



**THE MARRAKESH DECISION AND FOOD SECURITY:
CONTRIBUTION OF THE INTER-AMERICAN INSTITUTE
FOR COOPERATION ON AGRICULTURE (IICA)**

SUBMISSION BY THE IICA

The following submission, dated 9 October 2017, is being circulated at the request of the Inter-American Institute for Cooperation on Agriculture (IICA).

The purpose of this document is to inform Member countries of the World Trade Organization (WTO) about some of the technical cooperation activities carried out by the IICA in 2017¹ to support Latin American and Caribbean (LAC) countries in the area of food and nutrition security.

One of the objectives of the IICA's 2014-2018 Medium-Term Plan (MTP) is to improve agriculture's contribution to food security. Accordingly, the Institute cooperates with its Member States in developing policies, strategies and institutional frameworks to this end, and especially to enhance the contribution of family farming.

The IICA provides its technical cooperation through various instruments, such as programmes and projects financed from external resources, a technical cooperation fund (FonCT), rapid-response actions, cooperation programmes for research and innovation (PROCI), an agricultural health and food safety programme, and four flagship projects, the latter focusing on four main areas:

- a. competitiveness and sustainability of agricultural chains for food security and economic development;
- b. inclusion in agriculture and rural areas;
- c. resilience and comprehensive risk management in agriculture; and
- d. productivity and sustainability of family farming for food security and the rural economy.

These technical cooperation instruments and the partnerships established with national and international bodies in its Member countries enable the IICA to contribute to food security² in the Americas, based on the four dimensions established by the United Nations Food and Agriculture Organization (FAO): availability of food, access to food, food utilization and food stability.

¹ Covers the period from June 2016 to June 2017.

² IICA (Inter-American Institute for Cooperation on Agriculture, Costa Rica), 2009. IICA's Definition of Food Security. San José, Costa Rica. Accessed on 29 August 2017. Available at http://legacy.iica.int/esp/programas/seguridadalimentaria/Documents/SeguridadAlimentarias_Quées_Eng.pdf.

1 MULTINATIONAL ACTION BY THE IICA

1.1. During the period 2016-2017, the IICA carried out activities to support various countries and regions in the four dimensions of food security:

1.1 Access to food³

- a. **Caribbean region: Facilitating agribusiness.** *Evaluating mechanisms for facilitating business and recommendations to reduce the restrictive effects of trade policy and transport services.* This outcome was achieved within the framework of the [Agricultural Policy Programme \(APP\)](#), led by the IICA and focusing on the Caribbean countries, which is funded by the European Union (EU).

The Caribbean Community (CARICOM) is now equipped with a study on intra-regional trade, in which imports have fallen by over US\$4 billion, exerting pressure towards suspension of the Common External Tariff (CET). The study identifies the non-tariff barriers that exist, both regionally and specifically within countries, for each product affected, and formulates recommendations to reduce or eliminate them. Likewise, it flags some of the challenges that need to be addressed in the transport of fresh products and puts forward options for establishing three regional agrocorridors that may improve intra-regional trade in various products: tubers, wheat, beer, fish and fish products, light fruits, animal feed, rice, sugar, spices and condiments, among others.

- b. **Helping to increase incomes and market access.** In Brazil, Colombia, Costa Rica, Ecuador, Guatemala, Honduras, Mexico and Suriname, some 96 economic projects or business plans were drawn up on the basis of the AT-SIAL, LINKA/CIAT and CANVAS methodologies, in order to cater for ventures and production requirements of over 1,400 excluded family farmers (women, young people, indigenous populations and people of African descent) in various relevant areas such as, among others, diversifying production, food security, ecotourism, livestock, cocoa growing, coffee, plants, vegetables, tubers, coconut and medicinal plants.
- c. **Participation in animal-health and food-safety events for market access.** Approximately 500 staff from government entities and enterprises from over 20 countries raised their capacity to access markets through their participation in various activities, including, *inter alia*, the VIIth International Seminar on Good Agricultural Practices in the Mercosur region, the IInd National Seminar on Good Agricultural Practices in Argentina, the Conference of the World Organisation for Animal Health (OIE) Regional Commission for the Americas, the meeting of the Working Group on Fruit Flies of the Western Hemisphere, and the annual meeting of the North American Plant Protection Organization (NAPPO). In addition, the IICA participated in the regional meeting of the representatives of the six Member countries of the Permanent Veterinary Committee (CVP) of the Southern Cone, the meeting of the Capacity Development Committee (CDC) of the International Plant Protection Convention (IPPC), and the meeting of the FAO/WHO Coordinating Committee for LAC.
- d. **Modernizing market information systems.** The [Market Information Organization of the Americas \(MIOA\)](#), which has 33 Member countries, has supported the development of a new curriculum on agricultural market information and analysis, with universities in Brazil, Costa Rica, Honduras and Trinidad and Tobago, as well as the compilation of a catalogue of 39 products of commercial importance for Central America, such as, among others, maize, potato, melon, onion and pineapple. Similarly, the Agricultural Market Information System ([SIMA-AMIS](#)) platform⁴ has been developed to manage a

³ Access to food: Access by individuals to adequate resources (entitlements) for acquiring appropriate foods for a nutritious diet. Entitlements are defined as the set of all commodity bundles over which a person can establish command given the legal, political, economic and social arrangements of the community in which they live (including traditional rights such as access to common resources). See FAO (United National Food and Agricultural Organization, Italy), 2015. An Introduction to the Basic Concepts of Food Security. Rome, Italy. Accessed on 29 August 2017. Accessible at <http://www.fao.org/docrep/013/a1936e/a1936e00.pdf>.

⁴ The platform, into which price data are fed by staff in ministries of agriculture or by statistical officers in various countries, may be found at <http://www.sima-amis.com>.

cloud-based price database, and 150 people from 11 countries were trained in its use. Thus, staff from various governmental entities in Antigua and Barbuda, Bahamas, Barbados, Belize, Costa Rica, Dominica, Granada, Dominican Republic, Saint Kitts and Nevis, Saint Lucia and Saint Vincent and the Grenadines are able to make their prices available to the public.

- e. **Technological capacity-building for competitive chains.** Around 1,900 people from various agricultural chains in seven countries were trained in technology options for, *inter alia*, managing milk, post-harvest handling of fruit, sweet potato farming, pest and disease control, economic and risk evaluation, managing cadmium, and carbon footprint. The beneficiary agricultural chains were coffee and cocoa in Panama, sheep in Paraguay, fruit in El Salvador, goat's milk in Trinidad and Tobago, poultry in Venezuela, horticulture in Argentina and sweet potato in Jamaica.
- f. **Fair trade certification.** In Costa Rica, Nicaragua and Panama, capacity-building in marketing, building partnerships, leadership, strategic planning, adding value, project development and fair trade rules was organized for 500 small producers linked to 47 enterprises certified or in the process of gaining certification. Of these enterprises, 25 are already exporting their products (pineapple, coffee, cocoa, etc.) to markets in the United States; Canada; Spain; France; Belgium; Netherlands; Germany; Switzerland; Israel; Republic of Korea; Japan; New Zealand; England; Ireland; Scotland; and Wales.
- g. **Promoting agri-food business.** The IICA consolidated the [Platform for Agribusiness Promotion, Knowledge-Management and Foresight in South America \(AgroSur network\)](#), which enables nine countries in the Andean and Southern regions to contribute information, technical exchanges and knowledge for the development of agribusiness in the region, and to foster expansion and diversification of the growing trade in value-added products, while safeguarding the economic, social and environmental sustainability of agribusiness.
- h. **Identifying challenges in regard to trade with the United States.** Around 80 public and private stakeholders from 50 entities in the banana (El Salvador), yucca (Dominican Republic) and coffee (Peru) chains identified challenges to be addressed in order to reinforce trade with the United States, through their participation in training activities carried out by the IICA under a project entitled "Strengthening bilateral trade between the United States and the Latin American countries with which the United States has established free trade agreements", funded by the Foreign Agricultural Service (FAS) of the US Department of Agriculture (USDA).

1.2 Food availability⁵

- a. **Central America: Diversified food options.** Progress was made in the yucca chain: In Guatemala, the ICTA Izabal variety was sown on 890 plots, and in Costa Rica 13 technologies were generated (in areas such as, *inter alia*, improving lifetime, nutrition and availability of crops) and 35 new genotypes were produced. Furthermore, through the [Regional Programme for Research and Innovation in Agricultural Value Chains \(PRIICA\)](#), funded by the European Union, the members of 24 local yucca, potato, avocado and tomato consortia gained knowledge on new ways of preparing and consuming their crops, thanks to the results of research placed at their disposal and their participation in training activities and trade fairs. This programme also supported the release, by research institutes in Central America, of yucca, potato, avocado and tomato germplasm for 5,314 beneficiaries.
- b. **More robust production systems.** The IICA enhanced the skills of 50 family farmers, technicians and authorities in Brazil, Colombia, Ecuador, Guatemala, Honduras, Mexico, Paraguay and Peru in the application of public-policy strategies designed to promote rural development and family farming and in innovative practices to improve

⁵ Food availability: The availability of sufficient quantities of food of appropriate quality, supplied through domestic production or imports (including food aid). See FAO (United Nations Food and Agriculture Organization, Italy), 2015. An Introduction to the Basic Concepts of Food Security. Rome, Italy. Accessed on 29 August 2017. Accessible at <http://www.fao.org/docrep/013/al936e/al936e00.pdf>.

management of their production systems, food availability and marketing of their products. In Saint Vincent and the Grenadines, Jamaica, Haiti and Guyana, the dynamics and strategies of family agricultural production were delineated.

- c. **Promotion of innovation.** Within the framework of the Network for Innovation Management in the Agri-food Sector ([INNOVAGRO Network](#)), which comprises 82 public and private institutions from 16 countries of Latin America and Europe, three innovative technological processes were implemented:
- i. a method for biological control of the olive fly in Spain;
 - ii. a latest-generation nanoparticle aqueous adjuvant for production animal vaccines in Argentina; and
 - iii. an IT application for determining fertilization requirements for rice crops in Uruguay. Seminars, videoconferences and workshops were organized to build the capacity of 3,500 people.
- d. **Analysis and efficiency in agricultural chains.** The "Commodity Systems Assessment Methodology for value chain problem and project identification" (CSAM) was updated with the support of its original authors and the Postharvest Education Foundation. This methodology, which serves to identify weaknesses throughout agricultural value chains that cause food losses and to find solutions, was applied in Peru in the yellow flint maize chain, with the backing of the Ministry of Agriculture and Irrigation (MINAGRI), the Norte Chico Agrarian Cooperative (COOPANORTE) and the Ecumenical Centre for Social Promotion and Action (CEDEPAS Norte). It was also applied in Uruguay in the lettuce chain, with the collaboration of Modelo market and the Directorate-General for Farms (DIGEGRA) in the Ministry of Livestock, Agriculture and Fisheries (MGAP).
- e. **Cooperation programmes in research and innovation for the competitiveness of family farming.** The IICA has supported cooperation projects implemented in countries and subregions through various joint regional programmes. The Cooperative Programme for the Technological Development of Agri-food and Agro-industries in the Southern Cone (PROCISUR), the Cooperative Programme on Agricultural Research, Development and Innovation for the South American Tropics (PROCITROPICOS), and the Cooperative Agricultural Research and Technology Programme for the Northern Region (PROCINORTE) focus on research, public policy, and knowledge-sharing and management in relation to various topics such as marketing models, genetic resources, and animal and plant health, thereby fundamentally contributing to food availability and utilization.
- Under PROCITROPICOS, Bolivia, Brazil, Colombia, Ecuador, Peru and Venezuela have shared around 50 protocols for the delineation of strategic genetic resources for food security in the face of the effects of climate change. PROCINORTE's Special Group on Genetic Resources organized the workshop on "Ancestral/indigenous conservation and development of genetic resources: challenges, tools and prospects", which focused on maize, marrow and beans. This programme also helped train Mexican scientists in the use of the Animal Genetic Resources Information Network (GRIN).
- f. **Monitoring and evaluation of agricultural policies.** The IICA enhanced the skills of more than 95 authorities and technicians from the agriculture policy units of Argentina, Bolivia, Brazil, Chile, Costa Rica, Paraguay, Peru and Uruguay in good practices and lessons learned for the pursuit, monitoring and evaluation of policies for agriculture, thanks to joint work with partner institutions in Brazil, Canada, Chile, Colombia and Mexico.

1.3 Stable Access to food⁶

- a. **Caribbean States: Access to and transfer of new technologies for small producers, especially young people and women.** *Demonstration of mechanized technologies to improve the production and productivity of farms and agro-enterprises.* In Antigua and Barbuda, Dominica, Grenada, Jamaica, Saint Kitts and Nevis, Saint Lucia and Trinidad and Tobago, 200 producers benefited from practical and visual demonstrations teaching them about the immediate impacts of tractors on soil preparation and on the productivity of roots and tubers. Around 30% of the beneficiaries were women, and secondary-school pupils participated in some countries (e.g. Dominica). This activity was carried out under the leadership of the Caribbean Agriculture Research and Development Institute (CARDI), within the framework of the Agricultural Policy Programme (APP), focusing on the Caribbean countries and funded by the EU.
- b. **Attention to degraded soils in the Caribbean.** The IICA validated a regional training module on the management of degraded soils, in which 40 extension technicians from Antigua and Barbuda, Guyana, Haiti, Jamaica and Suriname participated. Virtual forums were held, too, in which 1,383 participants interacted, as well as various courses dispensed by experts in soil management and efficient use of water, building the capacities of 575 participants on those topics.
- c. **Capacities of family farmers to manage natural resources.** In Guatemala, Paraguay and Peru, the IICA promoted the formulation and implementation of strategies and plans for the management of sustainable production systems for family farming. Elsewhere, in Bolivia and Venezuela, it provided technical capacity-building in the formulation and implementation of water-management and irrigation plans. Both these activities served to improve the management of natural and production resources, secure a quality diet and reduce levels of malnutrition in these countries.
- d. **Recovery of local knowledge.** In Bolivia, Ecuador, Guatemala, Nicaragua, Paraguay and Venezuela, family-farming knowledge was documented through the methodical organization of local knowledge and ancestral practices that enable more effective utilization of indigenous species and native genetic resources with food potential. One highlight was the exchange of experiences among 250 farmers and technicians in regard to local knowledge in the growing of quinoa and cañahua, which made it possible to upgrade the use of these products in national production systems.
- e. **Dissemination of climate-smart agriculture systems.** This activity was conducted through various events which attracted around 350 participants from the public and private sectors. One of these was the Caribbean Climate Smart Agriculture (CCSA) Forum, which positioned itself as a space for national and regional knowledge-sharing on climate-smart agriculture in the Eastern Caribbean States (ECS). Furthermore, workshops were held in the Bahamas and Dominica, aimed at improving climate-change adaptation of agriculture, a topic that was also addressed in Argentina, Chile and Paraguay. In addition, inventories of policies and actions on climate change and agriculture were made in several countries.

⁶ Stability: To be food secure, a population, household or individual must have access to adequate food at all times. They should not risk losing access to food as a consequence of sudden shocks (e.g. an economic or climatic crisis) or cyclical events (e.g. seasonal food insecurity). The concept of stability can therefore refer to both the availability and access dimensions of food security. See FAO (United Nations Food and Agriculture Organization, Italy), 2015. An Introduction to the Basic Concepts of Food Security. Rome, Italy. Accessed on 29 August 2017. Accessible at <http://www.fao.org/docrep/013/al936e/al936e00.pdf>.

1.4 Food utilization⁷

- a. **Harmonization of food safety checks in Central America.** The Virtual Regional Food Inspectors School for Central America and the Dominican Republic ran several courses on food inspection and food audit, from which 479 inspectors graduated. This has made it possible to establish a solid network of experts in this domain.
- b. **Strengthening sanitary measures in the Caribbean.** Through a series of institutional efforts, on top of activities implemented with partners such as, *inter alia*, the European Union, the IICA carried out capacity-building in the Caribbean region in plant health, primarily plant virology, communication, pest diagnosis and quarantine. The validation of a model law on plant health, animal health and food safety by the countries of the Caribbean Forum (CARIFORUM) paved the way for formulating a harmonized legislative framework, creating regional liaison mechanisms, and increasing countries' participation in international meetings on animal health and food safety by 60%. Furthermore, 1,350 public and private stakeholders were trained in sanitary and phytosanitary requirements, thus helping to improve the safety systems of over 25 private companies.
- c. **Capacity-building for LAC countries in matters relating to the Codex Alimentarius.** The participation of representatives from 19 countries in nine meetings of the Codex Committee, the organization of joint events between the Codex Coordinating Committees for Latin America and the Caribbean (CCLAC) and Africa (CCAFRICA), and the implementation of five twinning projects, among other activities, benefited over 1,000 people and built institutional capacity in LAC.
- d. **Compliance with international standards.** The IICA assisted in the implementation of good agricultural practices that help the countries of the region comply with the United States Food Safety Modernization Act (FSMA), in making public and private stakeholders aware of this law, and in the certification of 45 food-safety professionals from Antigua and Barbuda, Barbados, Granada, Jamaica, Saint Lucia and Trinidad and Tobago as lead instructors.
- e. **Good practices in chicken production in the Caribbean.** Members of 100 public- and private-sector groups from Barbados, Belize, Guyana, Jamaica, Dominican Republic, Suriname and Trinidad and Tobago were trained in good agricultural practices. Also, a study was carried out to elaborate good poultry practice guides.

2 ACTIONS IN VARIOUS LATIN AMERICAN AND CARIBBEAN COUNTRIES

2.1. Reported below are some of the main activities carried out by the IICA and its representatives in support of its Member States, in relation to the four dimensions of food security:

2.1 Food availability

- a. **Bolivia:** *Better informed quinoa producers.* The Ministry of Rural Development and Land (MDRyT) of Bolivia is now equipped with an information, knowledge and communication system on various aspects of the production, marketing, distribution and consumption of quinoa, the purpose of which is to improve the situation of stakeholders involved in quinoa production, especially the most vulnerable.
- b. **Guatemala:** *Management and governance of the cocoa chain.* In coordination with the Ministry of Agriculture and Livestock, the Strategic Plan for Guatemala's cocoa agri-food chain (PEAC) was validated and publicized; around 150 people participated in this work, including actors directly involved in the chain, government authorities and representatives of academia and international cooperation agencies. A study was carried out to formulate a management model for the national cocoa strategy. Likewise,

⁷ Utilization of food through adequate diet, clean water, sanitation and health care to reach a state of nutritional well-being where all physiological needs are met. This brings out the importance of non-food inputs in food security. See FAO (United Nations Food and Agriculture Organization, Italy), 2015. An Introduction to the Basic Concepts of Food Security. Rome, Italy. Accessed on 29 August 2017. Accessible at <http://www.fao.org/docrep/013/al936e/al936e00.pdf>.

24 stakeholders benefited from capacity-building in institutional regulations, governance mechanisms, project management and design and formulation of investment programmes.

- c. **Mexico:** The IICA helped to ensure that the National Agriculture and Food Health, Safety and Quality Service (SENASICA) is in a position to maintain its phytosanitary status as a country free from Mediterranean fruit fly, thereby strengthening sustainable fruit and vegetable activity, creating employment and boosting access to international markets, which yields direct economic benefits for the country of around US\$60 billion (39% from exports and 61% from trade on the domestic market).
- d. **Panama:** *Contributions to strengthening innovation.* With the aim of safeguarding food security, the IICA placed at the disposal of the National Secretariat of Science, Technology and Innovation (SENACYT) a feasibility study for setting up the Research and Training Laboratory on New Agriculture Methodologies in a Controlled Environment with Emphasis on Vertical Protected Agriculture. It will continue to support establishment of the legal framework and the formulation of promotion plans, among other measures required to put in place the laboratory.
- e. **Dominica:** *Improving the management of roots.* In collaboration with the CARDI, the Caribbean Farmers Network (CAFAN), the Dominica Bureau of Standards (DBOS) and the Dominica Export/Import Agency (DEXIA), 25 producers, packagers and exporters were trained in post-harvest management, traceability and quality enhancement of roots.
- f. **Honduras:** *Determining the potential of avocado.* Within the framework of the PRIICA, an inventory of crop-growing areas and a nursery certification manual were made available to 195 stakeholders in the avocado chain. This will enable them to ascertain the production and economic potential of this crop, ensure the production of quality plants, and raise productivity and plantation yield.
- g. **Haiti:** *A source of protein for low-income families.* With the support of CARITAS nuns and the IICA, a poultry farm project in Arreguy was expanded with the addition of 500 hens. This project, as well as enabling poor children, adults and farmers to enjoy better nutrition at low cost, encourages that farms be managed by women from the area and helps families to generate extra income through the sale of eggs to neighbouring communities.
- h. **Grenada:** *Reducing losses in the banana chain and rehabilitating the coconut industry.* In collaboration with the Grenada Marketing and National Importing Board, 20 producers and extension officers were trained in techniques to improve banana quality and reduce losses during harvesting, selection, processing and packaging. On top of this, the IICA helped the Ministry of Agriculture obtain 2,000 yellow-rust resistant coconut seedlings, 16 technicians were trained in the proper management of nurseries of these seedlings and in agronomic processes, and a protocol was developed and adopted for the transport, nursery toughening and distribution of resistant cultivars.

2.2 Access to food

- a. **Argentina:** *Institutional innovations supporting the management of trade processes for family farming and connecting family farming with markets.* Under this project, which was implemented in Argentina, Chile and Peru, the IICA provided capacity-building for 377 technicians, extension officers and local development agents in the application of knowledge and tools in the area of trade innovation for family farming. Around 490 producers were provided with diagnostics, conceptualizations, methodologies, proposed approaches, novel training profiles and programmes, manuals and didactic material, among other things. These resources, which are highly relevant for the three participating countries, broadened the range of specialized tools offered by the IICA with considerable potential for replication in other countries and technical

cooperation organizations. The support of technicians from the participating institutions⁸ strengthens the trade processes of the producers with whom they work.

- b. **Paraguay:** *Family Agriculture (AF) label.* The Ministry of Agriculture and Livestock (MAG) adopted a trade innovation process based on the design of a Family Agriculture (AF) label for which it received support from the IICA. This label differentiates AF products, such as carrots, and helps them penetrate markets more effectively. Under this initiative, some 142 producers from four cooperatives and producer associations in the Tomás Romero Pereira district produce, classify and market carrots with accompanying assistance from the MAG's directorates of Marketing and of Agriculture Extension and the National Plant and Seed Quality and Health Service (SENAVE). A large proportion of their output is sold directly to supermarkets in Asunción, thanks to arrangements made by the Directorate of Trade with the Paraguayan Chamber of Supermarkets (CAPASU).
- c. **Saint Kitts and Nevis:** *Reduction of food decomposition.* The IICA collaborated in the training of 31 people from the agro-industry, professors and farmers in food management, health and safety, adding value, and business sustainability, resulting in a reduction in the amount of decomposition and wastage of mangos.
- d. **Colombia:** *Projects in conjunction with the World Food Programme (WFP).* Five cooperatives of small agricultural producers from three Colombian departments participated in processes aimed at improving the quality of their products, thus strengthening their capacity to access local markets.

2.3 Food stability

- a. **El Salvador:** *Water collection.* The National Council for Environmental Sustainability and Vulnerability (CONASAV) received horizontal cooperation for the harvesting and collection of water through reservoirs and rooftops, mirroring what has been done in the Paraguayan Chaco. The use of fertigation technology was also promoted among Salvadoran producers, enabling them to reduce water consumption.
- b. **Venezuela:** *Water-management strategies.* The Jiménez municipality, the Ministry of Popular Power for Eco-socialism and Water and the IICA developed, with a participative approach, a comprehensive water resource management strategy, which was made available to 300 horticultural producers in the Agua Negra community. The institute also contributed to capacity-building of 320 actors in the states of Lara, Mérida and Trujillo in water conservation and collection, use of irrigation systems and management of catchment areas.
- c. **Antigua and Barbuda:** *Sustainable use of soil.* Public and private-sector authorities responsible for soil management improved their technical capacities in terms of adapting agriculture to climate change.
- d. **Saint Kitts and Nevis:** *Expanded use of value-added products and increased profitability of the mango chain.* Various value-added products, including mango juice, dried and candied mango, among others, raised farmers' and processors' incomes by 15%. Assistance was also provided in organizing activities, such as mango festivals and local mango consumption days, which brought opportunities for obtaining extra income. Furthermore, 45 persons were trained in food-processing technologies, thus improving enterprises' sustainability. Mango farmers and processors invested in small-scale equipment and to be able to store a larger quantity of pulp, which can then be conserved for use during the tourist season.
- e. **Colombia:** *Projects in conjunction with the WFP.* Two communities of the Wayuu indigenous people, in the department of La Guajira, were equipped with a local climate-change adaptation plan.

⁸ Argentina: National Institute of Agricultural Technology (INTA) and the ArgenINTA Foundation; Peru: Ministry of Agriculture and Irrigation (MINAGRI) and Production Technology Institute; Chile: Agricultural Development Institute (INDAP).

- f. **Dominican Republic:** *Grow with less - foundations of the Intensive Rice-Growing System (SICA).* Four demonstration plots were cultivated and data were collected for two comparable seasons. In addition, 50 technicians were trained in and 110 producers made aware of the use of the corresponding technology, with a view to imparting its principles and promoting its application. The SICA's goal is to improve efficiency in the use of water, soil and other inputs in order to reduce the rice-growing system's sensitivity to climate change, improve its adaptation to climate change and increase profitability for farmers.

2.4 Food utilization

- a. **Bolivia:** *Epidemiological vigilance in respect of foot-and-mouth disease.* In collaboration with Chile's Agriculture and Livestock Service (SAG), capacity-building was provided for a specialist from the Cochabamba Veterinary Research and Diagnosis Laboratory (LIDIVECO) for the diagnosis of diseases prioritized by the National Agricultural Health and Food Safety Service (SENASAG). In addition, assistance was provided in strengthening the country's animal health monitoring system, which enables Bolivia to confirm the absence of foot-and-mouth disease and refine procedures for diagnosing other statutorily notifiable diseases, such as bovine spongiform encephalopathy (BSE), of which Bolivia is free.
- b. **Haiti and Dominican Republic:** *Improved capacity in the application of sanitary and phytosanitary measures.* Capacity-building was provided for technical staff from the Plant Health departments of both countries in the certification of agricultural export products and by-products, and in the application of sanitary and phytosanitary measures recommended by international benchmark bodies. This was achieved through the training of 129 Haitian officials and 177 Dominican officials in 2016. This activity formed part of a project funded by the USDA-FAS Food for Progress programme.
- c. **Venezuela:** *Capacity-building for milk producers in good practices for milk quality and safety.* With the support of the Nestlé company and representatives of academia, the IICA organized capacity-building for 59 milk producers and seven public-sector technicians in the states of Táchira and Zulia in, *inter alia*, improving milk quality, nutrition, animal welfare, sustainability and water, reproduction and genetic enhancement, and ranch management.
- d. **Uruguay:** *Improved knowledge to reduce the presence of the insecticide Ethion in meat exported to the United States.* The skills of around 250 producers and vets were enhanced in regard to strategies for controlling and eradicating ticks. In addition, 63 lectures were given in locations countrywide (1,887 participants) and an information campaign was carried out through various media, with the aim of helping to reduce the presence of Ethion in meat cuts exported to the United States.

2.2. For further details on IICA activities in this area:

Contact:

James French
Lead Specialist
Agricultural Chains for Sustainability and Economic Development
Email: james.french@iica.int
Tel.: +(506) 2216 0218

Adriana Campos Azofeifa
Trade Specialist
Email: adriana.campos@iica.int
Tel.: +(506) 2216 0170

Visit the IICA website at: <http://www.iica.int>.
