture of accountability, of which this annual report is an example.
190 technical cooperation projects or actions funded with external resources

47 rapid response actions funded by IICA and approved to provide effective cooperation in 21 countries and in the Andean, Central and Southern regions

5 hemispheric projects funded with IICA resources underway in areas related to chains, inclusion, family farming, resilience and agricultural health

9 multinational projects operating under the IICA Technical Cooperation Fund

34 strategies by IICA being implemented in the countries

Close to USD 95 million executed for external projects
Over 60 partners
60 national and international partners

21 countries benefited
from IICA’s rapid-response actions

Over 27,000 persons trained
in adaptation to climate change, innovation, trade, business, health, public policies and rural development

25 validated technologies
benefit about 4000 tomato, cassava, potato and avocado producers in Central America (EU-IICA)

1043 trained officials
from 10 countries learned about the requirements for exporting to the U.S.

1060 trained technical officers
in the Caribbean and Central America participated in 14 programs in Mexico

301 scholarship recipients
in master’s and doctoral degree courses at 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

Increase in quotas
6.57% increase in the IICA quota budget beginning in 2016
Formulation of innovative policies and strategies for agricultural and rural development, aimed at facilitating business activities and promoting innovation, participatory management, inclusion, and family farming.

Linking to markets of at least eleven agricultural chains in ten countries, through the creation of committees for competitiveness; training in management, entrepreneurship, associative enterprises, and value added; and the operation of market information systems.

Promotion of technological and commercial innovations aimed at improving agro-ecological production, agroindustry, fish farming, beekeeping, and water resource management, and reducing food loss. The improvements adopted can be seen in products such as rice, vegetables, poultry, cacao, coffee, flowers, avocados, tomatoes, potatoes, and cassava.

Agricultural health and food safety assurance in the Americas through the training of sanitary officials, the harmonization of processes to gain access to markets, the use of good agricultural and production practices, emergency response actions, and the management of risks, particularly those associated with climate change.

Increase in 16 countries of public sector capabilities for integrated water resource management, the use of irrigation systems and water harvesting, waste management, and the implementation of measures to combat soil degradation and to make better use of agricultural insurance.
Promotion of knowledge-intensive agriculture through networks, grants, and information systems. Of special importance was the approval of 301 grants to enable students to take master's and doctoral degree courses under the program with Mexico's National Council of Science and Technology (CONACYT), and the enrollment of 121 students in the master's degree program in food security operated by the Open and Distance University of Mexico.

Contribution to the hemispheric dialogue on sustainable agricultural productivity and rural inclusion by means of the Declaration of Ministers of Agriculture of the Americas Mexico 2015, which was presented at the Eighteenth Regular Meeting of the Inter-American Board of Agriculture (IABA).

The Member States have recognized the Institution's efforts and have increased IICA's annual quota budget by 6.57%.
A modern corporate management model

In 2015, the Institute fully implemented its program budget model aligned with the strategic structure established in the 2014-2018 MTP; it completed the accreditation process of the European Union (EU) based on the four institutional pillars and opted for the fifth pillar (grants), which has allowed IICA to qualify as an organization eligible to implement technical cooperation projects with EU resources in LAC; it succeeded in securing the member countries’ approval of a 6.57% increase in the quota budget beginning in 2016, in order to support its finances and continue to provide cooperation to the countries on the same scale and of the same quality as previously.

Most of the countries also offered to pay varying sums in the form of over-quotas, which constitute not only an important form of complementary financial support for the Institute’s activities, bringing the total increase to 8.11%, but also a good indicator of the degree of satisfaction of the member countries with IICA’s performance.

At the same time, the Institute placed emphasis on the process of continuous improvement initiated in 2010 involving systematic work that has generated clear results and a positive impact on the modernization of the organization that is currently underway. The following are some of the most important results:

• Greater integration of corporate management with technical cooperation, which resulted in a clear improvement in the use of resources. In this regard, every unit received support in the consensus-building process of projects as well as the funds needed to implement the MTP as and when required.
• Strict application of the criteria of austerity, rationality, equity, and transparency in the execution of the budget, which reduced operating costs and absorbed incremental expenditures without affecting the growing need for technical cooperation in the countries.

• Application of a policy of accountability and transparent use of resources, including the preparation of audited and approved financial statements that complied strictly with U.S. GAAP (U.S. generally accepted accounting principles) international accounting standards.

• Successful negotiation of an Agreement between Spain and IICA, thereby opening up new possibilities of financing for technical cooperation.

• Operation of the technological platform SAPIENS for human talent management and of the Unified Institutional Management System (SUGI) for planning, monitoring and reporting on all of the Institute's projects and actions; and consolidation of the accounting-financial system SAP.

• Updating of the Code of Ethics, the Antifraud and Sexual Harassment Policy, and the Manual on the procurement of goods and services.

• Rationality in expenditure achieved through the renegotiation of service contracts and campaigns to promote savings in water, electricity, fuels and other consumables.
Productivity and competitiveness

Design of instruments for agriculture: Belize, Costa Rica, Ecuador, Guatemala, Honduras, Peru, Panama and Paraguay received cooperation for the facilitation of agribusiness operations, agroindustrial innovation, adding of value, and formulation and implementation of sanitary measures.

Innovation and chains: The Institute enhanced the expertise of 900 people working in the public and private sectors in eleven chains with regard to the technological options for generating innovations in the areas of agro-ecological production, the use of bioinputs, promotion of product quality, pest control, food loss reduction, and calculation of the water footprint.

Innovation and family farming: The Institute enhanced the capabilities of more than 1000 specialists and leaders of Family Farming (FF) by means of: i) an international event showcasing innovations in FF held in the Southern Common Market (MERCOSUR) in partnership with the Specialized Meeting on Family Farming (REAF), the Cooperative Program for Agrifood and Agroindustrial Technology Development in the Southern Cone (PROCISUR) and Paraguay’s Ministry of Agriculture and Livestock (MAG) (200 participants from seven countries); ii) various innovative tools and approaches for knowledge transfer in FF (33 Central American specialists), among other courses and studies on policies, extension, innovation, gender, and knowledge management for FF, among other topics.

1 National Policy for Food and Agriculture 2015-2025.
2 Fruit-growing Policy.
3 National Food Safety Policy.
4 Master Plan for the Recovery of Agriculture.
5 Cashew (Honduras), fruit trees (El Salvador), cacao and coffee (Panama and Peru), poultry farming (Venezuela), horticulture (Argentina), cattle (Uruguay), sheep and flower-growing (Paraguay), goat milk (Trinidad and Tobago), and sweet potato (Jamaica).
Technological and institutional innovation

The program “Associative Encounters: Agribusiness Internships in FF,” which led to the creation of a network of 50 organizations offering internship services (126 members in the Southern, Andean, Central and Caribbean regions).

Access to timely information: Nearly 1500 small and medium-scale producers in the Q’eqchi’ territory in Guatemala now receive information on climate, prices, productive technology, and other matters of interest in Spanish and the Q’eqchi’ language through the TOTOGEO platform, which is managed jointly with the Universidad Rafael Landívar, the Universidad de San Carlos, the Guatemalan Radiophonic Education Federation, the Verapaces Federation of Cooperatives, and the Association of Cardamom Producers, with financial support from the FAS/USDA.

Innovation in Central America: The EU-funded Regional Program for Research and Innovation by Agricultural Value Chains (PRIICA) made available to 4000 members of 24 local innovation consortia more than 25 technologies and practices validated with the national agricultural research institutes of six Central American countries. The technologies and practices were related to tomato, cassava, potato, and avocado varieties, integrated pest and soil management, fertilization, and postharvest and marketing processes, including business plans designed to generate income.

Regional Program for Research and Innovation by Agricultural Value Chains

Watch video (Spanish only): https://www.youtube.com/watch?v=GTz0EDv40ZM

Learn about PRIICA and its objectives, actions and next steps.
Toward safe trade in food: Working with the United States Department of Agriculture (USDA), IICA trained 1043 public and private sector officials of ten member countries, to give them a better grasp of the requirements for exporting to the U.S., as well as the regulations proposed under the Food Safety Modernization Act (FSMA).

The support provided by IICA to the Plant Health Committee (COSAVE) and the Standing Veterinary Committee (CVP) allowed for the harmonization of sanitary processes to gain access to markets and the resolution of bilateral and multilateral trade issues in the Southern Cone.

A more robust institutional framework for dealing with sanitary matters: Belize and 15 Caribbean countries have draft legislation on matters related to animal health and food safety, manuals on good agricultural practices, coordination mechanisms, improved laboratories, and the support of three regional entities: the Caribbean Animal Health Network (CaribVet), the Caribbean Plant Health Directors (CPHD) Forum and the Coordinating Group of Pesticides Control Boards of the Caribbean (CGPC).

Sharing of experiences on the Codex Alimentarius: Thanks to five food safety twinning programs, horizontal cooperation increased among Ecuador, Chile, Uruguay, Argentina, Colombia, Antigua and Barbuda, Dominica, Bahamas, Grenada, and Canada. Furthermore, 70 participants in Honduras and El Salvador benefited from two programs aimed at strengthening national Codex committees.

New food inspectors: The Regional Virtual School for Food Inspectors, which was established by the Institute with the support of seven universities (Universidad Rafael Landivar,
Thirty-eight Central American technical officers were trained in plant inspection and in the compilation of lists of quarantine pests. In the Andean Region, 30 plant health inspectors improved their knowledge of international plant health standards.

**Increased capabilities in health-related issues:** More than 600 professionals in the Central, Andean, and Caribbean regions received training in good poultry production practices, how to respond to animal health emergencies (incident command system), food safety, antimicrobial resistance, good agricultural practices, traceability, and maximum residue levels, among other topics.

**Safeguarding the Caribbean, Central, and Andean regions:** IICA enhanced the expertise of 50 plant health officials in seven Caribbean countries for the control and effective management of outbreaks of quarantine pests; and of ten plant health officers involved in monitoring infestations of red palm weevil (*Rhynchophorus ferrugineus*) in the Caribbean.

**Mexico’s plant health status:** As it has done for the last 20 years, IICA coordinated the management of a series of programs, such as Moscamed, Moscafrut and Diagnosing-Surveillance of Exotic Pests and Diseases of the Secretariat of Agriculture, Livestock, Rural Development, Fisheries, and Food (SAGARPA) and the National Service for Agricultural Health, Safety and Quality (SENASICA), thanks to which 51% of Mexico’s territory has remained free from fruit flies, and the entire country free from the Mediterranean fruit fly.
Quarantine control and inspection systems in Haiti and the Dominican Republic: With funds from the U.S. Food for Progress Program, the Institute spearheaded the drafting of sanitary control legislation and regulations, the implementation of an electronic quarantine information system, the operation of incinerators, and the training of nearly 300 inspectors of the ministries of agriculture of the two countries.

With the Ministry of Agriculture, Livestock, and Supply (MAPA) of Brazil, IICA implemented a pilot project at Brasilia’s international airport involving the use of detector dogs as part of agricultural controls.

Competitive development of chains: After identifying the critical issues of eleven chains that were prioritized by ten countries in 2014, the Institute promoted the competitiveness of six of them by means of forums and committees on the competitiveness of cashew (Honduras), sweet potatoes (Jamaica), coffee and cacao (Panama), flowers and sheep (Paraguay), goats (Trinidad and Tobago) and poultry (Venezuela).

Enabling environments for business development in the Caribbean: The EU’s Agriculture Policy Programme with focus on the Caribbean and the Pacific, which IICA is implementing in the 15 Caribbean Forum (CARIFORUM) countries, conducted research, generated baselines and crafted strategies for the pig, cereal, sweet potato, cassava, beekeeping, herbs and spices, hot pepper, and small ruminant chains.

Agribusiness development: By providing producers with a range of opportunities for sharing experiences, knowledge was generated that will help them to integrate

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6 Cashew, fruit trees, cacao, coffee, poultry, vegetables, cattle, sheep, flowers, goats and sweet potatoes.
With support from IICA and USDA, 33 member countries of the Market Information Organization of the Americas (MIOA) strengthened their market information and intelligence services.

**Integration into markets:** More than 120 small and medium-scale producers in Panama, Costa Rica, and Peru are better equipped to integrate into markets, after IICA, working with national counterparts, promoted opportunities for dialogue and innovative mechanisms such as coffee and cacao fairs (Panama), the “One people, one product” initiative (Costa Rica), and the coffee and cacao agro-export route (Peru).

**Export opportunities:** IICA’s cooperation was instrumental in 475 Mexican exporting firms benefiting from the creation and consolidation of opportunities for penetrating markets. SAGARPA agricultural attachés at various Mexican embassies supported this effort.

**Business ties between Canada, and Peru and Colombia:** Producers of cacao, brown sugar paste, and tilapia in Peru and Colombia forged ties with Canadian importers, which resulted in business commitments and training actions on the requirements of the Canadian market for the entry of these products.
Fifty-one firms received recommendations on how to maintain and improve access to the U.S. export market.

**Agriculture and tourism:** With assistance from the Technical Center for Agricultural and Rural Cooperation (CTA), 175 public and private stakeholders in ten Caribbean countries enhanced their capacity to insert themselves into markets, mainly those related to tourism.

**Adding value in dairy products, cassava, and mangoes:** In the Caribbean Region, IICA’s assistance facilitated advances in agroindustrial processes. For example:

- Training activities in dairy production management and sanitary concerns helped the Trinidad and Tobago Goat and Sheep Society add further value to its products.

- Under a project aimed at the development of agriculture and rural enterprises in Tapakuma, Guyana, a cassava processing plant was inaugurated that will enable 180 producers in the area to increase their income.

- 31 mango producers in St. Kitts and Nevis boosted their income after learning about new ways of improving the hygienic conditions of their crops, thereby adding value to their production.

Listen to audio (Spanish only): [http://goo.gl/wWBbJB](http://goo.gl/wWBbJB)

**AgroEnlace: Agribusiness Internships: Where Knowledge is Shared (Part 1).**

IICA agribusiness internships in Latin America and the Caribbean foster the socio-organizational and agribusiness development of family farming through knowledge sharing among farmers’ organizations. Listen to some of the participants.
Increased use of agricultural insurance: IICA promoted the use of agricultural insurance and an integrated vision of risk. Its efforts included inventories of risk maps in Latin America; the training of 210 people from the public and private sectors in El Salvador, Guyana, Jamaica, Nicaragua, Paraguay, St. Lucia, St. Vincent and the Grenadines, St. Kitts, and Nevis, Suriname, Trinidad and Tobago, and Uruguay in comprehensive risk management; the holding of the fifth annual symposium on agricultural insurance; and the publication of a study on the performance of the insurance market in the Americas between 2010 and 2014.

Environmental risks in Guatemala: In support of the Ministry of Agriculture, Livestock, and Food (MAGA), the Institute conducted an assessment of the environmental risks posed by the possible entry of genetically modified corn materials from Honduras as a result of the bilateral customs union agreement between the two countries.

Training to reduce food losses: With support from PRIICA, a program implemented in Central America and Panama, coordinated by IICA and funded by the EU, a training activity was held involving 22 people from Central America, including IICA specialists. The event focused on the use of the methodology for the evaluation of agrifood chains (MECA) to identify problems and projects, a systematic method for identifying and quantifying the factors that lead to postharvest losses, thus making it possible to detect problems related to product quality in a specific location. This methodology was made available to the member countries, and in 2016 the manual on its application will be updated.

Increase in sweet potato production in Jamaica: Key stakeholders in Jamaica’s sweet potato subsector took part in a mission to North Carolina, U.S.A., to enhance their expertise for the propagation, cultivation, and postharvest management of the Beauregard and Covington varieties. It is estimated that 30 farmers growing the Beauregard variety on 93 acres will harvest 1.2 million pounds of sweet potatoes in March 2016.
**The potential of quinoa:** Thanks to an IICA study carried out with funding from the Inter-American Development Bank (IDB) and the collaboration of Peru's National Agricultural Innovation Institute (INIA), people from the public and private sectors working in the quinoa chain have up-to-date information on production of the crop and its access to markets. IICA also supported the International Quinoa Center in Bolivia with an information system on the production, marketing, and consumption of the crop, which facilitates interaction among the different stakeholders in the chain.

**Meeting of Ministers of Agriculture of the Americas 2015:** Representatives of the highest-level agricultural authorities in the Americas met in Mexico, where a ministerial declaration was signed that establishes eight commitments aimed at improving the productivity and sustainability of agriculture. This meeting strengthened IICA's role as an international organization specializing in agriculture and the coordinator of efforts to promote rural well-being.

**AgroEnlace: Discussions and Decisions about Agriculture in the Americas**

Listen to audio (Spanish only): [http://goo.gl/OAYfoq](http://goo.gl/OAYfoq)

**Inter-American Meeting of National Animal and Plant Health and Food Safety Services (RISAVIA):** This meeting enabled 34 countries in the hemisphere to harmonize their priorities with respect to animal and plant health standards, and the subsequent meeting of the Inter-American Board of Agriculture (IABA) adopted a resolution calling for efforts to strengthen technical capabilities in this area.

**Opening ceremony of RISAVIA**

Watch video (Spanish only): [https://www.youtube.com/watch?v=A_hugCTlcwI](https://www.youtube.com/watch?v=A_hugCTlcwI)

*Speech by the Director General of IICA at the opening ceremony of the Inter-American Meeting of National Animal and Plant Health and Food Safety Services in the Face of the Challenges of International Trade.*
Participation in international forums and knowledge management

**Codex Alimentarius:** The Institute contributed to capacity building and greater use of the forum by increasing the participation of representatives of the LAC countries in Codex meetings. IICA supported the participation of 60 delegates from LAC and Africa in the first transcontinental colloquium; 37 representatives of 12 countries in Codex committee meetings; 60 delegates from 30 countries in two regional colloquia; and representatives of 16 countries in meetings of the Codex Alimentarius Commission. This helped enhance the countries’ regulatory frameworks, develop standards to facilitate agrifood trade and production, improve consumer protection, and balance the multilateral negotiation processes.

A total of 60 delegates from LAC and Africa participated in the first transcontinental colloquium, and 37 representatives of 12 countries participated in Codex committee meetings.

**World Trade Organization (WTO):** The training of 579 development agents in various subjects (tariff quotas, sanitary measures, environment, trade regulations, food security, trade data and statistical indicators) enabled the countries to closely monitor their commitments and increase their participation in WTO events and negotiation mechanisms.
Innovations

IICA continues to promote innovation in the agrifood sector, as instructed in the Declaration of the Meeting of Ministers of Agriculture of the Americas 2011. Specifically, the Institute supported Member States’ efforts to generate the following innovations:

**Protected agriculture:** Working with the Caribbean Agricultural Research and Development Institute (CARDI) and Guyana’s National Research and Extension Institute, IICA set up two greenhouses, one at the latter institute and the other on the Tain Campus of the University of Guyana, to serve as demonstration facilities for producers and students for research on agricultural productivity and production costs. The Ministry of Agriculture, Food and Water Management (MAFFW) of Barbados increased its capacity for innovation with protected agriculture systems, with IICA supplying materials and training its staff.

**Rice:** In the Dominican Republic, 20 producers in the provinces of Monte Plata and Duarte adopted the system of rice intensification (SRI) on 50 hectares of land, after participating in training programs that benefited 100 producers. Research on this system is also under way in Venezuela, Colombia, and Costa Rica.

**Bioinputs:** Argentina, Colombia, Ecuador, and Nicaragua enhanced their capabilities with respect to the use of bioinputs in agriculture, which will impact climate change mitigation and bio-business development. Using an analytical tool developed by IICA, Argentina, Nicaragua, Ecuador, and Guyana were able to identify the priorities for developing the institutional framework and regulations for bioinputs.

**Biotechnology:** IICA produced and revised biotechnology and biosafety proposals in Ecuador and Guatemala that were used to make decisions about the use of genetic modification technology and its products.
This will have an impact on the reduction of trade barriers, increase the supply of products and make some of them more competitive.

**Renewable energy:** Under the joint project being implemented in Peru by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and IICA, entitled “Fund for Sustainable Access to Thermal Renewable Energies (FASERT),” 8518 families acquired improved stoves that use that type of energy. In addition, 59 families whose micro-enterprises make bricks boosted their incomes by 37% and reduced their use of biomass by 10%, avoiding 11.27t of CO₂ emissions.

**Flowers:** IICA promoted the use of agricultural waste for composting and beneficial fungi to control pests and diseases in Paraguay’s flower-growing chain.

**Dual-purpose livestock:** In Venezuela, IICA worked with the Integrated Dairy Development Program to enhance the skills of 8000 producers through the application of an integrated approach based on the principles of good agricultural practices.

**Honey:** In several of the Institute’s member countries, honey producers began using Perone hives from Argentina, an innovation for beekeepers who produce honey in barrels. In the Dominican Republic, 155 producers were supplied with 960 hives; in Guyana, 30 beekeepers learned about the technology; and in The Bahamas and St. Lucia 112 producers were trained in permaculture.

**Fish:** Under the US-funded Program to Support the Improvement of the Productivity and Competitiveness of the Agricultural Sector (PRESSAC), a system for feeding fish with the aquatic plant *Lemna minor* was introduced in the municipality of Bayaguana, in the province of Monte Plata in the Dominican Republic. Fourteen demonstration farm modules were set up.

**Small ruminants:** IICA and the St. Lucia Ruminants Cooperative Society established a forage bank, a national-level innovation that will promote resilience in the value chains of small ruminants.

**Listen to audio (Spanish only):**
https://soundcloud.com/iicanoticias/sets/priica

Participants in a Central American initiative share the ways in which participatory processes in the areas of agricultural research and technological innovation are contributing to food security for the benefit of small-scale farmers and their families.
Pest and disease control

**Brucellosis and tuberculosis:** Thanks to the joint cooperation efforts of IICA, Argentina’s National Institute of Agricultural Technology (INTA), and the Brazilian Agricultural Research Corporation (EMBRAPA), the National Quality and Animal Health Service (SENACSA), the Ministry of Health and the Universidad Nacional de Asunción (UNA) have trained staff, equipment and supplies for diagnosing these diseases in Paraguay.

**Capim annoni (Eragrostis plana):** Experts from EMBRAPA exchanged experiences with producers and technical officers in the north of Uruguay with regard to this plant that affects grasslands, thereby contributing to the efforts to prevent and control the weed.

**Citrus fruit disease:** In Argentina, a country free from *Huanglongbing* (HLB), IICA concluded a study of the impact that an outbreak of the citrus fruit disease would have on the domestic economy and more than 5000 citrus producers. As a result, several sectors are expected to continue investing in efforts to prevent the entry of the disease.

**Foot-and-mouth disease (FMD):** IICA collaborated in the efforts to maintain Paraguay’s status as FMD-free with vaccination, which called for the use of an epidemiological surveillance system and the training of SENACSA staff.

**Ticks:** IICA prepared guidelines for the management of ticks in cattle in the Andean region.

**Microsporidium parasite:** IICA Canada’s Research and Internship Assistance Program (RIAP) supported the construction of knowledge in Argentina, Uruguay, and Canada on the optimization of techniques for the early detection of the parasite *Nosema ceranae* that affects bees.

*The Andean region, Argentina, Costa Rica, and the U.S. have an overview of the impact on health and production of the giant snail and the apple snail in the Americas.*
Mollusk pests: The official services of Antigua and Barbuda, Argentina, Costa Rica, the U.S. and the countries of the Andean region shared experiences and opinions regarding the status and effects of the giant snail (*Lissachatina fulica*) and the apple snail (*Pomacea canaliculata*).

Rust: Working with Jamaican, Colombian, and U.S. scientists, IICA prepared the profile of an early warning system for managing rust in 12 communities located in Jamaica’s Blue Mountains, where 87% of the country’s coffee producers are to be found. Furthermore, Central America and the Dominican Republic will benefit from the EU-funded Program for Integrated Coffee Rust Management (PROCAGICA) whose implementation in 2016 has been assigned to IICA.

**Development of rural territories and rural well-being**

Territorial rural development policies: The Institute supported Mexico, Brazil, Costa Rica, Honduras, Ecuador, Guatemala, and the Dominican Republic in the implementation of actions aimed at inclusive and equitable rural development, the participatory management of territories, and the processes for the integration of programs in the rural territories of each country.

Political focus on family farming: Bolivia, Colombia, Chile, Ecuador, Honduras, Nicaragua, Paraguay, and Venezuela have made family farming (FF) a focus of public policies. In the Andean Region, FF was characterized by territories, to support the implementation of public intervention strategies on the subject.

Guatemala, and Colombia reached agreement on differentiated actions for FF after at least 100 senior officials, specialists, and other public and private stakeholders discussed the importance of FF and its public policies.
30 specialists from Bolivia, Ecuador, Venezuela, Nicaragua, Paraguay, Colombia, Uruguay, and Guatemala completed the Diploma Program on the Design of Public Policies for Agriculture, carried out in partnership with Mexico’s Center for Regional Cooperation on Adult Education in Latin America and the Caribbean (CREFAL).

**Synergies for inclusive rural development:** The Strategic Management System for Area-based Development and Family Farming (SIGET), a platform generated by IICA, facilitated consensus among 60 participants from 15 Ibero-American countries\(^7\) in a forum on synergies between FF and inclusive rural development, mainly with respect to the connection between the strengthening of FF, the development of territories, and the processes of inclusion for historically excluded groups. Over 110 technical officers from Paraguay, Peru, and Venezuela have enhanced their expertise on this topic and over 290 persons from 13 countries\(^8\) have shared their experiences through the inter-learning module.

**Coordination and training for socioeconomic inclusion:** In Mexico, Guatemala, Honduras, Costa Rica, Dominican Republic and Brazil, IICA facilitated coordinated mechanisms for drafting plans to meet the strategic needs of territorial actors. In addition, in those same countries, as well as in Guyana, Suriname, and Ecuador, individuals from both the public and private sectors received training in inclusion policies, the construction of participatory management mechanisms in territories, and economic activation and social empowerment processes.

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\(^7\) Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Honduras, Guatemala, Nicaragua, Paraguay, Spain, Uruguay, and Venezuela.

\(^8\) Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Mexico, Paraguay, Peru, Spain, and Venezuela.
**Economic activation of territories:** Under the Central American Strategy for Rural Area-based Development (ECADERT), funded by Taiwan, producers in the territories of Jucuarán, San Dionisio, Concepción Batres, and Jiquilisco, in El Salvador, enhanced their technical skills and were given access to innovations and inputs that enabled them to improve their income and food security. In Belize, with IICA’s assistance, the Ministry of Agriculture, Forestry, Fisheries, the Environment and Sustainable Development crafted proposals for the territorial economic activation of six Mayan communities.

21 excluded groups in territories of La Selva Lacandona, Chiapas, Mexico, with support from the government and civil society, is implementing ten projects designed to stimulate family farming and rural development.

**AgroEnlace: Produce More, Sell Better: An Instructional Experience**

Listen to audio (Spanish only): [http://goo.gl/rDtGAI](http://goo.gl/rDtGAI)

An innovative initiative for fostering rural development throughout the value chain provided technical assistance to and organized training sessions for small-scale corn and bean farmers in Guatemala who successfully increased their productivity rate by 25%. Participants share their experiences.

**AgroEnlace: Biodiversity and Local Development: An Achievable Link**

Listen to audio (Spanish only): [https://goo.gl/NN4FV1](https://goo.gl/NN4FV1)

The natural wealth of a protected area in Antioquia, Colombia, which is of vital importance to the city of Medellín, is threatened by the illegal extraction of forest resources. An innovative proposal puts forth a plan for reverting this situation, as described by Diana Amaya Pérez, Environmental and Cultural Deputy Director of Corporación Parque Arví, and Tania Ammour, Main Technical Advisor of the Sustainable Forestry Management Program in the Andean Region, an initiative developed by IICA with support from the Ministry of Foreign Affairs of Finland.

**AgroEnlace: Central American Cultural Wealth. Garifuna Territory and Development**

Listen to audio (Spanish only): [http://goo.gl/qiMYqc](http://goo.gl/qiMYqc)

Get an insider’s look into the cultural wealth of the Garifuna people, their work, dreams, and struggle to build a future without giving up their past, in order to achieve development while still honoring their values and principles.
Agrotourism in indigenous communities: Under a project funded by UKAid through the CART Fund of the Caribbean Development Bank, tourism in Suriname increased by 400% in the territories of Powakka, Pierre Kondre, Redi Doti, and Cassipora. The project equipped these territories with tourism infrastructure (museums, community center, camping areas, berths for boats, and paths) and facilitated the training of 54 local actors in business matters, tours, and hospitality.

New system of indicators of territorial impact: The different investment projects designed under the Provincial Agricultural Services Program (PROSAP) have a collection of sociodemographic, geospatial, economic, and institutional information from Argentina at their disposal for defining the parameters of the model for monitoring and evaluating territorial impact.
Inclusion of women in agriculture

In Panama, the socio-productive conditions of women were improved. Thanks to PRIICA, an EU-funded program, 836 Panamanian producers were trained in the role played by women in food security and nutrition. Under ECADERT, a project was implemented to strengthen the Association of Women of the Palo Seco Community (district of Mariato), which benefited 25 families with training in vegetable production of community kitchen gardens, the construction of ecological stoves, solid waste management and disposal, production of handicraft goods, gender and entrepreneurship.

In Honduras, the Yeguaré Women’s Network was organized, and in Suriname, jointly with the Ministry of Agriculture, Livestock and Fisheries (LVV), the Institute set up four cooperatives that benefited 84 women in Brokopondo, Marowijne and Sipaliwini.

IICA strengthened the management and associative capabilities of the national chapters of the Caribbean Network of Rural Women Producers (CANROP). The specific results were as follows: a) the Network of Women Producers in The Bahamas has a strategic plan and at least 100 women were trained in backyard farming, empowerment, food security, and sustainable development (together with the Women’s Office of the Ministry of Social Services); b) in Dominica, 25 women in the community of Delices received agricultural inputs and machinery following Tropical Storm Erika, thanks to humanitarian assistance from IICA staff; and c) Jamaica’s Network of Women Producers improved its finances and the ability to secure loans with auditing processes and training in good recordkeeping implemented with the Institute’s assistance.

In Antigua and Barbuda, IICA was instrumental in the Network of Rural Women Producers securing land for a commercial agro-processing plant and obtaining financing from the Global Environment Facility (GEF) and the Caribbean Development Bank for renewing structures and training in business plans.

With support from the CTA, IICA enabled two networks of women producers in Guyana to enhance their information and communication technology skills, leading to the creation of a platform for disseminating information and sharing knowledge via the Web.

In Trinidad and Tobago, 65 women and young people learned how to add value to
goats’ milk cheese and chocolate bars with cocoa nibs. They also have a better understanding of commercial terms, which will permit them to increase their families’ incomes.

Finally, IICA improved the quality of life of families in Lakatia, a community situated in Bolivia’s Altiplano region, by enhancing their skills for providing tourism services, promoting the inclusion of women in the delivery of such services, and implementing a community shelter that uses renewable energies.

Innovative projects in Central and South America: IICA and the Inter-American Development Bank (IDB) supported the 2015 call for bids of the Regional Fund for Agricultural Technology (FONTAGRO), related to resilience in agriculture. The projects granted funding were as follows:

- Centers for the supply of traditional seed varieties (Chile, Argentina, Paraguay and Uruguay).
- Technological innovations to construct resilient livelihoods among rural families in the Dry Corridor (Nicaragua and Honduras).
- Innovation platform for the sustainability of family livestock systems in Uruguay and Argentina.
- Bio-intensive cultivation for rural families in the Dry Corridor (Nicaragua and Honduras).
Water and soil management: More than 940 producers, officials and academics in 16 countries benefited from training activities that IICA organized on integrated water management, irrigation systems and water harvesting, integrated waste management, and soil degradation. In addition, in the Caribbean and Andean regions, the Institute validated a training module on integrated water management with 49 participants from 14 countries.9

In Venezuela, working with the Nestlé company, IICA trained 243 people in techniques for the conservation, use, quality control, and local management of water.

Efficient irrigation systems and water balance models: With assistance from IICA and the EU, two municipalities in Paraguay’s El Chaco region implemented a rainwater harvesting project that made it possible to install and maintain drip irrigation systems. Furthermore, the MAG improved its ability to manage meteorological risks by using a new water balance model to monitor water surpluses or shortages in agricultural areas.

A number of countries, Brazil, Honduras, Ecuador and Costa Rica among them, now have proposals or projects for developing irrigation and drainage plans.

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9 Guyana, Suriname, St. Lucia, St. Kitts and Nevis, St. Vincent and the Grenadines, Antigua and Barbuda, Jamaica, Peru, Argentina, Nicaragua, Costa Rica, Paraguay, Bolivia and Venezuela.
Management of natural resources: In St. Vincent and the Grenadines, IICA established a demonstration model for water harvesting to train technical officers and producers in climate-smart agriculture, water harvesting, and soil management.

In Grenada, IICA collaborated with the GIZ and the national authorities to provide assistance to 50 producers so they could improve the soil using compost produced from Sargassum seaweed.

Updating of agricultural soil maps: Working with the Universidad de Costa Rica (UCR), the Institute generated the agricultural soil maps (orders and suborders) that form part of a useful geographic information system for the preparation of plans and the management of agricultural production in that country.

Conservation of Nicaraguan soils: With the participation of 12 cooperation, education and governmental organizations, IICA facilitated the creation of a national alliance for soil resources, and prioritized actions for a future strategy.
The ministries of agriculture of 20 countries developed national plans for the adaptation of agriculture to climate change and integrated the issue into their development plans.

Coordination for climate-smart agriculture: The Caribbean Forum on Climate-Smart Agriculture was set up and made it possible to provide training in climate change adaptation in agriculture to more than 450 technical officers from ministries of environment and agriculture, including extension workers and decision-makers. At least 109 people from the public and private sectors of Barbados, St. Vincent and the Grenadines, Grenada, Dominica, and St. Kitts and Nevis were trained in good agricultural practices (GAP) for dealing with climate change.

Strengthening of capabilities for climate change adaptation and mitigation in agriculture: Under the EU-funded EUROCLIMA Program, more than 700 technical officers and specialists increased their knowledge of the United Nations Framework Convention on Climate Change (UNFCCC) and subjects such as the reduction of vulnerability to drought, use of the climate analogues tool, sustainable soil use, integrated water management, and the application of the water footprint concept to agriculture, among others.

Clean energies and carbon sequestration: Under the agreement with Ecuador's Ministry of Electricity and Renewable Energy (MEER), through the project “Production of Jatropha oil for the pilot plan for power generation in the Galapagos Islands,” 41,000 liters of pure Jatropha vegetable oil were sent to the islands. In addition, the planting of more than one million Jatropha curcas plants in Manabí, Ecuador, helped sequester 4000 t of CO₂.

AgroEnlace: Jatropha for Galapagos: A Project that Creates Light

Listen to audio (Spanish only): http://goo.gl/dpr1go

Floreana, a Galapagos island, lights up thanks to pure Jatropha vegetable oil used to power electricity generators. Living fences in Manabí, along the Ecuadorian coastline, provide the raw material which farmer families collect and sell to local collection centers. As a result, the Jatropha for Galapagos project creates a virtuous circle that benefits both the environment and rural communities.
Thanks to a joint effort by IICA and the World Animal Protection organization, Latin America has a set of guidelines for assisting animals in disasters.

Series: “A Day on the Farm” IICA-European Union, Euroclima-IICA project

Watch videos (Spanish only):
https://goo.gl/kf1nu8

“A Day on the Farm” is an audiovisual production by IICA and the European Union via the Euroclima-IICA project. Through documentaries of approximately five minutes each, the project shares success stories related to the implementation of climate change mitigation and adaptation strategies in agriculture.
Enhancing capabilities for dealing with climate change

- **Latin America and the Caribbean:** Within the framework of the Regional Gateway for Technology Transfer and Climate Change Action (REGATTA), IICA assisted the United Nations Environment Programme (UNEP) in enhancing the expertise of 610 representatives of the public and private sectors in good practices for climate change adaptation, measures for mitigating the effects of greenhouse gases, climate finance, climate forecasts, and vulnerability in key LAC crops.

- **Bolivia and St. Vincent and the Grenadines:** Fifteen Bolivian interest groups and 573 people from ten Caribbean communities were trained in climate-smart agriculture.

- **Chile:** The “Integration of agriculture into climate change” course for trainers was held ten times, with a total of 178 participants.

- **Dominica:** More than 40 people from the public and private sectors were trained in sustainable agriculture, soil care, and methodologies for conducting assessments of adaptation to the climate.

- **Grenada, St. Kitts and Nevis, St. Lucia:** Working with the UWI, 14 people in the Caribbean were trained in methodologies for sustainable soil management, efficiency improvements, and adaptation to climate change.

- **Integration of gender, agriculture, and climate change:** Through South-South cooperation established under the aegis of the EUROCLIMA Program, 24 women from eight countries involved in projects aimed at integrating the climate change perspective into the agricultural sector shared experiences that will make it possible to improve appreciation of women’s role in agriculture.

Listen to audio (Spanish only): [http://goo.gl/qpGsDM](http://goo.gl/qpGsDM)

Out of all productive activities, agriculture is the one most vulnerable to the effects of climate change; it is also one of the main activities responsible for global warming. However, it is possible to make agriculture sustainable and capable of adapting to new conditions and reducing its impact on natural resources.
New institutions: IICA assisted a number of countries with the formulation of plans or strategies aimed at the creation of specialized institutions, including the Center for Research on Agricultural Production under Controlled Environments (Panama), the Peruvian Coffee Institute, and the Center for the Promotion of Value Added (Costa Rica).

Mexico: Toward results-based national programs: The planning and design evaluation processes of Mexico’s SAGARPA were strengthened following IICA’s evaluation of its eleven programs, training in logical frameworks and results-based budgets, and the preparation of the operating rules for 2016.

Innovative policy instruments: More than 3000 people working in the public and private sectors in 28 IICA member countries increased their knowledge of market-oriented agriculture, risk management, regional integration, sustainable natural resource management, and efficient use of production inputs.

New rural extension methodologies: IICA enhanced the skills of 98 extension workers from Chile's National Agricultural Research Institute (INIA) and the Agricultural Development Institute (INDAP).

Combating malnutrition in children: 500 people working for food and nutrition security programs in Guatemala learned about the factors that influence chronic child malnutrition, and identified effective ways of combating it thanks to a study entitled “Systemic and territorial model of chronic child malnutrition in Guatemala,” prepared by the Universidad Rafael Landívar and Canada's McGill University, with support from IICA and the International Development Research Centre (IDRC).

Summit of the Americas: The Institute supported the Organization of American States (OAS) at the Seventh Summit of the Americas, held in Panama, where the declaration adopted emphasized the importance of agriculture, food security, and sustainable natural resource management.
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://soundcloud.com/icanoticias/sets/perspectivas-de-la-agricultura

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

Under IICA’s joint program with Mexico’s National Council for Science and Technology (CONACYT), 301 grants were processed and approved to enable young professionals from across the continent to continue their education in the agricultural and related sciences. As a result, by the end of 2015, as many as 207 students were enrolled in master’s programs and 94 in doctoral programs at 47 Mexican higher education institutions.

Number of scholarship holders under the CONACYT-IICA program (2015)
Master’s degrees and doctorates

Professionals

- Argentina: 5
- Belize: 4
- Bolivia: 4
- Brazil: 8
- Chile: 3
- Colombia: 170
- Costa Rica: 8
- Dominican Republic: 3
- Ecuador: 20
- El Salvador: 2
- Guatemala: 10
- Haiti: 5
- Honduras: 14
- Nicaragua: 7
- Panama: 4
- Paraguay: 2
- Peru: 11
- United States: 3
- Uruguay: 5
- Venezuela: 12
Similarly, under the joint project between IICA and the Tropical Agriculture Research and Higher Education Center (CATIE) entitled “Enhancing Agriculture and Rural Development through Leadership Education” (Henry A. Wallace Legacy Scholars –HWLS), 24 students from the Americas received grants for master’s degree courses at CATIE.

**Master’s degree in food security:**

With the participation of FAO, ECLAC, and ten universities across the Americas that are members of the Union of Latin American Universities, IICA spearheaded the design of the study program for the International Master’s Degree in Food Security. With grants from the Open and Distance University of Mexico (UnADM), 121 students are now enrolled in the master’s degree course.

**Agricultural capabilities in the Caribbean:**

With IICA’s assistance, the Government of Mexico consolidated its horizontal cooperation, implementing 14 capacity-building programs for agriculture that benefited 1060 technical officers in the Caribbean and Central America. The subject matter of the programs dovetailed with the knowledge needs of the countries concerned, and included protected agriculture, rural tourism, family and backyard farming, protection of soils and water, plant pathology, and sheep production.
The alliance, comprised of 175 national institutions in 22 countries, facilitated access to 2.8 million references and 252,665 full-text documents archived in 345 databases. During the course of the year, 2.6 million unique visitors and 811,745 recurrent users benefited from this service. The participants shared 49,730 articles and documents.

Thanks to the work with the FAO and other international organizations, 11 courses on information and knowledge management are available. At the global level, the platform provides access to courses in English, Spanish, and French related to 18 subject areas.

The Institute spearheaded the adaptation and operation of the VIVO system in LAC. Developed by the University of Cornell, the system makes it possible to administer technical and professional profiles in agriculture. Currently, 982 profiles can be accessed, related to more than 1100 institutions.

As many as 772 people from 21 countries benefited from different activities related to the construction of knowledge on innovation. The Network involves 81 institutions in 16 countries in Latin America, Europe, and the Middle East, as well as six regional systems and networks.
Public and private stakeholders have access to timely and pertinent information about the food security situation across the Americas and worldwide. The site receives an average of 1200 visits per month. The monthly bulletin is sent to 604 subscribers.

Food Security Observatory for the Americas
http://goo.gl/dYBNDk

In 2015, IICA published 49 books and technical documents, all available in digital format and under the system of Creative Commons licenses.

Main publications available online

- **Políticas públicas y agriculturas familiares en América Latina y el Caribe: nuevas perspectivas** (Spanish only)
- **Innovation and Water Management for Sustainable Development in Agriculture**
- **Caracterización de capacidades nacionales de respuestas de emergencias en sanidad animal y protección vegetal. 2.ª ed.** (Spanish only)

Information resources
http://www.iica.int/en/information-resources