



Food Safety and Agricultural Sustainability Training (FAST)

Promoting Food Safety, Food Security and Trade July 1, 2014 – March 30, 2019



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FAST Project Numbers by Country At-A-Glance

| BARBADOS 272 PARTICIPANTS 10 ACTIVITIES | colombia 2,354 participants 14 activities | costa rica 1,059 participants 9 activities | dominca 47 participants 1 activity | DOMINICAN REPUBLIC 1,166 PARTICIPANTS 1] ACTIVITIES | EL SALVADOR 580 PARTICIPANTS 8 ACTIVITIES |
|---|---|--|--|--|---|
| GRENADA | GUATEMALA | HAITI | HONDURAS | JAMAICA | NICARAGUA |
| 29 participants 2 activities | 1,401 participants 10 activities | 121 participants 5 activities | 1,120 participants 8 activities | 272 participants 11 activities | 46 participants 5 activities |
| PANAMA | PARAGUAY | PERU | ST. KITTS ST. LUCIA | ST. VINCENT THE GREN. | TRINIDAD & TOBAGO |
| 242 participants 7 activities | 459 participants 8 activities | 1,855 participants 13 activities | 29 participants 3 activities | 28 participants 1 activity | 479 participants 12 activities |

FAST Major COLLABORATORS



EXECUTIVE SUMMARY

For more than a decade, the U.S. Government (USG) has invested heavily in assisting Latin American and Caribbean region (LAC) countries achieve economic stability and food security by helping them to develop safe food systems and trading capacities. However, with the implementation of the Food Safety Modernization Act (FSMA), LAC exporters must provide evidence food products originating in the region are grown, harvested and handled under sanitary conditions that prevent or reduce risk of contamination. To protect years of investment and to assist countries in readying their food-exporting value chains to comply with FSMA requirements, the U.S. Agency for International Development (USAID) and the U.S. Department of Agriculture (USDA) agreed to collaborate on the implementation of the Food Safety and Agricultural Sustainability Training (FAST) project.

The goal of the FAST project was to strengthen the understanding of FSMA and prepare the public and private sectors in the region to meet new export requirements and lessen trade disruptions related to the new rules. This final report shares the background, rationale, methods and highlights of the project. The three consecutive Phases are detailed with highlight tables. Statistics, outcomes and antidotal successes include indicator data, and the section on additional value-added reports the capacity building and trade influence the project had on stakeholders and countries, followed by conclusions and recommendations.

At the onset of the FAST project, participating countries and organizations needed to implement major changes in their food safety management programs to comply with the FSMA rules. Government officials significantly lacked knowledge regarding the implications of FSMA and a wide range of technical gaps in food safety systems leaving exporters at different levels of FSMA preparedness. The FAST project was able to navigate through these issues and overcome initial challenges by targeting specific problems in training case studies and providing technical guidance on improving food safety systems at national, exporter, processor and producer levels.

The FAST project, and its partners who contributed approximately \$700,000, provided essential, sciencebased FSMA knowledge and skills, as well as crucially timed information to fulfill multiple development goals, including: expanding markets and trade; strengthening institutions that are essential to a country's economic development and progress; reducing trade disruptions; and enhancing partner countries' capacity to participate in international agricultural trade.

The major objectives of the FAST project were to collaborate with local stakeholder organizations and to assemble cadres of in-country diverse public and private sector individuals who, as train-the-trainers, would be local, sustainable resources on FSMA export requirements. The project has trained 215 intermediary organizations and a total of 12,539 individuals to achieve a wide multiplier effect throughout the region. Under the project, 463 individuals in 18 countries received trainer certificates from the Food Safety Preventive Controls Alliance and the Produce Safety Alliance. Eighty-two percent of these trainers fulfilled pay-back to the project by collectively conducting 473 FSMA rule training courses targeting 9,505 producers, processors, exporters and government officials in 20 countries.

Local collaboration took place with 69 organizations contributed with in-kind and finances to promote and host FSMA activities. Greater than one-off events, numerous organizations incorporated the FSMA food safety information into their training programs and course curricula. Table 10 reports these collaborators: 34 government agencies, 14 IICA offices, 10 universities, and 11 private sector and non-government groups. And beyond conducting trainings, FAST trainers reported through post-project surveys, instances of consulting on new and/or improved processes implemented (64% of respondents); developing new curricula for academic institutions (32% of respondents); leveraging funding and in-kind contributions to implement their trainings (32% of respondents); and/or increased professional growth opportunities (12% of respondents). Over half (69%) of the FAST trainers reported providing specific one-on-one expert technical assistance to companies processing for and/or exporting produce to the U.S.

Five additional complimentary activities took place in Phase III of the project. Here the audience more directly targeted U.S. importers, more in-depth LAC processing plant readiness assessments, local government co-sponsored private sector consulting, and concluded with FSMA video for our trainers and social media.

BACKGROUND

The United States Congress passed comprehensive food safety legislation, called the Food Safety and Modernization Act (FSMA) in late 2010 and President Obama signed the law on January 4, 2011. The legislation represented the largest expansion and overhaul of the U.S food safety system in roughly eight decades. While FSMA greatly expanded food safety oversight and authority within the U.S. the law also extended these functions and responsibilities to foreign producers and companies supplying food imports to the U.S.

From 2014 to 2019, the U.S. Department of Agriculture's (USDA) Foreign Agricultural Service (FAS) Food Safety and Agricultural Training (FAST) project collaborated with the U.S. Agency for International Development (USAID), the U.S. Food and Drug Administration (FDA), the Inter-American Institute for Cooperation on Agriculture (IICA), and other stakeholders to provide capacity building activities and technical assistance in the Latin America and Caribbean region (LAC) to address needs originating from the new law. With these partnerships, the FAST project set the stage ensuring food imported from LAC into the U.S. delivers the same level of public health protection as food produced in the U.S.

RATIONALE

For more than a decade, the U.S. Government (USG) has invested heavily in helping LAC countries achieve economic stability and food security by helping to develop safe food systems and trading capacities. However, with the implementation of FSMA, LAC exporters must provide evidence food products originating in the region are grown, harvested, and handled under sanitary conditions that prevent or reduce risk of contamination. To protect years of investment and to assist countries in readying their food-exporting value chains to comply with FSMA requirements, USAID and FAS agreed to collaborate on the implementation of the FAST project. The goal of the project was to strengthen the understanding of FSMA and prepare the public and private sectors in the region to meet new export requirements and lessen trade disruptions related to the new rules.

METHOD AND HIGHLIGHTS

The FAST project went into effect on July 1, 2014 through a 3-year Participating Agency Program Agreement between USAID and USDA for capacity building and technical assistance support in LAC countries on FSMA regulations applying to food exported to the U.S. With over 50 percent of the fresh and processed produce consumed in the U.S. coming from LAC, horticultural value chains have been the primary target for USG investments in the region. Thus, the FAST project focused on two significant FSMA rules-- the Produce Safety Rule and the Preventive Controls for Human Foods Rule.

To ensure sustainability in the project, FAS partnered with a variety of agencies and organizations to accomplish FAST's objectives through a three phased approach –

- I. Awareness and Foundation Building
- II. Train-the-Trainer
- III. Strengthening Country FSMA Readiness

The project emphasized training using a Train-the-Trainer (TTT) model and technical assistance to build the institutional capacity of regional and national-level intermediary organizations in LAC. The TTT approach focused on sustainable support by building local cadres of trainers to disseminate knowledge of FSMA rules. Building stakeholder relations with government agencies, trade organizations, and academia firmly set in Phase I of FAST enabled the TTT multiplier effect of training and partnership collaboration in Phase II and helped strengthen the public sector and private companies in FAST target countries understanding of why and benefits of compliance with the FSMA rules in Phase III.

PHASE I: AWARENESS AND FOUNDATION BUILDING

Phase I of FAST focused on building FSMA awareness, identifying project partners and developing relevant materials. This phase:

- Increased awareness, knowledge, and understanding of FSMA's basic technical requirements for food safety;
- Built collaborative relationships and established a network of partners to build Train-the-Trainer capacity within the region and FAST target countries; and,
- Modified existing instructional materials and tools on FSMA-related topics for use during Phase II's Trainthe-Trainer courses.

Five Components of Phase I

Component 1: Assess "FSMA preparedness"

To clearly define gaps in food safety systems related to FSMA requirements, FAS utilized a FSMA Readiness

tool to collect data in the FAST target countries. The assessment tool, initially developed at IICA and further refined at Texas Tech University, identified gaps in food safety systems – particularly regarding the FSMA draft requirements. Results of the analysis helped to define overall areas of greatest need within subregions and nationally. The assessments were conducted at 40 production and processing facilities in 12 countries.

"Packinghouse Culantro Fresco Company of Costa Rica made several improvements in good manufacturing practices and produce safety following recommendations from the 2015 assessment. They established a plan for container washing on the farm and for packaging materials in the facility. Receiving product is not permitted on the floor. Now records of trainings and register of farm activities are kept. Staff also had course on Fresh Produce Safety of FSMA."

Pedro Sánchez Carballo, PS Trainer, Costa Rica

<u>Component 2: Materials development</u> The FAST project collaborated closely

with the U.S. Food and Drug Administration (FDA) and FDA sponsored Produce Safety Alliance (PSA) and the Food Safety Preventive Controls Alliance (FSPCA) to develop and translate region appropriate materials for TTT courses. These materials are now publicly available in Spanish and English.

Component 3: Introduction to FSMA workshops

FAS facilitated several FSMA introductory workshops targeting public and private sector entities throughout food-exporting value chains that could be impacted by the proposed FSMA rules. The workshops included topics on the basic conditions needed to ensure food safety. the food safety importance for exporting value chains, implications of FSMA for food-exporting value chains and resources to help.

Component 4: Identification of Intermediary Organizations/Experts

Throughout the FSMA workshops and country stakeholder missions during FAST Phase I a network was built

of intermediary organizations who had the reach and potential to provide technical assistance and training on FSMA rules. Regional and national-level intermediary organizations of export promotion and producer associations, ministries and academic institutions were solicited as stakeholders. These organizations and their experts had a variety of strengths and specializations to tap for contributing to and or



collaborating on the project's capacity building activities.

Component 5: Develop FSMA Implementation Strategies

Implementation strategies were developed based on what was known of the proposed FSMA rules, local food safety measures and accounting for priority gaps defined in Component 1 and organizational strengths defined in Component 4. Implementation strategies defined country-specific target audiences throughout the food-exporting value chains. These draft strategies were ready for modifications and implementation once the final rules were published.

Table1: Awareness and Foundation Building Highlights



FSMA Background and Setting the Stage for Phase II

FSMA shifted the focus from responding to foodborne illness to preventing it. Congress enacted FSMA in response to dramatic changes in the global food system and in better understanding of foodborne illness and its consequences; including the realization that preventable foodborne illness is both a significant public health problem and a threat to the economic well-being of the food system. The FDA established seven major rules to implement FSMA, recognizing that ensuring the safety of the food supply is a shared responsibility among many different points in the global supply chain. The FSMA rules are designed with specific actions required at each of these points to prevent contamination.

FSMA's Seven Rules

FDA engaged with stakeholders and the public between FSMA's enactment in 2011 and the finalization of the rules in 2015-2016. Compliance dates for the rules were staggered according to the size of the business.

FSMA seven rules:

Mitigation Strategies to Protect Food Against Intentional Adulteration (Food Defense)

Final Status: May 27, 2016 This rule is intended to protect food from intentional acts of adulteration where there is an intent to cause wide scale public health harm. The rule applies to both domestic and foreign facilities that are required to register under section 415 of the FD&C Act.

<u>Sanitary Transportation of Human and Animal Food</u> (Sanitary Transportation) Final Status: April 6, 2016 This rule is intended to establish requirements for shippers, loaders, carriers by motor vehicle and rail vehicle, and receivers engaged in the transportation of food, including food for animals, to use sanitary transportation practices to ensure the safety of the food they transport.

Accreditation of Third-Party Certification Bodies to Conduct Food Safety Audits and To Issue

<u>Certifications</u> (Accredited Third-Party Certification) Final Status: November 27, 2015 This rule is intended to provide for accreditation of third-party certification bodies to conduct food safety audits of foreign food entities, including registered foreign food facilities, and to issue food and facility certifications, under the FDA Food Safety Modernization Act (FSMA)

Foreign Supplier Verification Programs for Importers of Food for Humans and Animals (Foreign Supplier Verification Programs (FSVP) Final Status: November 27, 2015

This rule is intended to require importers to verify food they import into the United States Is produced in compliance with the hazard analysis and risk-based preventive controls and standards for produce safety provisions of the Federal Food, Drug, and Cosmetic Act (the FDA&C Act), is not adulterated, and is not misbranded with respect to food allergen labeling.

<u>Standards for the Growing, Harvesting, Packing, and Holding of Produce for Human Consumption</u> (Produce Safety) Final Status: November 27, 2015

This rule is intended to minimize the risk of serious adverse health consequences or death from consumption of contaminated produce, by establishing science-based minimum standards for the safe growing, harvesting, packing, and holding of produce, meaning fruits and vegetables grown for human consumption.

Current Good Manufacturing Practice and Hazard Analysis and Risk-Based Preventive Controls for Human Food (Preventive Controls for Human Food) Final Status: September 17, 2015

The rule is intended to modernize requirements for current good manufacturing practices (cGMPs) and for domestic and foreign facilities that are subject to Registration of Food Facilities to establish and implement hazard analysis and risk-based preventive controls for human food.

Current Good Manufacturing Practice and Hazard Analysis and Risk-Based Preventive Controls for Food for Animals (Preventive Controls for Food for Animals) Final Status: September 17, 2015

This rule is intended to establish requirements for the current good manufacturing practice (cGMP) for food for animals and for certain domestic and foreign animal food facilities to establish and implement hazard analysis and risk-based preventive controls for food for animals.

The Two FSMA Rules Most Relevant to the FAST Project

With over 50 percent of the fresh and processed produce consumed in the U.S. coming from LAC, horticultural value chains were identified as the primary target to invest the FAST project resources. The project focused on two FSMA rules, the Standards for the Growing, Harvesting, Packing and Holding of Produce for Human Consumption; and, the Current Good Manufacturing Practice and Hazard Analysis and Risk-Based Preventive Controls for Human Food.

Produce Safety Rule

The Standards for the Growing, Harvesting, Packing, and Holding of Produce for Human Consumption Rule (21 CR 112) (abbreviated as Produce Safety Rule or PS Rule) establishes, for the first time, science-based minimum food safety standards for growing, harvesting, packing, and holding fruits and vegetables for human consumption. In 1998 prior to the FSMA in response to a presidential directive, the FDA and USDA

issued a guidance document for the fresh fruit and vegetable industry to provide general guidelines for reducing the risk of contamination of fresh produce by microbial organisms. The guide outlined voluntary good agricultural practices (GAP) and good management practices for domestic and imported produce. GAP along with USDA's good handling practices (GHP) were used to draft the PS Rule.

The PS Rule is divided into several parts, including standards for:

- Worker Health, Hygiene, and Training
- Biological Soil Amendments
- Domesticated and Wild Animals
- Agricultural Water for Pre- and Postharvest Uses
- Postharvest Handling and Sanitation
- Required Records

PS Rule Key Requirement

The PS Rule key requirement is that at least one supervisor or responsible person on a covered farm must complete a food safety training at least equivalent to that received under an FDA recognized standardized curriculum. The Produce Safety Alliance (PSA), in association with FDA, created a seven module Grower training course based on good agricultural principles to address this requirement.

Preventive Controls for Human Foods Rule

The Current Good Manufacturing Practice and Hazard Analysis and Risk-Based Preventive Controls for Human Food Rule (21 CFR 117) (abbreviated as Preventive Controls-Human Foods Rule or PC Rule) contains regulations for food processing operations that promote food safety through the establishment of risk based preventive measures to identify, reduce and potentially control biological, chemical, physical and economically motivated hazards. The PC Rule requires domestic and foreign food facilities to follow updated good manufacturing practice (cGMPs) and establish and implement hazard analysis and risk-based preventive controls for human food products.

The PC Rule follows a systematic approach based on the principles of the Hazard Analysis Critical Control Point (HACCP) food safety system. HACCP based systems were first established to ensure food safety for the U.S. manned space program in the 1950s, and then over the next decades, were voluntarily adopted by industry. In the 1990s, the World Health Organization's Codex Alimentarius Commission established international criteria for HACCP. Within the U.S., mandated HACCP systems were required for facilities under the FDA or USDA's jurisdiction with rules effective for processing meat and poultry (1996), seafood (1997) and juice (2002).

The PC Rule major subparts are:

- Current Good Manufacturing Practices
- Hazard Analysis
- Risk-Based Preventive Controls-for processes, food allergens, and sanitation
- Supply Chain Program
- Recall Plan

PC Rule Key Requirements

The PC Rule key requirement for processing facilities has two components:

- 1) To develop a written food safety plan based on risk analysis principles that allow food manufactures to identify preventive controls specific to process controls, allergen, sanitation and supply chain preventive controls.
- 2) The food safety plan must be prepared, or its preparation overseen, by one or more Preventive Controls Qualified Individuals (PCQI). Designation of PCQI requires successfully completed training in the development and application of risk-based preventive controls at least equivalent to that received under a standardized curriculum recognized as adequate by FDA, or otherwise qualified through job experience to develop and apply a food safety system. The Food Safety Preventive Controls Safety Alliance (FSPCA), in association with FDA, created a 2.5-day PCQI training course to address the requirement.

FSMA and the Alliances

The FDA recognized that food industry training would be an important component of successful FSMA implementation. The vision of this training began within 2010-2012 with public-private alliances created and funded primarily by the FDA as a resource for industry and to facilitate widespread understanding of the new standards to support compliance. The two alliances which the FAST project coordinated with were the Produce Safety Alliance (PSA) and the Food Safety Preventive Controls Alliance (FSPCA). The PSA was created in 2010 by FDA and USDA, in cooperation with Cornell University, to develop a standardized training and education program to increase produce safety knowledge and prepare the produce industry and associated groups for FSMA implementation. The FSPCA was created in 2011 by a grant from FDA to the Illinois Institute of Technology's Institute for Food Safety and Health to develop a standardized training and education program to help industry comply with the PC rules for human food and animal food and the foreign supplier verification regulations.

FSMA Rules Training Courses and Delivery Method

The FDA-funded Alliances developed standardized training curricula designed to meet the needs of, and be used by, most stakeholders who must comply with the FSMA rules. Although the standardized training concept is the same, the two Alliances differ in approach.

PSA curriculum: the process to provide these training events is organized in the following format: either PS Trainers (PST), PS Lead Trainers (PSLT) or Trainer-of-Trainers (TOT) can offer the course. However, PSTs are only able to deliver the training event accompanied by a PSLT or TOT. To become a PST or PSLT, participants must first participate in a Grower training event and then be vetted to participate in a TTT course. The PS TTT covers the same material with additional information specific to adult training and training delivery methods. Once completing these two steps the aspiring PSLT submits application to PSA and the Alliance provides a 4-question exam that challenges applicants with topics specific to the Produce Safety Rule.

FSPCA curriculum: the PC training module can only be delivered by a Lead Instructor (PCLI) or Trainer-of-Trainers (TOT). To become a PCLI aspiring applicants first complete the PC Qualified Individual (PCQI) training followed by application where the applicant's qualifications are evaluated for approval to participate in a PCLI TTT course. After concluding the TTT course, participants receive the PCLI certificate to independently conduct PCQI courses.

The Different Certificates and Roles

PSA and FSPCA award certificates on successful completion of their FDA-endorsed standardized curricula. The certificates, issued for both Alliances by the Association of Food and Drug Officials (AFDO), are the following:

Preventive Controls Rule

- <u>PC Trainer-of-Trainer (TOT)</u>- An individual designated by the FSPCA to conduct PCLI and PCQI training course. Their main role is conducting TTT training for PCLI candidates.
- PC Lead Instructor (PCLI)- An individual vetted to participate and has successfully completed the FSPCA's TTT 4-day standardized training. The purpose of the PCLI training is to instruct PCLI candidates on how the course should be taught, rather than the content presented in the PCQI course. TOTs summarize the overall information presented in each chapter, with special attention paid to learning objectives, hints for communicating the primary chapter information, and common questions PCLIs are likely to encounter in actual PCQI classes and how they should be answered. The TTT includes a practicum to provide PCLI candidates with real-time experience in delivering course materials. PCLIs are from the private and public sectors capable and in the position to train others on the PC Rule. PCLIs are facility quality assurance staff, government trainers, consultants and academics. The position's main role is to conduct PCQI training courses.
- <u>PC Qualified Individual (PCQI)</u>- An individual who has successfully completed training under a standardized curriculum recognized by the FDA (i.e.: the FSPCA-developed 2.5-day PCQI course) or

can demonstrate equivalent competency through other training/education and work experience. The PCQI course covers Good Manufacturing Practices; food safety hazards, analysis & risk-based preventive; developing a food safety plan, recorded keeping, supply chain controls, sanitation control and more. A PCQI is usually the quality assurance staff although other personnel and individuals can obtain this certificate. The main role of the position is preparation of a facility's food safety plan required by FSMA of all facilities exporting to the U.S.

Produce Safety Standards Rule

- <u>PS Trainer-of-Trainer TOT</u>)- An individual designated by the PSA to conduct PSLT, PST and PSG trainings. Their main role is conducting TTTs for approved PST candidates.
- PS Lead Trainers (PSLT)- An individual vetted to participate and has successfully completed the PSA's TTT 3-day standardized training and an advanced application process. The TTT course includes principles of adult learning, how to form training partnerships, and information to guide trainers on teaching concepts related to GAP, and the FSMA Produce Safety standards. The advance written application may require extra justification and interviews. The PSLTs can be from the private and public sectors capable and in the position to train producers on the PS Rule and award PS Grower training certificates. The main role of the position is to conduct PS Grower trainings.
- <u>PS Trainer (PST)</u>- An individual vetted to participate and has successfully completed the PSA's TTT 3-day standardized training. A PST can be from the private and public sectors and many are government trainers, consultants and academics. After course completion the PSTs cannot independently train others. However, they can share their PS Rule knowledge and co-train with PSLTs conducting PS Grower trainings.
- <u>PS Grower (PSG)</u>- Anyone can, usually producers, participate in the PSA's Grower Training. The 1-day training covers the foundation of Good Agricultural Practices (GAPs) and FSMA Produce Safety Rule requirements. The Grower course is also a way to satisfy the PS Rule training requirement for supervisors or responsible persons on farms with produce to be exported to the U.S.

PHASE II: TRAIN-THE-TRAINERS

Horticultural value chains had been successful recipients of USAID agricultural investments in LAC. USAID funded the FAST project through a cooperative agreement to provide FSMA regulation training in LAC with the objectives of reducing potential loss of livelihoods and trade disruptions in these value chains. To increase the success and sustainability of the project a Train-the-Trainer (TTT) model was adopted. The FAST project focused training on two significant FSMA rules affecting horticulture, the PS Rule (fresh produce) and the PC Rule (processed produce).

Phase II utilized Phase I action plans and relationships cultivated in each country to implement the TTT model. The primary focus was conducting TTT courses and managing the resulting trainers to conduct trainings for others across the region. This phase:

- Built a network of FSMA instructors equipped to advance food safety expertise; and,
- Coached new FSMA instructors on implementing FSMA trainings.

Two Components of Phase II

Component 1: FSMA Produce Safety Rule Training

FAS aligned with the Produce Safety Alliance (PSA) to conduct the PS Rule TTT course across the region. PSA's Trainer-of-Trainers (TOTs) taught the TTT course to selected candidates who upon successfully

completing the course were awarded Produce Safety Trainer (PST) certificates. FAS required these PSTs to conduct at no charge at least one Produce Safety Grower (PSG) training course to a small/medium-sized exporting supply farm or a government institute. The PSTs as a cadre developed their country training strategy during the TTT. The training strategy was the PSTs plan of who, where and when they would train during the following six months. At the start of Phase II, there was only one PSLT in Central America and none in South America or the Caribbean. In 4 countries; Colombia, Dominican Republic, Guatemala and Peru; an activity for a selected group of FAST PSTs received coaching and experience to apply for the advanced PSLT status.

"Knowing the norm and implementing it is helping us to maintain our position in the market and not lose it. The supermarkets are demanding that we have gone through a safety training as required by §112.22 (c) and this is done with the FAST training I gave to the producers and we can continue to supply Wal-Mart with Avocado for example." *Alfredo Caycho, PS Trainer, Peru*

As of this report, 19 PSTs were approved as advanced PSLTs. As a result of the FAST project, 245 PSTs conducted 272 PSG courses in 12 countries and trained 5,212 participants.

Component 2: FSMA Preventive Controls for Human Foods Rule Training

FAS aligned with the FSPCA to conduct PC Rule TTT courses across the region. The FSCPCA's TOTs taught the TTT courses to selected participants. Upon successfully completing the course were awarded PCLI

certificates and eligibility to deliver the Preventive Controls Qualified Individual (PCQI) course. The PC Rule requires a food safety plan for food processing facilities prepared or overseen by a PCQI. The PCLIs as a cadre developed a country training strategy during the TTT. The training strategy was the PCLIs plan who, where and when they would train during the following six months. FAS required these PCLIs to conduct at no charge at least one PCQI training course to a SME or a government institute. As a result of the FAST project, 217 individuals were training as PCLIs in 16 countries, conducting 201 courses to train 4,293 individuals in the PCQI curriculum. Responding to a questionnaire, 117 PCLIs reported providing technical assistance to 1,002

"After the FSMA PC course a number of firms which benefited from the training were inspected by the FDA and the outcomes were positive."

Mrs. Beverley C. Miller, Coordinator Food Safety Modernization Secretariat Ministry of Industry, Commerce, Agriculture and Fisheries/ Bureau of Standards Jamaica

companies including guidance on 704 food safety plans during the 12-month period following their training.

Table 2: Train-Trainer Highlights



participants.

FAST Trainers Represented

- ✓ 56% female;
- ✓ 40% government agencies;
- ✓ 37% private sector representatives; and
- ✓ 22% civil society (including universities)

FAST Trainers Taught 9,505 Participants who Represented:

- ✓ 43% female;
- ✓ 48% private sector (including exporters and processors);
- ✓ 28% producers;
- ✓ 17% government agencies; and
- ✓ 7% civil society (including academics)

PHASE III: STRENGTHENING COUNTRY FSMA READINESS

Phase III was added thanks to a USAID no-cost 6-month agreement extension. Since Phase II educational TTT courses were completed and trainers confidently providing training in the region, FAST turned to strengthening FSMA readiness with public and private entities. FAST facilitated assessments and specific capacity building support to U.S. importers, LAC governments and LAC processing and export facilities. Guidance and technical assistance to encourage adoption of standards aligned with U.S. regulations were the core objectives of the five new activities. This phase:

- Increased knowledge of FSMA rules with U.S. importers, including how to address pending/potential issues surrounding the importation processes;
- Encouraged government agencies to incorporate FSMA their food safety systems regulations;
- Increased awareness and understanding of the process of implementation and verification of FSMA rules, including maintaining a food safety plan for a farm, a packinghouse, or a processing facility;
- Taught best practices and procedures for developing a hazard analysis when required; and,
- Developed FSMA materials for identified information gaps for social media.

Five Components of Phase III

Component 1: U.S. Importers FSMA Roundtable

After FAS assessed several U.S. importers there was concern that their lack of FSMA knowledge could negatively impact LAC exporters. To help remedy the situation FAS hosted an event for U.S. companies importing fresh or processed produce from SMEs in LAC. Sixty-eight company representatives (34% female) received clarity on the new FSMA rules. Information was also shared on the FAST project's capacity building of LAC exporters for FSMA compliance. Responding survey participants rated their pre- to post-event awareness and knowledge increased from on average 68%.

Component 2: FSMA Readiness Assessments

Export supplying produce farms and processing companies were assessed to determine their baseline of, and improvement needs for FSMA rules compliance. Like in Phase I, the FSMA Readiness Tool was the assessment's framework. For Phase III, FAS encouraged and monitored FSMA compliance at 25 processing and export facilities in South America and the Caribbean through sequential visits and communication over an approximate 8-month time-period. Several criteria were considered for including them such as amount of product exported, type, importance to their national economy, in addition to their resources and commitment to implement change. The companies were chosen with the aid of the FAS Post, local IICA office and other organizations from each country such as ProColombia (Colombia), SENASA (Peru), and Paraguay's Ministry of Industry and Commerce. Company FSMA Readiness baseline scores ranged from 28% to 76% and the final assessment FSMA Readiness scores ranged from 31 to 81%. The overall average FSMA Readiness score from the baseline to final assessments increase was 8.5% for the 25 South America and the Caribbean companies.

Component 3: LAC Government and FSMA Harmonization

Foreign governments' food safety responsibility is often fragmented among several ministries. Government Roundtable forums were held to encouraged inter-agency and regional dialog. Potential issues in complying

with FSMA that could impede or block their country's exports were shared. Government representatives were presented ways to consider harmonizing their policies and regulations with FSMA. An exercise during the roundtables was title 'Food Safety Road Map'. Here, county groups determined the state of their country's food safety system and considered ways to harmonize their policies and regulations with FSMA. A roundtable was held in the Caribbean

"The USA is one of our largest market for food export. Most firms are small and very small, relying heavily on the secretariat for guidance. It is therefore very important to be knowledgeable in order to assist them in preparing for compliance."

Jamaica Government Roundtable Participant

and in South America, 26 government representatives from 6 countries participated. After the roundtables, the country groups were offered additional consultation on their draft food safety road maps. As an outcome, the inter-agency groups of Peru, Colombia, Jamaica and Trinidad and Tobago advanced their draft documents. The Peru inter-ministerial group (Ministry of Commerce, Health, Agriculture and PromPeru) is the best example of seizing this consult opportunity and in short-time collaborated to advance their road map. It's a short-term plan though already being implemented by government groups with private sector collaboration. The roadmap emphasizes the PC and PS Rules training and strengthening the FAST project Train-the-Trainer cadre.

Component 4: Private Sector and FSMA Harmonization

The Colombia government saw a need for FSMA information with their private sector companies and approached FAS for support. FAS collaborated with Colombia's Ministry of Commerce Program for

Transformation (PTP), Productive a government entity to promote and facilitate trade. PTP facilitated and cost-shared on the roundtables. SMEs that export to the U.S. were consulted on implementation strategies of the PS and PC rules. The six FSMA Roundtables in Bogota, Cali and Medellin were attended by 160 individuals (51% female) representing 129 companies. conclusion At of the roundtables. participants had developed their Food Safety Plan required under the PC Rule or the records necessary under the PS Rule.

"It is very interesting and a positive fact that the USDA is interested in training those who sell to them, in order to continue to be able to have the door open to the export of products. The fact that the USDA doesn't just say what they want, but rather they train the seller to comply with the requirements, in addition to the fact that ultimately this also has an effect on the country, because producing with a view to exporting turns into work and income for the people." *Colombia Private Sector Roundtable Participant*

Component 5: FSMA Messaging Resources

The FSMA information most requested, current and applicable to LAC was determined. 10 FSMA videos with associated informational sheets were developed in English and Spanish and one in French. Countries government agencies and organizations requested to upload materials.

Table 3: Strengthening Country FSMA Readiness

| 2018 | 2018 | 2018 | 2018 | 2018 |
|--|--|--|--|--|
| | | | | |
| U.S. IMPORTERS FSMA ROUNDTABLE U.S. companies importing fresh/processed produce from SMEs in LAC received clarity on the FSMA rules. | FSMA READINESS ASSESSMENTS Farms and processing companies assessed for baseline of and improvement needs for FSMA compliance. Between the first and final assessment visits, the firms were consulted. | GOVERNMENT FSMA ROUNDTABLES AND FOOD SAFETY ROADMAPS A two-day roundtable activity to discuss pending or potential issues that may impede or block their country's exports due to FSMA. Sub-regional event to encourage dialog. | PRIVATE SECTOR FSMA ROUNDTABLES Colombia government and FAS cost-shared on 6 roundtables in 3 locations that consulted on the PC and PS rules. | FSMA MESSAGING RESOURCES Information gaps identified for FAST LAC audience at FAST project conclusion to offer on social media. |
| 8 (34% female) importer and broker company representatives participated. Participants responding to our survey rated a 68% overall average pre- to post-event knowledge increase. | 25 companies were assessed using the FSMA Readiness Tool and received consultation on improvement measures for FSMA compliance. Readiness baseline scores average overall readiness increase of Increase 8.5%. | Six country government inter- agency representatives considered ways to harmonize their policies and regulations with FSMA. Four county groups drafted a Food Safety Way Forward Road Map. | 160 exporting company representatives participated. (51% female.) Participants developed their Food Safety Plan required under the PC Rule and the records necessary under the PS Rule. | 10 FSMA videos developed in English, Spanish, and one in French. |

OUTCOMES

STATISTICS, OUTCOMES AND ANECDOTAL SUCCESSES

With the help of additional monetary contributions (approximately \$700,000) from FDA, the Joint Institute for Food Safety and Applied Nutrition (JIFSAN), the International Executive Service Corps (IESC), and Texas Tech University), the FAST project has trained 12,539 individuals from 20 countries.¹ Under the project, 462 individuals from 18 countries received FDA endorsed Alliance certificates as FSMA rule trainers. Together, 357 (77%) of the total trainers conducted more than 474 FSMA rule courses targeting producers, processors, exporters and government officials in 20 countries. Eighty-one of the trainers reported providing one-on-one technical expert assistance to 1,002 processing, and/or exporting companies. Overall, 9,505 individuals received FDA-endorsed training from FAST instructors on the Produce Safety Rule (No.=5,212) and the Preventive Controls for Human Food Rule (No.=4,293).

The FAST project's main objective was to build a sustainable human element to locally disseminate FSMA rules information in LAC. This objective was accomplished with the trained country cadres and their pursuit of training others. Because of the FAST project, FSMA Produce Safety and Preventative Control rules instructors are now in every target country. In collaboration with the FSTI program, FSMA competency has improved in the LAC Region. For example, the FAST project trained the staff on FSMA rules and the FSTI program supported improvements for Terra Chips, who informed USDA that their sales increased over 30% as a result.

Project indicators and numbers follow. Also noted are examples of added outcomes generated and received by the national governments, private sector, academia and the FAST trainers.

FAST USAID Indicators

The FAST project performance target and actual numbers by year and cumulative numbers are as follows:

| FAST Annual Performance Indicator Targets | FY16 | FY17 | FY18 | FY19 |
|---|------|------|-------|-------|
| Number of individuals who received USG supported short- term agricultural sector productivity or food security training. | 75 | 1000 | 2,000 | 2,000 |
| Number of trainings delivered by the TTT cadre on FSMA rules. | 3 | 100 | 150 | 100 |
| Number of country strategies for disseminating FSMA Rules training. | 11 | 15 | 8 | 0 |
| Number of for-profit private enterprisesthat applied improved organization-level technologies or management practices w/USG assistance. | 0 | 0 | 0 | 24 |

Table 4: FAST Performance Indicator Targets

Table 5: FAST Performance Indicator Actuals

| FAST Annual Performance Indicator Actuals | FY16 | FY17 | FY18 | FY19 |
|---|-------|-------|-------|-------|
| Number of individuals who received USG supported short- term agricultural sector productivity or food security training. | 1,912 | 1,706 | 4,476 | 4,445 |
| Number of trainings delivered by the TTT cadre on FSMA rules. | 0 | 70 | 294 | 151 |
| Number of country strategies for disseminating FSMA Rules training. | 1 | 5 | 6 | 4 |
| Number of for-profit private enterprisesthat applied improved organization-level technologies or management practices w/USG assistance. | 0 | 0 | 0 | 24 |

¹ A full breakdown on participants can be found in Annex X.

Table 6: FAST Performance Indicator Cumulative Targets and Actuals

| FAST Performance Indicator Cumulative Targets and Actuals | Target | TOTAL |
|---|--------|--------|
| Number of individuals who received USG supported short-term agricultural sector productivity or food security training. | 5,075 | 12,539 |
| Number of trainings delivered by the TTT cadre on FSMA rules. | 353 | 515 |
| Number of country strategies for disseminating FSMA Rules training. | 14 | 13 |
| Number of for-profit private enterprisesthat applied improved organization-level technologies or management practices w/USG assistance. | 25 | 24 |

FAST Project Numbers

- ✓ Total Reach = 12,539 individuals trained on the FSMA rules
- ✓ 462 individuals in 18 countries are FDA-endorsed Alliance FSMA Train-the-Trainers
- ✓ 12 countries had trainers design FSMA Rule outreach training strategy for 2016-18
- ✓ 473 courses in 20 countries conducted by FAST trainers for 9,505 participants
- ✓ 3 individuals earned FSMA Produce Safety Alliance Trainer-of-Trainer (TOT) status and are the first native Spanish speakers to earn this status
- ✓ 704 company food safety plans developed with FAST trainer technical assistance
- ✓ 4 countries had government representatives draft Food Safety Road Maps to incorporate FSMA standards
- ✓ 500+ page FSMA Preventive Controls Rule's training curricula translated into Spanish and now used worldwide

FAST Project Outcomes

National governments examples:

- Jamaica was motivated by the FAST project to establish a public-private sector FSMA Task Force; Honduras adopted parts of the FSMA Readiness Tool used in the FAST project's assessments for their government processing plant inspections;
- Peru's food safety inter-ministerial further defined the country's Food Safety Road Map drafted during the government roundtable to incorporated FSMA rules training in collaboration with their private sector. During 2019 MINCETUR (Ministry of Commerce and Tourism) with ADEX (export association) are jointly offering FSMA courses;
- after the Ministry of Agriculture's staff in the Dominican Republic received training through the FAST project the Department of Food Safety updated and modified their guides for Best Agricultural Practices for agriculture and fruits/vegetables to include FSMA considerations;
- in Costa Rica the Ministry of Agriculture and Irrigation incorporated the modules of PSA (fresh products) into their Voluntary Certification in Good Agricultural Practices; and,
- > the DR's official packing house inspections were modified to incorporate FSMA risk -based considerations.

Private sector examples:

- Improvements in processes reported post-project by participants in the PS Roundtables activity ranged widely from very technical matters such as employing water treatments to ensure clean water in produce processing to improving management of fertilizers and pesticides on farmer fields to implementing the required food safety certification training by the exporting companies.
- > In Guatemala since September 2018 the exporters union's monthly audits included FSMA requirements.

Academic examples:

At least eight academic institutions folded new course material on FSMA or specific FSMA into their curricula, including the Jose Matias Delgado University of El Salvador; the National Learning Institute of Costa Rica (NIA) (which has 54 Central America locations); the Guatemalan University of San Carlos; the

National University of San Marcos; Cordon Bleu and Singularity Universities in Peru; and the University of the West Indies campuses in Jamaica and Trinidad and Tobago.

> FAST trainers in academia reported partnering with companies in Costa Rica and Jamaica for students hands-on training and internships, the latter resulting in jobs after graduation.

Trainer examples:

- ➢ FAST trainers' responding to a survey of positive impacts they experienced after becoming a TTT:
 - •Career advancement- 82%
 - Networking- 50%
 - •New ventures- 47%
 - Job promotion- 29%
 - •Economic benefits- 22%
- While several respondents reported promotions or new job opportunities, two individuals (twin sisters in the Dominican Republic) told us their FAST trainings inspired them to start a consulting firm – Incocuidad Gemela RD – specifically to deliver food safety preventive controls training to producers, processors, exporters, retailers (restaurants, grocery stores), and consumers.
- About half (47%) of contributions to FSMA trainings were monetary, largely in the form of meal and material expenses with equal funding from government and private entities. The other half of contributions (53%) were in-kind through, for example, venue or logistics assistance from government, private, academic entities and producer organizations.

Additional Value-Added

The FAST project has been successful in developing a wide network of FSMA specialists in LAC. Added outcomes of the project are also important to note, especially assistance the FAST project contributed to other USG agencies meeting their organizational objectives. This is the case for both FDA and FAS.

When FSMA was enacted Congress left implementation and outreach to FDA. While the agency was able

to establish the Produce Safety Alliance and the Food Safety Preventive Controls Alliance to help educate domestic consumers, they had little ability to reach international stakeholders regarding the FAST played an new requirements. invaluable part helping FDA and the Alliances achieve this goal. Additionally, FDA continues to collaborate in the region through a new multi-million-dollar agreement with IICA. This agreement builds FSMA expertise in larger markets of Latin America.

Similarly, FAS' overseas offices reported that

"All Phases of the FAST program were certainly beneficial to both my agency [FDA] and the international counterparts it touched. However, especially valuable was the work undertaken in the early stages of the program to identify needs, awareness levels, and begin preparedness discussions--much of which occurred when there was great need to communicate with the public, but before the Rules themselves were actually finalized. FAST provided a platform for that discourse." *Kelly McCormick, International Policy Analyst, FDA/CFSAN/IAS*

food safety training under the FAST project has built significant good will for the U.S. among agricultural organizations and stakeholders in the region. Further, they noted a shift toward improved opinions about trade. With this new perspective, government officials in Guatemala, Honduras, and El Salvador are considering what improvements toward risk-based governance can be made to their own food safety policies.

"The FAST program gave us the opportunity to deliver on the important 2014 USG commitment to assist the Caribbean Community Secretariat in development of the region's technical capacity on the U.S. Food Code and system promise, helping to cement these important relationships with our Caribbean neighbors."

Omar Gonzalez/Richard Battaglia, International Trade Specialist/Director USDA/Agriculture Trade Office Nearly all U.S. stakeholders and USG respondents to postproject surveys remarked on the significance of the food safety expert network in LAC established through the FAST project. Our network continues to be highly valued by FAST implementing partners, USG overseas offices, national governments and the new set of FSMA instructors.

"The agricultural export sector in Central America is if not the most powerful, one of the most powerful sectors in the region. By ensuring that these exporters could continue to access the U.S. market, the FAST program helped us to strengthen relationships and goodwill with the agricultural sectors and in turn to advance our priorities and open markets for U.S. exports."

Sean Cox, Regional Agricultural Attaché USDA/FAS-Guatemala, Honduras, El Salvador

Strategic Partnerships Established

Before rules were finalized USAID, FDA, IICA and the Alliances joined FAS to identify needs, possibilities and plans for the FAST project. IICA with local offices in every FAST project target country was a natural fit to facilitate activities. JIFSAN and Texas Tech University collaborated by providing instructors and evaluations. For Phase III, Penn State University and Food Safety CTS partnered on social media and private sector roundtable activities. The FDA (Office of International Programs, the Latin America Office and CIFSAN) was a constant partner. The Alliances guided the training process and stakeholder organizations contributed to the greater good while also advancing their own missions. FDA and IICA used the FAST TTT model for a new multi-million dollars FSMA training initiative in LAC.

Additionally, the FAST project was able to leverage two USG programs and funding to increase FSMA competency in LAC. First, the Food Security and Trade Integration (FSTI) program that operated in Central America. FSTI (previously titled CAFTA-DR program) was managed by the same office in USDA/FAS as FAST and funded by a USAID-USDA Participating Agency Program Agreement. The FSTI's objective was wider than FSMA and covered food safety training, standards and policy. FSTI prepared producers and packing houses to meet standard food safety systems as prerequisites for FDA regulations. Conversely, FAST focused exclusively on FMSA Rules and used TTT courses to build sustainable local capacity. Together the FSIT program and FAST project coordinated and collaborated on activities and shared lessons learned.

Second, the Exporting Quality and Safety (EQ) Program, funded by the USDA's Food for Progress Program. EQ worked solely in the Dominican Republic on training and promotion of key export commodities. As examples, the FAST project trainers in Dominican Republic, El Salvador, Guatemala and Nicaragua conducted eight FSMA courses for the FSTI program during 2018. And in the Dominican Republic, the FAST project and the EQ program developed effective synergies by combining resources to achieve mutual training objectives. The EQ program served as the incountry support base and helped convoke candidates and supplied the venues for the FAST TTT courses. EQ also facilitated and funded the pay-back

"FAST advanced the FSMA message in LAC, providing a single source of FSMA interpretation information for Latin America was critical. Otherwise it would have been up to multiple sources with multiple motivations and interests to have done so. FAST empowered local FSMA expertise."

Brain Rudert International Executive Service Corps (IESC), Chief of Party Exporting Quality Program, Dominican Republic

trainings required of the FAST trainers. EQ's monetary contribution was approximately \$30,000.

Local Organizations Collaborated

Local organizations also supported the FAS TTT courses and the local trainers to conduct their courses. Sixtynine organizations contributed with in-kind and finances to promote and host the events. Greater than oneoff events, numerous organizations incorporated the FSMA food safety information into their training programs, course curricula and media outlets like newsletters and video feeds. Table 10 lists the collaborators; 34 government agencies, 14 IICA offices, 10 universities, and 11 private sector and non-government groups.

CONCLUSIONS AND RECOMMENDATIONS

The FAST project fulfilled its goal to strengthen the understanding of FSMA and prepare the public and private sectors in the LAC region countries to meet new export requirements and lessen trade disruptions related to the new rules. At the onset of the project, countries and organizations taking part needed to implement major changes in their food safety management programs to follow the FSMA regulations. Government officials lacked knowledge on the implications of FSMA and there was a wide range of technical gaps in food safety systems. Processors and exporters had differing levels of FSMA preparedness. The FAST project was able to navigate through these issues and overcome initial challenges by targeting training and providing technical guidance on improving food safety at national, exporter, processor and producer levels.

Over the project's four-year period, FAST developed an expert Train-the-Trainer (TTT) network of trainers with the skills to develop food safety plans, train and consult on FSMA compliance measures and assess facilities. This network of expertise should be expanded and utilized by the public and private sectors. As example, FAST experts could supply preventive food safety controls training and consulting to national governments, guidance on enhancing curricula to academia and aid organizations such as IICA, USAID and USDA by expanding their reach into communities throughout LAC.

The TTT model was a cost-effective approach to training due to the multiplier effect. A recommendation when seeking candidates is to engage with many potential collaborating partners for a varied pools of participant types and resulting pay-back delivery. Ministry extension agents, for example, are ideal knowledge disseminators during their field visits. However, extension training budgets were limited, and FAST agents pay-back training workshops were often delayed until later years. These situations need to be considered in a project's timeline. For diversity, the civil society such as university food science and other department staff should be considered as trainers and collaborators. Professors welcomed FSMA training materials to incorporate in their courses and FSMA courses were permanently added to universities' schedules.

FAST trainers will need on-going support. FSMA regulations are complex, have a scientific component and trainers need a good grasp of the subject matter to teach others. The Alliances should correspondence, and offer their trainers continuing education and networking opportunities in English and Spanish.

The greatest demand in LAC countries is for Produce Safety Rule training. Governments should consider supporting the existing FAST PS Trainers within their agencies to apply for the PS Lead Trainer status to independently conduct PS Grower courses. Likewise, produce associations and trade groups with interest in their supply chains being compliant likely already have members PS Trainers thanks to the FAST project and eligible to apply for the PSLT status.

Governments should consider having their inspection and regulatory agencies apply for accreditation as a certification body under FDA's Accredited Third-Party Certification Program (a FSMA rule). The accreditation authorizes the group to conduct food safety audits and issue food and facility certifications. Jamaica expressed interest in this accreditation.

The Foreign Supplier Verification Program (FSVP) (a FSMA rule) needs to be linked with the country's training initiatives. Under the FSVP Rule, food importers in the U.S. must have a FSVP Plan that ensures their foreign food suppliers are meeting the FSMA regulations. However, market signals are still not coming through to exporters and producers as to the importance of FSMA compliance.

ANNEXES

| Barbados | Rule TTT | Title | Agency/Company | E-Mail |
|---------------------------------|--------------|---|---|-------------------------------------|
| Carol Thomas | PST, PCLI | Agricultural Health and Food Safety Specialist | IICA-Barbados | carol.thomas@iica.int |
| Fabian Gittens | PCLI | Quality Control Officer | Quality Control Officer | fabiangittens@hotmail.com |
| Heather Farrell-Clarke | PCLI | Operations Manager | Roberts Manufacturing Company | hfaclarke@icloud.com |
| Kelly Brathwaite | PST, PCLI | Scientific Officer | Ministry of Ag-Veterinary Services Laboratory | kbrath@gmail.com |
| Lana McQuilkin- Prescod | PCLI | Officer | Ministry of Health | Lana.mcquilkin@barbados.gov.bb |
| Leonard King | PCLI | Food Safety Specialist | Environmental Inspection Port/Airport | king_leonard97@hotmail.com |
| Nadine Benn-Greaves | PCLI | Quality Assurance Manager | Roberts Manufacturing Company | fsqsolutions@gmail.com |
| Pamela Whitehall | PST, PCLI | Veterinary Laboratory Technologist | Ministry of Ag-Veterinary Services Laboratory | pwhitehall2001@yahoo.com |
| Colombia | Rule TTT | Title | Agency/Company | E-Mail |
| Alfonso Arenas Hortua | PST | Medico Veterinario Zootecnista | Consultor en Inocuidad de Alimentos | alfonsoarenashortua@gmail.com |
| Ana Karina Carrascal | PST, PCLI | Associate Professor | Pontificia Universidad Javeriana | acarrasc68@gmail.com |
| Andrea Varón García | PCLI | Consultora en Inocuidad de Alimentos | Independiente | apvaron@gmail.com |
| Angela Rocio Galindo Vizcaya | PCLI | Consultora | Gestión de la Calidad | angelagalindov@gmail.com |
| Carlos Lozano | PST | Director Comite Uchuva Exportaciones | Asociación Nacional de Comercio Exterior (ANALDEX) | comiteuchuva@analdex.org |
| Carolina Calderón | PST, PCLI | Director Latin America & Caribbean | Quality and Safety Agrofoods | carolina.calderon@qsafecolombia.com |
| Carolina Estrada | PCLI | Consultora | TFC | caro.eh@outlook.com |
| Carolina Marin García | PCLI | Ingeniera de alimentos | Consultora independiente | caromaga@gmail.com |
| Carolina Ramírez | PCLI | Consultora | Independiente | carolinaramirez@ferrans.net |
| Daisy Johanna Lopez Alba | PST | Consultora | Independiente | johannalopez2905@gmail.com |
| Dalia Zaray Alarcon | PCLI | Analista Asuntos Regulatorios | Casaluker | ingdaliaalarcon@gmail.com |
| Daniela Poveda Rojas | PST, PCLI | Consultora | Independiente | dpovedarojas@gmail.com |

LIST OF INSTRUCTORS AWARDED TRAIN-THE-TRAINER CERTIFICATE

| Deyci Rodriguez | PST | Associate Professor Food Microbiology | Xaveriana University | deycirodri@gmail.com |
|------------------------------------|--------------|---|---|---|
| Diego Molina | PST | Biologist | CI Andes Export Company S.A.S. | diegomol16@gmail.com |
| Doris Emilce Novoa Bautista | PST | Contratista-Coordinador del comité de residuos de plagas | Instituto Colombiano Agropecuario- ICA | doris.novoa@ica.gov.co; doris.novoa1@gmail.com |
| Eduardo Javier Montes Arturo | PST | Ingeniero Agrónomo | Organizacion de Naciones Unidas para el Desarrollo | edu.martu@gmail.com |
| Elvin Leonel Rincón Cárdenas | PST | Asesor Dirección de Relaciones Comerciales | Ministerio de Comercio, Industria y Turismo | erincon@mincit.gov.co |
| Evelyn Dayana Morales Trejos | PST, PCLI | Agronomist | Independiente | evelynmotre21@gmail.com |
| Fernando Sampedro | PCLI | Professor | University of Minnnesota | fsampedr@umn.edu |
| Franciso Javier Osorio Martinez | PST | Medico Veterinario | Instituto Colombiano Agropecuario- ICA | francisco.osorio@ica.gov.co |
| Gabriel Mutis Namur | PST | Regulatory Affairs Professional for Agriculture and GMO products | Instituto Colombiano Agropecuario- ICA | gabriel.mutis@gmail.com |
| Gilma Janeth Luna Cortes | PST | Microbiologist | TFC Colombia | jluna2702@gmail.com; tfccolombia@gmail.com |
| Horrys Friaca | PST, PCLI | Agricultural Health and Food Safety Specialist | IICA | horrys.friaca@iica.int |
| Hugo Alberto Sepúlveda | PST | Profesional Universitario Agropecuario | Instituto Colombiano Agropecuario- ICA | hugo.sepulvedaa@ica.gov.co |
| Ingri Paola Hernandez Rodriguez | PCLI | University professional. PGDip. Food Quality & Safety | Universidad Nacional de Colombia | paolahernandez88@gmail.com |
| Ivan Daniel Portillo Gonzalez | PST | Ingeniero Agrónomo | Instituto Colombiano Agropecuario- ICA | ivan.portillo@ica.gov.co |
| Janneth Cecilia Ortiz Cabrera | PST | Ingeniero Agrónomo | Instituto Colombiano Agropecuario- ICA | janneth.ortiz@ica.gov.co |
| Janneth Luna Cortes | PCLI | Consultor | Food Consortium CO | jluna2702@gmail.com |
| Javier Enrique Guzman Carrascal | PST | Director of Health Operations | INVIMA | jguzmanc@invima.gov.co |
| Jennifer Guzman | PST | Senior Professional Agroindustry | Productive Transformation Program | jennifer.guzman@ptp.com.co |
| Johana Fernandez | PST | Ingeniero Agrónomo | Procolombia | joanakafer@gmail.com |
| Johanna Lopez Alba | PCLI | Head of quiality affairs | Macro | johannalopez2905@gmail.com |
| John Jairo Alarcon Restrepo | PST | Ingeniero Agrónomo | Instituto Colombiano Agropecuario- ICA | john.alarcon@ica.gov.co |
| Jorge Alejo Diaz Fandino | PCLI | Inspector | INVIMA | jaldifa@gmail.com |

| Jorge Leonardo Sandoval | PCLI | Laboratory Technician | INAL | ingjorgesandoval1990@gmail.com |
|------------------------------------|--------------|--|---|--|
| Juan Manuel Morales Buitrago | PST | Administrador de Empresas Agropecuarias | Corporación Colombia Internacional (CCI) | jmorales@cci.org.co |
| Juan Sebastian Linares Ospina | PST | International Trade Promotion Coordinator | Asociación Hortifrutícola de Colombia (ASOHOFRUCOL) | sebastian.asohofrucol@gmail.com |
| Juddy Ximmena Cuervo Aguilera | PST | Director de Seguridad Alimentaria | Retos Global Group S.A.S. | ing.ximmena.cuervo@gmail.com |
| Julian David Ayala Pinzon | PST | Coordinator Proyecto | Instituto Colombiano Agropecuario- ICA | julian.ayala@ica.gov.co |
| Julie Aguirre Carvajal | PST | National Food Quality Consultant | Organizacion de Naciones Unidas para el Desarrollo | J.AGUIRRE-CARVAJAL@unido.org |
| Liliana Garcia Naranjo | PST | Auditor | SGS | liligarcian2011@gmail.com |
| Liliana Navarrete | PCLI | Supervisor | V&N Consultora | liliananavarrete26@gmail.com |
| Luis Angel Moreno Urbano | PST | Ingeniero Agrónomo | EXCOAGRO S.A.S. | lamur3103@hotmail.com |
| Luis Carlos Leiva Cobos | PST | Presidente | Asociación Colombiana de Ingenieros Agrónomos (ACIA) | presidencia.acia.2014@gmail.com |
| Luis Mario Murillo Rodriquez | PST | Asesor de Inocuidad y Agronegocios | Corporación Colombia Internacional (CCI) | Immurillo@cci.org.co |
| Manuel Mejia Lago | PST | Phytosanitary Assistant | Bengala Agricola | mmejialago@yahoo.ca; mmejialago@hotmail.com |
| Maria del Pilar Chiquillo | PST, PCLI | Esp. en Seguridad y Calidad Alimentaria | Independiente | chiquillopilar@gmail.com |
| Maria Isabel Lopez Munera | PST | Coordinadora Técnica | Asociación Nacional de Comercio Exterior (ANALDEX) | isabelitalomu@gmail.com |
| Mauricio Alarcon Serrano | PCLI | Inspector | INVIMA | mauricioalarcons@gmail.com |
| Monica Margarita Moreno Noguera | PCLI | Inspector | INVIMA | misalo70@gmail.com |
| Néstor Guillermo Zabala Latorre | PST | Director de comites y asuntos juridicos | AmCham Colombia | guillermozabala85@hotmail.com |
| Olga Lucia Pesca Rico | PST | Coordinadora de Calidad | Productive Transformation Program | olga.pesca@ptp.com.co |
| Parmenio Cardenas Yazo | PST | Ingeniero Agrónomo | Corporación Colombia Internacional (CCI) | PCardenasY@cci.org.co |
| Pedro Andres Castro | PST | Mr. | Instituto Colombiano Agropecuario- ICA | Pedro.Castro@ica.gov.co |
| Piedad Constanza Ciro Basto | PST | Bacterióloga | Corporación Colombia Internacional (CCI) | pcciro@cci.org.co |

| Pilar Agudelo | PST, PCLI | Especialista Sanidad Agropecuaria e Inocuidad Alimentaria | IICA-Colombia | pilar.agudelo@iica.int; mpagu11@gmail.com |
|---|--|---|---|---|
| Ricardo Bogota | PST | Senior Certification Officer | ICONTEC | rbogota@icontec.org |
| Roberto Guzman | PST | Sanitary and PhytoSanitary Specialist | USDA/APHIS | roberto.guzman@aphis.usda.gov |
| Rosa Tulia Amézquita | PST, PCLI | Consultora | Indepediente | rosamezquita@gmail.com |
| Ruth Alexandra Dallos | PST, PCLI | Industrial Microbiology | 3M Colombia S.A. | ruthdallos@gmail.com |
| Sandra Liliana Ostos | PCLI | Directora Gestión de Calidad y Ambiental | Casaluker | sostos@casaluker.com.co |
| Uveimar Ulloa Cáceres | PST | Administrador de Empresas Agropecuarias | Asociación Hortifrutícola de Colombia (ASOHOFRUCOL) | uveuca@gmail.com |
| Wiliken Antonio Ramirez Espinosa | PST | Ingeniero Agrónomo | Instituto Colombiano Agropecuario- ICA | wilkien.ramirez@ica.gov.co |
| Yadira Natalia Pinzón Pulido | PST | Contratista | Instituto Colombiano Agropecuario- ICA | yadira.pinzon@ica.gov.co |
| Yuly Andrea Gamboa Marín | PCLI | Specialized Professional | Instituto Nacional de Salud | yulyangamboa@gmail.com |
| THOIL | | | | |
| Costa Rica | Rule TTT | Title | Agency/Company | E-Mail |
| Costa Rica Alejandra Diaz | Rule TTT PCLI | TitleSanidad Agropecuaria eInocuidad de Alimentos | Agency/Company IICA | E-Mail alejandra.diaz@iica.int |
| Costa Rica Alejandra Diaz Amanda Lasso Cruz | Rule TTT PCLI PCLI | TitleSanidad Agropecuaria eInocuidad de AlimentosCODEX sensor, CODEXDepartment of MEIC, QualityManagement of MEIC | Agency/Company IICA Ministerio de Economia | E-Mail alejandra.diaz@iica.int alasso@meic.go.cr |
| Costa Rica Alejandra Diaz Amanda Lasso Cruz Ana María Cordero | Rule TTTPCLIPCLIPST | TitleSanidad Agropecuaria e Inocuidad de AlimentosCODEX sensor, CODEX Department of MEIC, Quality Management of MEICAgricultural Health and Food Safety Specialist | Agency/Company IICA Ministerio de Economia IICA | E-Mail alejandra.diaz@iica.int alasso@meic.go.cr ana.cordero@iica.int |
| Costa Rica Alejandra Diaz Amanda Lasso Cruz Ana María Cordero Andrea Benach Sanchez | Rule TTTPCLIPCLIPSTPCLI | TitleSanidad Agropecuaria e Inocuidad de AlimentosCODEX sensor, CODEX Department of MEIC, Quality Management of MEICAgricultural Health and Food Safety SpecialistHead of department | Agency/Company IICA Ministerio de Economia IICA Servicio Nacional de Sanidad Agraria (SENASA) | E-Mail alejandra.diaz@iica.int alasso@meic.go.cr ana.cordero@iica.int jrebelo.senasa@gmail.com |
| Costa Rica Alejandra Diaz Amanda Lasso Cruz Ana María Cordero Andrea Benach Sanchez Andrea Bolanos Bolanos | Rule TTTPCLIPCLIPSTPCLIPCLI | TitleSanidad Agropecuaria e Inocuidad de AlimentosCODEX sensor, CODEX Department of MEIC, Quality Management of MEICAgricultural Health and Food Safety SpecialistHead of departmentLicenciatura en Agronomía con énfasis en Fitotecnia | Agency/Company IICA Ministerio de Economia IICA Servicio Nacional de Sanidad Agraria (SENASA) Servicio Fitosanitario del Estado (SFE)- Ministerio de Agricultura y Ganadería | E-Mail alejandra.diaz@iica.int alasso@meic.go.cr ana.cordero@iica.int jrebelo.senasa@gmail.com abolanos@sfe.go.cr |
| Costa Rica Alejandra Diaz Amanda Lasso Cruz Ana María Cordero Andrea Benach Sanchez Andrea Bolanos Bolanos Andrea Monge Mendez | Rule TTTPCLIPCLIPSTPCLIPCLIPCLIPCLI | TitleSanidad Agropecuaria eInocuidad de AlimentosCODEX sensor, CODEXDepartment of MEIC, QualityManagement of MEICAgricultural Health and FoodSafety SpecialistHead of departmentLicenciatura en Agronomía conénfasis en FitotecniaGovernment PhytosanitaryServices Officer | Agency/Company IICA Ministerio de Economia IICA Servicio Nacional de Sanidad Agraria (SENASA) Servicio Fitosanitario del Estado (SFE)- Ministerio de Agricultura y Ganadería Servicio Fitosanitario del Estado (SFE)- Ministerio de Agricultura y Ganadería | E-Mail alejandra.diaz@iica.int alasso@meic.go.cr ana.cordero@iica.int jrebelo.senasa@gmail.com abolanos@sfe.go.cr amonge@sfe.go.cr |
| Costa Rica Alejandra Diaz Amanda Lasso Cruz Ana María Cordero Andrea Benach Sanchez Andrea Bolanos Bolanos Andrea Monge Mendez Carlos Hugo Roman Jeri | Rule TTTPCLIPCLIPSTPCLIPCLIPCLIPCLIPCLIPST | TitleSanidad Agropecuaria eInocuidad de AlimentosCODEX sensor, CODEXDepartment of MEIC, QualityManagement of MEICAgricultural Health and FoodSafety SpecialistHead of departmentLicenciatura en Agronomía conénfasis en FitotecniaGovernment PhytosanitaryServices OfficerAgrónomo | Agency/CompanyIICAMinisterio de EconomiaIICAServicio Nacional de Sanidad Agraria (SENASA)Servicio Fitosanitario del Estado (SFE)- Ministerio de Agricultura y Ganadería Servicio Fitosanitario del Estado (SFE)- Ministerio de Agricultura y Ganadería Servicio Nacional de Sanidad Agraria (SENASA) | E-Mail alejandra.diaz@iica.int alasso@meic.go.cr ana.cordero@iica.int jrebelo.senasa@gmail.com abolanos@sfe.go.cr amonge@sfe.go.cr croman@catie.ac.cr |
| Costa Rica Alejandra Diaz Amanda Lasso Cruz Ana María Cordero Andrea Benach Sanchez Andrea Bolanos Bolanos Andrea Monge Mendez Carlos Hugo Roman Jeri Cesar Duran Morales | Rule TTTPCLIPCLIPSTPCLIPCLIPCLIPCLIPSTPST | TitleSanidad Agropecuaria e Inocuidad de AlimentosCODEX sensor, CODEX Department of MEIC, Quality Management of MEICAgricultural Health and Food Safety SpecialistHead of departmentLicenciatura en Agronomía con énfasis en FitotecniaGovernment Phytosanitary Services OfficerAgrónomoTechnological Process Manager | Agency/CompanyIICAMinisterio de EconomiaIICAServicio Nacional de Sanidad Agraria (SENASA)Servicio Fitosanitario del Estado (SFE)- Ministerio de Agricultura y GanaderíaServicio Fitosanitario del Estado (SFE)- Ministerio de Agricultura y GanaderíaServicio Nacional de Sanidad Agraria (SENASA)Instituto Nacional de Aprendizaje (INA) | E-Mail alejandra.diaz@iica.int alasso@meic.go.cr ana.cordero@iica.int jrebelo.senasa@gmail.com abolanos@sfe.go.cr amonge@sfe.go.cr croman@catie.ac.cr cduranmorales@gmail.com |

| Gabriela Carvajal | PST, PCLI | Directora General | Servicio Profesional en Producción de Alimentos SRL | industryandfood@gmail.com |
|------------------------------|--------------|---|---|----------------------------|
| Jessie Usaga | PCLI | Expert in food microbiology, thermal process evaluation and quality and safety management | Universidad de Costa Rica-Centro Nacional de Ciencia y Tecnología de Alimentos (CITA) | jessie.usaga@ucr.ac.cr |
| Jorge Rebelo Gaitan | PCLI | National Animal Health and Service Officer | Servicio Nacional de Sanidad Agraria (SENASA) | jrebelo.senasa@gmail.com |
| Karl Myrie Hart | PCLI | Government Phytosanitary Services Officer | Servicio Fitosanitario del Estado (SFE), Ministerio de Agricultura y Ganadería | kmyrie@sfe.go.cr |
| Karla Morales Roman | PST | Ingeniero Agrónomo | Servicio Fitosanitario del Estado, Ministerio de Agricultura y Ganadería | kmorales@sfe.go.cr |
| Luis Pena Coto | PCLI | Government Phytosanitary Services Officer | Servicio Fitosanitario del Estado (SFE), Ministerio de Agricultura y Ganadería | lpena@sfe.go.cr |
| Marinanela Arias Avendano | PCLI | Profesora | Servicio Fitosanitario del Estado (SFE), Ministerio de Agricultura y Ganadería | marias_cr@yahoo.com |
| Mario Vargas | PST, PCLI | Ingeniero Agrónomo | Instituto Nacional de Aprendizaje (INA) | madanavc@gmail.com |
| Marisol Moya Vasquez | PCLI | Profesora | Consultor | marimvasz@gmail.com |
| Oscar Acosta | PCLI | Associate Professor | Instituto Nacional de Aprendizaje (INA) | oscar.acosta@ucr.ac.cr |
| Oscar Rodríguez Araya | PCLI | Government Phytosanitary Services Officer | Universidad de Costa Rica-Centro Nacional de Ciencia y Tecnología de Alimentos (CITA) | orodriguez@sfe.go.cr |
| Pedro Sánchez Carballo | PST, PCLI | Ingeniero Agrónomo | Servicio Fitosanitario del Estado (SFE), Ministerio de Agricultura y Ganadería | psanchez@sfe.go.cr |
| Pilar Fernandez | PCLI | President | LAPINA S.A. | fernandezd.pilar@gmail.com |
| Roberto García Salazar | PST | Licenciatura en Ingeniería Agronómica | Servicio Fitosanitario del Estado, Ministerio de Agricultura y Ganadería | rgarcia@sfe.go.cr |
| Sacha Trelles | PST | Especialista Sanidad Agropecuaria e Inocuidad Alimentaria | IICA-Costa Rica | sachinat@yahoo.com |
| Silvia Fernández Saénz | PCLI | Profesora | LAPINA S.A. | silviafersa@gmail.com |
| Tomas Rojas Miranda | PCLI | | Servicio Fitosanitario del Estado (SFE)- Ministerio de Agricultura y Ganadería | trojas@sfe.go.cr |
| Warren Hidalgo Jara | PCLI | Official Veterinarian | Servicio Fitosanitario del Estado (SFE), Ministerio de Agricultura y Ganadería | whidalgo@senasa.go.cr |
| Dominica | Rule TTT | Title | Agency/Company | E-Mail |
| lan A. Lambert | PST | Technical Advisor/Consultant | Dominica Export Import Agency (DEXIA) | ianmar5757@yahoo.com |

| Dominican Republic | Rule TTT | Title | Agency/Company | E-Mail |
|---|-----------------------|--|--|--|
| Alfie Scarborough | PCLI | Inspector | Ministerio de Salud Publica (DIGEMASP) | alfie03.scarborough@gmail.com |
| Ana De Aza | PST | Master en Alimentacion y Nutrición | Ministerio Salud Pública | ana.deaza@ministeriodesalud.gob.do |
| Ana Francisca Tavarez Mendez | PST, PCLI | CEO Inocuidad Gemela RD y Analista de Normas del Departamento de Buenas Practicas Comerciales | Empresa Consultora Inocuidad Gemela RD y Instituto Nacional de Protección de los Derechos del Consumidor (Pro Consumidor) | ana.tavarez@proconsumidor.gob.do; inocuidadgemelard@gmail.com |
| Angel Luis Fermín Gomez | PST | Master en Ciencias, Mención Tecnología de los Alimentos | Corporación Agropecuaria del Cibao | afermin2008@gmail.com |
| Ariany Martinez Gonzales | PST, PSLT, PCLI | Inspector de Inocuidad Agroalimentaria | Ministerio de Agricultura | arianymartinezmt@gmail.com |
| Belarminio Nunez | PST | Inspector Agroalimentario | Ministerio de Agricultura | belarminionunez@gmail.com |
| Bernarda Reynoso | PCLI | Profesora/Investigadora | Universidad ISA, Depart. de Tecnología de Alimentos | breynoso@isa.edu.do |
| Bethel Gonzalez | PST | Inspector de Inocuidad Agroalimentaria | Ministerio de Agricultura | bethelgonzalez@hotmail.com |
| Carlos Ariel Gastón Castillo Vicioso | PST | Inspector de Inocuidad Agroalimentaria | Ministerio de Agricultura | ccastillovicioso66@gmail.com |
| Carlos Mena | PST | Food Safety Specialist | Carlos Mena Services | carlosmenaal@gmail.com |
| Clara Angel Botero | PCLI | Profesora/Ingeniería en Tecnología de Alimentos | Universidad ISA, Depart. de Tecnología de Alimentos | claraangel2000@gmail.com |
| Edward Delgado | PCLI | Professor | Lab Inocuidad | edelgado@isa.edu.do |
| Emilia Santana | PST | Agricultura | Ministerio de Agricultura | emyh01@hotmail.com |
| Francelyn Perez | PST | Veterinaria | Ministerio de Agricultura | fmpquirico@yahoo.com |
| Francis Herrera Sánchez | PST, PCLI | Ingeniero Agrónomo | Ministerio de Agricultura, Departamento de Inocuidad Agroalimentaria (DIA) | ingfrancisherrera87@gmail.com |
| Gaudy Suzana | PCLI | Engineer | Food Quality | ing.gaudysuzana@gmail.com |
| Gregorio Lombert | PCLI | Ingeniero en Tecnología de Alimentos | Representante Técnico y de Ventas Grupo Trisan | lombert_7@hotmail.com |
| Jose del Carmen Valenzuela | PST | Coordinador de Normas Alimentarias | Univ. Nac. Pedro Henríquez Ureña (UNPHU) | jvalram@gmail.com |
| Jose Hernandez | PST | Ingeniero Agrónomo | Ministerio de Agricultura | josehdez1054@gmail.com |

| José Luis Frías Castillo | PST | Ing. Producción Animal | Ministerio de Agricultura, Departamento de Inocuidad | jlfrias76@hotmail.com |
|------------------------------------|--------------|--|---|--------------------------------------|
| | | | Agroalimantaria | |
| José Ramón Fortuna | PST | Ingeniero Industrial | Universidad ISA | jfortuna@isa.edu.do |
| Josefina Tavarez Consoro | PST, PCLI | Enc. Div. Registro DIA | Ministerio de Agricultura | josefinaconsoro@gmail.com |
| Julia Carrasco | PST | Food Safety Leader | Consorcio Citricos Dominicanos S.A. | jcarrasco@gruporica.com.do |
| Lucibel Alvarez Ramoz | PST | Master's in food science | Universidad ISA | lucibelar@gmail.com |
| Luis Sanchez | PST | Medical Doctor | Medicheq | medicheq@gmail.com |
| Luis Santiago Rivas Laureano | PST | OCI Specialist | Exporting Quality Program | srivas@cedaf.org.do |
| Luisa Milagros Ozuna | PST | Chemical Engineer | FAO | luisam.ozuna@gmail.com |
| Manuel Ramón Garcia | PST | Técnico Agrícola | Asociacion de Productores Bajo Ambiente Contolado de la Sierra, Inc. (APACOS) | ramongcia@hotmail.es |
| Manuel Ramón Guzmán Reyes | PST | Maestria en Ciencias en Tecnología de Alimentos | Universidad ISA | rreyes0225@gmail.com |
| Marcos Tavárez | PST | Profesor | Universidad ISA | mtavarez@isa.edu.do |
| María Altagracia de los Santos | PCLI | Ingeniera en Tecnología de Alimentos | Ministerio de Salud Publica (DIGEMASP) | mpascual0219@gmail.com |
| Maria Altagracia Tavárez Mendez | PST, PCLI | Inspector de Inocuidad Agroalimentaria | Ministerio de Agricultura/Consultora Inocuidad Gemela RD | maria.tavarezm@gmail.com |
| María Elisa Peña | PCLI | Profesora/Investigadora | Universidad ISA, Depart. de Tecnología de Alimentos | mpena@isa.edu.do |
| María Luisa Santos | PCLI | Quality Manager | CONACADO Agroindustrial | marialuisasantosrosario@gmail.com |
| Mary Esther Barrientos Taveras | PST | Ingeniero Agrónomo | Ministerio de Agricultura | esthery18@gmail.com |
| Modesto Pérez | PCLI | Supervisor | Ministerio de Salud Publica (DIGEMASP) | mbperezb@gmail.com |
| Olga Perez Jimenez | PST | Food Safety Consultant- Manager | Gea Consulting and Coaching Group | olga_perez@hotmail.com |
| Pedro de Padua | PCLI | Supevisor Nacional de Alimentos | Ministerio de Salud Publica (DIGEMASP) | pedro.padua@ministeriodesalud.gob.do |
| Pura Miguelina Vasquez Baez | PST | Ingeniera en Tecnología de Alimentos | La Fabril | m.vasquez@lafabril.com.do |
| Rogelio Zimbron | PST | Ingeniero | Baltimore Dominicana (BALDOM) | rogelio.zimbron@baldom.net |

| Sahira Vasquez | PST | Ingeniería en Tecnología de Alimentos | Universidad ISA | svasquez@isa.edu.do |
|-----------------------------------|--------------|---|---|---------------------------------|
| Sócrates A. Cabral | PST | Cluster de Invernaderos, Inc. | Clúster de Invernaderos INC | socratescabral@hotmail.com |
| Victor de Oleo- Montero | PST | Coordinator, avocado & pineapple value chains | International Executive Service Corps (IESC) | vdeoleo@iesc.org |
| Walkiria G. Cruz Álvarez | PCLI | Consultora | Independiente | walkiria.cruzalvarez@gmail.com |
| Yanilka Yulisa Alcántara | PST, PCLI | Profesora | Universidad ISA, Depart. de Tecnología de Alimentos | yanilkaalcantaramarte@gmail.com |
| Yolanda Landinez Tellez | PST, PCLI | Manager | Landinez y Angel Supplies | ylandineztellez@gmail.com |
| El Salvador | Rule TTT | Title | Agency/Company | E-Mail |
| Aracely Guadalupe Artiga | PCLI | Profesor | Universidad Centroamericana | aartiga@uca.edu.sv |
| Carmen Menjivar | PCLI | Profesora/Directora de Ingeniería de Alimentos | Universidad Centroamericana José Simeón Cañas | cmenjivar@uca.edu.sv |
| Claudia Alfaro | PCLI | Profesor | Universidad Centroamericana | calfaro@uca.edu.sv |
| David Eduardo Pineda Velasquez | PCLI | Coordinador de la Unidad de Alimentos y Bebidas | Dirección de Innovación y Calidad (DICA)-Ministerio de Economía | dpineda@minec.gob.sv |
| Douglas Arsenio Navarro | PCLI | Head of Agricultural Production Surveillance and Certification Division | Ministerio de Agricultura y Ganadería | douglas.navarro@mag.gob.sv |
| Eduardo José Escobar Palma | PCLI | Consultant and Professional in Processed Foods | ELE Consultant Group | e_palma7@hotmail.com |
| Elizabeth Garcia | PCLI | Ś | Ministerio de Agricultura y Ganadería | betty_peque@hotmail.com |
| Emilio Campos | PCLI | Profesor | Universidad Centroamericana | ecampos@fulbrightmail.org |
| Ever Reyes | PCLI | Sanidad Agropecuaria e Inocuidad de los Alimentos | IICA-El Salvador | ever.reyes@iica.int |
| Helmer Esquivel | PCLI | Coordinador de Proyecto | IICA-El Salvador | helmer.esquivel@iica.int |
| José Eduardo Umana Cerros | PST, PCLI | Ingeniero | Fundación Salvadoreña para el Desarrollo Económico y Social (FUSADES) | jeduardoumanac@gmail.com |
| Juan Carlos Calderón | PCLI | Profesor | Universidad José Matías Delgado | jccalderon@ujmd.edu.sv |
| Karen Rosales Siu | PCLI | Ing. en Industrias Alimentarias | Independiente | karen.rosales.siu@gmail.com |
| Lilian Carmen Carreno | PCLI | Ingeniería de Alimentos | Universidad José Matías Delgado | lccarreno@ujmd.edu.sv |

| Mirssa Nubia Hernandez Ayala | PCLI | Consultora | Independient | mirssanubia@hotmail.com |
|-----------------------------------|--------------|---|--|--------------------------------|
| Ricardo Hernandez | PCLI | Consultor | COEXPORT | ricardo.auerbach@gmail.com |
| Ricardo Soundy | PCLI | Consultor | Consultora Quality Control | ricardosoundy@gmail.com |
| Grenada | Rule TTT | Title | Agency/Company | E-Mail |
| Nicholas Bernal | PCLI | Importer | Fresh Seasons | nick@seasonsfarmfresh.com |
| Guatemala | Rule TTT | Title | Agency/Company | E-Mail |
| Alvin Ovalle Lynch | pst, pcli | Certificador de Exportación Fitosanitario e Inocuidad | PIPAA-Ministerio de AgriculturaAgricultura, Ganadería y Alimentación | alvin.ovalle@pipaa.com |
| Amabilia Alvarez | PCLI | Ingeniera en Ciencias dr los Alimentos | FACENDO S.A. | pizzillo99@yahoo.com |
| Ana Cristabel Hernández Torres | PST | Ingeniera en Industrias Agropecuarias y Forestales | Ministerio de Agricultura, Ganadería y Alimentación | htcrista@gmail.com |
| Beathris Girón Revolorio | PST, PCLI | Ingeniera química. Master sistemas de gestión de calidad | Consultor Independiente | bmgiron@gmail.com |
| Carlos Alfonso Campins Padilla | PST | Perito en Recursos Naturales Renovables | CCIPPP-El Centro Especializado en Negocios Agroindustriales (CENA) | alfonso.campins@gmail.com |
| Carlos Humberto López Sicaján | PST | Ingeniera en Industrias Agropecuarias y Forestales | PIPAA-Ministerio de AgriculturaAgricultura, Ganadería y Alimentación | carlos.lopez@pipaa.com |
| Cristina Mancilla | PCLI | Jefe de Laboratorio | FQB Laboratorios | cristina@fqblab.net |
| Daniel Orellana | PCLI | Food Safety Advisor | USDA/FAS | licorellana@yahoo.com |
| David Barrios | PST | Control de Alimentos | Ministerio de Agricultura, Ganadería y Alimentación | davidbarrios7@gmail.com |
| Edgar Roberto Mota Maldonado | PST | Ingeniero Agrónomo | CCIPPP-El Centro Especializado en Negocios Agroindustriales (CENA) | mota@lsqanet.com |
| Edgar Rolando Yool Rosales | pst, pcli | Ingeniero Agrónomo | PIPAA-Ministerio de AgriculturaAgricultura, Ganadería y Alimentación | edgaryool@gmail.com |
| Edwin E. Porón | PST | Ingeniero Agrónomo | Cooperativa Integral Agrícola Mujeres Cuatro Pinos R.L. | edwin.poron@cuatropinos.com.gt |
| Ervin Rivera Castello | PCLI | Consultor | PIPAA-Ministerio de AgriculturaAgricultura, Ganadería y Alimentación | elrivera23@yahoo.es |
| Eunice Madai Alvarado Noriega | PST | Microbiologist | FQB Laboratorios | madai.alvarado@gmail.com |

| Federico Villagran | PCLI | Hygiene Manager | SIESA | fvillagran@siesagt.com |
|--|--------------|--|--|---|
| Gilmer Calel | PST | Agronomo | PIPAA-Ministerio de AgriculturaAgricultura, Ganadería y Alimentación | gilmer.calel@pipaa.com |
| Herbert Pezzarossi | PCLI | Consultor | Ministerio de Salud | hepb_1219@hotmail.com |
| Isabel Catalan | PCLI | Nutritionist | Processed Food Regulatory | isabelcatalanc@yahoo.com |
| Jaime Sosa | PST | Executive Director of PIPAA | PIPAA-Ministerio de AgriculturaAgricultura, Ganadería y Alimentación | jaime.sosa@pipaa.com |
| Javier Bolaños | PST | Auditor Interno | Agroexportadora El Rejón | javier.bolanos@cuatropinos.com.gt |
| Juan Jacobo Reyes Ochoa | PST | Auditor | PIPAA-Ministerio de AgriculturaAgricultura, Ganadería y Alimentación | juan.reyes@pipaa.com |
| Ligia Lara | PST | Gerente Gestión de Inocuidad y Calidad | Cooperativa Cuatro Pinos | ligia.lara@cuatropinos.com.gt |
| Lizeth Monney | PCLI | Consultora | PIPAA-Ministerio de AgriculturaAgricultura, Ganadería y Alimentación | lizethmonney@yahoo.com |
| Luisa Barrientos | PCLI | Auditor de Seguridad Alimentaria | FQB Laboratorios | luisa@fqblab.net |
| Maria Isabel Catalan | PST | Counselor | FACENDO, S.A. | isabelcatalanc@yahoo.com |
| Maria J. Ramirez Prado | PCLI | Project Leader | GRUPO DUWEST | maria.ramirez@duwest.com |
| Mario Rolando Tubac Chonay | PST | Perito Agrónomo | PIPAA-Ministerio de AgriculturaAgricultura, Ganadería y Alimentación | mario.tubac@pipaa.com; mariotubac@live.com |
| Marivel Giron | PST | Consultor | Consultor Independiente | gironmarivel@gmail.com |
| Marvin Aguilar | pst, pcli | Ingeniero Agrónomo | PIPAA-Ministerio de AgriculturaAgricultura, Ganadería y Alimentación | leoaguilar2011@hotmail.com |
| Mirna Lizeth Monney de Montufar | PST | Consultant/Instructor | Consultor Independiente | lizethmonney@yahoo.com |
| Otto Fernando Maldonado De Los Angeles | PST | Veterinario | Ministerio de Agricultura, Ganadería y Alimentación | mottofernando@gmail.com |
| Pavel Ramirez | PCLI | Manager | SIESA | pramirez@siesagt.com |
| Sigrid Aguilera | PST, PCLI | Quality Asurance and Food Safety Director | Agroindustrias Legumex, S.A. | sigridaguilera@gmail.com |

| Ursula Quintana | PST, PCLI | Industrial Engineer | ICASA | ixmucanequintana@gmail.com |
|-------------------------------------|--------------|---|---|------------------------------|
| Victoria Mireya Morales | PCLI | Quality Culture an Food Safety Manager | ICASA | victoriamorales@icasa.com.gt |
| Wilfredo Antonio Fernández Vera | PST | Food Engineer | CCIPPP-El Centro Especializado en Negocios Agroindustriales (CENA) | wilf.fernandez@gmail.com |
| Yaseni Candelaria López Raymundo | PST | Líder de certificaciones | Semillas del Campo | ylopez@semillasdelcampo.com |
| Haiti | Rule TTT | Title | Agency/Company | E-Mail |
| Antonio Antonie | PCLI | Officer | Ministry of Commerce and Industry/BHN, Bureau of Standards | toninio14@hotmail.com |
| Dakson Sanon | PCLI | Chief of Service | Ministry of Agriculture, MARNDR | sdakson@gmail.com |
| Gesner Cledo Nozil | PCLI | Standards Manager | Ralph Perry Import-Export S.A., Management | gnozil09@gmail.com |
| Honduras | Rule TTT | Title | Agency/Company | E-Mail |
| Adela María Acosta Marchetti | PST, PCLI | Department Head | Zamorano University | aacosta@zamorano.edu |
| Alemar Santos | PCLI | Regulatory Affairs Supervisor in Quality Management and Food Safety | Cargill | santosalemar@gmail.com |
| Allan Antonio Aguilar Contreras | PST | Pasante Ingenieria Agricola | Compañia Agricola Barranco | contre1089@gmail.com |
| Anuar Nain Mejía | PST | Ingeniero Agroindustrial | Servicio Nacional de Sanidad e Inocuidad Agroalimentaria (SENASA) | nmejia@senasa.gob.hn |
| Blanca Carolina Valladares | PCLI | Profssora | Zamorano University | bvalladares@zamorano.edu |
| César Agusto Ardón | PST | Técnico Agrícola | Servicio Nacional de Sanidad e Inocuidad Agroalimentaria (SENASA) | ardon_c@yahoo.com |
| Cristian Geovanny Flores Guillen | PST | Ingeniero Agrónomo | Servicio Nacional de Sanidad e Inocuidad Agroalimentaria (SENASA) | cflores@senasa.gob.hn |
| Cristina Romero | PST | Dra. MIcribiologia y Quimica clinica | AgroBioTeK | cromero@agrobiotek.com |
| Derenk Xavier Muñoz Jimenez | PST | Lic. Tecnologia Alimentaria | Servicio Nacional de Sanidad e Inocuidad Agroalimentaria (SENASA) | dmunoz@senasa.gob.hn |
| Edward Moncada | PCLI | Profesor Asociado | Zamorano University | emoncada@zamorano.edu |
| Elin Gesmir Nuñez | PST | Bachiller Técnico Agropecuario | Servicio Nacional de Sanidad e Inocuidad Agroalimentaria (SENASA) | elgesnu1976@hotmail.com |
| Elvin Hernesto Palao Orellana | PST | Jefe de Coordinación de Certificaciones | Cia. Agrícola Barranco S.A. de C.V. | palao0212@gmail.com |

| Enuvia Carolina Puerto Hernandez | PST, PCLI | Inspectora de Inocuidad de Alimentos | Servicio Nacional de Sanidad e Inocuidad Agroalimentaria (SENASA) | benitezpuerto@gmail.com |
|-------------------------------------|--------------|---|--|--|
| Ever Javier Suazo Alcerro | PST | Ingeniero Industrial | Exportadora Suazo Alcerro S. de R.L. | ejasa36@yahoo.es |
| Fanny Maradiaga Carranza | PCLI | Profesora | Universidad Nacional de Agricultura, Catacamas, Olancho | famaradiaga16@gmail.com |
| Francisco Javier Matamoros | PST | Supervisor Regional de la Sección de Frutas y Hortalizas frescas y Procesados | Servicio Nacional de Sanidad e Inocuidad Agroalimentaria (SENASA) | fmatamoros@senasa.gob.hn |
| Gabriel Humberto Cosenza | PST | General Manager | AgroBioTek | gcosenza@agrobiotek.com |
| Heber Hernandez Villanueva | PST | Bachiller | Compañia Agricola Llanos | hheber24@gmail.com |
| Héctor Padilla | PST | Ingeniero Agrónomo | Servicio Nacional de Sanidad e Inocuidad Agroalimentaria (SENASA) | hpadillab47@hotmail.com |
| Hernan Mauricio Reyes Sierra | PST | Coordinador de Programas de Certificación | Compañia Agricola Olivo | ciaolivo.69_70@yahoo.com |
| Indira Oseguera | PST | Ingeniero Agroindustrial | Servicio Nacional de Sanidad e Inocuidad Agroalimentaria (SENASA) | ioseguera@senasa.gob.hn |
| Jaime Anibal Aviles Torres | PST | Técnico Agrícola | Servicio Nacional de Sanidad e Inocuidad Agroalimentaria (SENASA) | ajaimeanibal@yahoo.es |
| Javier Leva | PST | Agricultural Engineer | Standard Fruit of Honduras-Dole | javier.leva@dole.com |
| Jeannett Ayestas | PST, PCLI | Food Safety Specialist | AgroBioTek and Independant Consultant | jeannett.ayestas@gmail.com; jayestas@agrobiotek.com |
| Jorge A. Cardona Ponce | PCLI | Profesor | Zamorano University | jcardona83@gmail.com |
| Jose Motz | PCLI | Consultor | Servicio Nacional de Sanidad e Inocuidad Agroalimentaria (SENASA) | jmotz08@gmail.com |
| Jose Rene Gonzales Reyes | PST | Ingeniero Agrónomo | Servicio Nacional de Sanidad e Inocuidad Agroalimentaria (SENASA) | reneagro70@yahoo.com |
| Juan Carlos Paguada Rubio | PST | Ingeniero Agrónomo | Servicio Nacional de Sanidad e Inocuidad Agroalimentaria (SENASA) | jpaguada@senasa.gob.hn |
| Juan Pablo Mena | PST | Packing Manager | Exportadora del Atlantico | juanpablo.mena@dinant.com |
| Juan Ramon Velasquez | PCLI | Quality Manager | Servicio Nacional de Sanidad e Inocuidad Agroalimentaria (SENASA) | jrvelaz123@gmail.com |
| Katya Margarita Castillo | PST, PCLI | Ingeniero Agrónomo | Servicio Nacional de Sanidad e Inocuidad Agroalimentaria (SENASA) | kekicastillo203@gmail.com |
| Lourdes Medina | PST | Especialista Sanidad Agropecuaria e Inocuidad Alimentaria | IICA-Honduras | lourdes.medina@iica.int |

| Luis Fernando Osorio | PCLI | Academic Dean | Zamorano University | losorio@zamorano.edu |
|---------------------------------------|--------------|---|--|------------------------------------|
| Marlon Gabriel Fajardo Fajardo | PST | Lic. Relaciones Industriales | Universidad Tecnológica de Honduras | fajardo_marlon@hotmail.com |
| Mirian Bueno | PCLI | Director of Food Safety | Servicio Nacional de Sanidad e Inocuidad Agroalimentaria (SENASA) | mirianbueno@me.com |
| Noé López | PST | Licenciado en Administración de Empresas Agropecuarias | Servicio Nacional de Sanidad e Inocuidad Agroalimentaria (SENASA) | noelpzs@yahoo.com |
| Odalis Martinez | PCLI | General Manager, Services for the Food Industry (SERINSA) | Servicio Nacional de Sanidad e Inocuidad Agroalimentaria (SENASA) | omartinezm206@gmail.com |
| Olga Marcela Perez Ordoñez | PST | Jefe de Inocuidad | DISTEX | olgamarcela_perez@yahoo.com |
| Raphael Enrique Núñez Andara | PST | Industrial Engineer | Monty Farms | rafael.andara@montyfarms.com |
| Ronny Fabricio Fernández Lizardo | PST | Inspector Oficial | Servicio Nacional de Sanidad e Inocuidad Agroalimentaria (SENASA) | rfernandez@senasa.gob.hn |
| Sandra Espinoza | PCLI | Profesora Asistente/Jefe Planta de Innovación de Alimentos | Zamorano University | sespinoza@zamorano.edu |
| Suyapa del Carmen Villeda Monroy | PST | Técnico Universitario en Tecnologia de Alimentos | Servicio Nacional de Sanidad e Inocuidad Agroalimentaria (SENASA) | suyihn@yahoo.com |
| Thelma F. Calix Lara | PCLI | Profesora | Zamorano University | tcalix@gmail.com |
| Víctor Josue Lopez Luna | PST | Ingeniero Agroindustrial | EXPOCAN | victor1714lopez@gmail.com |
| Victor Pérez Zelaya | PST | Universitario | Ingeniería Agrícola y Ganadera S.A. IAGSA | victoralfonsoperezzelaya@gmail.com |
| Wilbor Lenin Santa Maria Zschocher | PST | BS Técnico Agrícola | Servicio Nacional de Sanidad e Inocuidad Agroalimentaria (SENASA) | wilborls@yahoo.com |
| Yensi Torres | PST | Inspector Oficial | Servicio Nacional de Sanidad e Inocuidad Agroalimentaria (SENASA) | yensi.torres@yahoo.es |
| Yolandina Lambur Valle | PST, PCLI | Ingeniero Agrónomo | Servicio Nacional de Sanidad e Inocuidad Agroalimentaria (SENASA) | yolylambur@hotmail.com |
| Jamaica | Rule TTT | Title | Agency/Company | E-Mail |
| Alfred Barrett | PST | Plant Quarantine / Produce Inspector | MICAF-Quarantine Citrus Protection Agency | barrettalfred@hotmail.com |
| Andre Fowler | PST | Plant Quarantine / Produce Inspector | Ministry of Industry, Commerce, Agric and Fisheries | ANDREFWLR@yahoo.com |
| Andre Gordon | PST, PCLI | Managing Director | Technological Solutions Limited | andre.gordon2@tsltech.com |
| Andrea Goldson- Barnaby | PST, PCLI | Lecturer | University of the West Indies | andrea.goldson03@uwimona.edu.jm |

| Andrea Legg | PST | Plant Health Food Safety Officer | MICAF-Rural Agricultural Development Authority (RADA) | legga@rada.gov.jm |
|----------------------------|--------------|---|---|---|
| Cigale Hyman | PST | Plant Quarantine / Produce Inspector | Ministry of Industry, Commerce, Agric and Fisheries | morsig@yahoo.com |
| Colin Cooper | PCLI | Environmental Health Specialist | Ministry of Health | cooperco@moh.gov.jm |
| Damian Rowe | PST | Plant Quarantine / Fumigator | Ministry of Industry, Commerce, Agric and Fisheries | dcrdonrowe@yahoo.com |
| Don McGlashan | PST | Operations Manager | Caribbean Boilers | don.mcglashan@mycbgroup.com |
| Donna Bromfield- Wright | PST, PCLI | Director | Jamaica Agro Processors Association | dmareeb@hotmail.com |
| Dwaine Josephs | PST | Marketing Extension Officer | MICAF-Rural Agricultural Development Authority (RADA) | josephsd@rada.gov.jm |
| Dwayne Henry | PCLI | Plant Health/Food Safety Specialist | MICAF-Rural Agricultural Development Authority (RADA) | dwaynechenry@gmail.com |
| Fitzroy White | PST | Sr. Plant Quarantine/SPS Enquiry Point Officer | Ministry of Industry, Commerce, Agric and Fisheries | hodijah1@gmail.com |
| George Blake | PST, PCLI | Audit Services Manager | Technological Solutions Limited | george.blake@tsltech.com |
| Karlene Atkinson | PST, PCLI | Food Safety Inspector | Ministry of Health | karleneatkinson77@gmail.com |
| Lisa Marie Lecesne | PST, PCLI | Quality Assurance Manager | Grace Food Processors Company | Lisamarie.Lecesne@gkco.com; lecesnel@gmail.com |
| Lucynth Hope Kerr | PST, PCLI | Food Technologist/Food Safety Trainer | Independent | hopekerr@gmail.com |
| Marva Hewitt | PCLI | CEO | Food Hygiene Bureau | marva@fsjamaica.org |
| Maxine Campbell | PST, PCLI | Managing Director | Maxine Campbell & Associates Ltd. | maxinecampbell24@gmail.com |
| Patrick Samuels | PST | Agricultural Specialist | USDA/APHIS | Patrick.A.Samuels@aphis.usda.gov |
| Sanniel Wilson | PST | Chief Plant Quarantine/Plant Inspection | Ministry of Industry, Commerce, Agric and Fisheries | sswilson@micaf.gov.jm |
| Shauna Brandon | PST | Rural Development Specialist | IICA-Jamaica | shauna.brandon@iica.int |
| Sheron Evans- McFarlane | PCLI | Senior Food Storage Scientist | Food Storage and Prevention of Infestation Division Ministry of Industry, Commerce, Agriculture and Fisheries | sheron.mcfarlane@fspid.gov.jm |
| Solangie Johnson | PST | Plant Quarantine Produce Inspector | Quarantine Produce Inspection Branch | svjohnson@micaf.gov.jm |
| Tamieka Sewell | PST | Principal Consultant/Chief Executive Officer | TS Quality Consultants | tsqualityconsultants@gmail.com |

| Tenoreo Beharrie | PST | Food Storage Scientist | Food Storage and Prevention of Infestation Division Ministry of Industry, Commerce, Agriculture and Fisheries | tenoreo.beharrie@fspid.gov.jm |
|--|--|--|---|--|
| Tracey - Ann Francis | PST | Quality Assurance Officer/Shipping Coordinator | Coffee Industry Board | tfrancis@ciboj.org |
| Tracy Ann Salmon- Smith | PST | Plant Quarantine Produce Inspector II | Ministry of Industry, Commerce, Agric and Fisheries | tasalmonsmith@micaf.gov.jm |
| Xavier Charvis | PST | Postharvest Specialist | MICAF-Rural Agricultural Developmen Authority (RADA) | charvisx@rada.gov.jm |
| Nicaragua | Rule TTT | Title | Agency/Company | E-Mail |
| Indiana Dávila Prado | PCLI | Profesora | UNAN León - Universidad Nacional Autónoma de Nicaragua | indidavila@gmail.com |
| Ivania Toruño Fonseca | PCLI | Profesora | UNAN León - Universidad Nacional Autónoma de Nicaragua | ivafonsek@gmail.com |
| María Jesús Sandino | PCLI | Profesora | UNAN León - Universidad Nacional Autónoma de Nicaragua | mjsm912@gmail.com |
| Oscar García Suárez | PCLI | Consultor Independiente | Asesoría Técnica Sistemas de Gestión de Inocuidad de Alimentos | gsoscar1983@gmail.com |
| Panama | Rule TTT | Title | Agency/Company | E-Mail |
| Annie Almaria | PST, | Veterinaria | Ministry of Health, Department of Food | anniealmario19@amail.com |
| | PCLI | | Protection | |
| Juan Pablo Miranda | PCLI PCLI | Presidente | COPCYTA | jp_miranda@yahoo.com |
| Juan Pablo Miranda Luis Alberto Horna Resende | PCLI PCLI PST, PCLI | Presidente Ingeniero Agrónomo | Department of Food Protection, Ministry of Health | jp_miranda@yahoo.com siulres@hotmail.com |
| Juan Pablo Miranda Luis Alberto Horna Resende Malena Meneses | PCLI PCLI PST, PCLI PCLI | Presidente Ingeniero Agrónomo Food Safety Administrator | Protection COPCYTA Department of Food Protection, Ministry of Health Hotel El Panama | jp_miranda@yahoo.com siulres@hotmail.com malena-1922@hotmail.com |
| Juan Pablo Miranda Luis Alberto Horna Resende Malena Meneses Omaris Vergara | PCLI PST, PCLI PCLI PCLI | Presidente Ingeniero Agrónomo Food Safety Administrator Profesor | Protection COPCYTA Department of Food Protection, Ministry of Health Hotel El Panama Universidad de Panama | jp_miranda@yahoo.com siulres@hotmail.com malena-1922@hotmail.com omaris.vergara@yahoo.com |
| Juan Pablo Miranda Luis Alberto Horna Resende Malena Meneses Omaris Vergara Patricia Jaar | PCLI PCLI PST, PCLI PCLI PCLI | Presidente Ingeniero Agrónomo Food Safety Administrator Profesor Owner | Protection COPCYTA Department of Food Protection, Ministry of Health Hotel El Panama Universidad de Panama Food Safety S.A. Analytical Lab | jp_miranda@yahoo.com siulres@hotmail.com malena-1922@hotmail.com omaris.vergara@yahoo.com pjaar@foodsafetypanama.com |
| Juan Pablo Miranda Luis Alberto Horna Resende Malena Meneses Omaris Vergara Patricia Jaar Renatty Palma | PCLI PST, PCLI PCLI PCLI PCLI PCLI | Presidente Ingeniero Agrónomo Food Safety Administrator Profesor Owner Product Development Técnica | Protection COPCYTA Department of Food Protection, Ministry of Health Hotel El Panama Universidad de Panama Food Safety S.A. Analytical Lab FISA | jp_miranda@yahoo.com siulres@hotmail.com malena-1922@hotmail.com omaris.vergara@yahoo.com pjaar@foodsafetypanama.com renatty_anet@hotmail.com |
| Juan Pablo Miranda Luis Alberto Horna Resende Malena Meneses Omaris Vergara Patricia Jaar Renatty Palma Paraguay | PCLI PST, PCLI PCLI PCLI PCLI PCLI Rule TTT | Presidente Ingeniero Agrónomo Food Safety Administrator Profesor Owner Product Development Técnica Title | Protection COPCYTA Department of Food Protection, Ministry of Health Hotel El Panama Universidad de Panama Food Safety S.A. Analytical Lab FISA Agency/Company | jp_miranda@yahoo.com siulres@hotmail.com malena-1922@hotmail.com omaris.vergara@yahoo.com pjaar@foodsafetypanama.com renatty_anet@hotmail.com E-Mail |
| Juan Pablo Miranda Luis Alberto Horna Resende Malena Meneses Omaris Vergara Patricia Jaar Renatty Palma Paraguay Ana Sagales | PCLI PCLI PST, PCLI PCLI PCLI PCLI PCLI Rule TTT PCLI | Presidente Ingeniero Agrónomo Food Safety Administrator Profesor Owner Product Development Técnica Title Regulatory Manager | Protection COPCYTA Department of Food Protection, Ministry of Health Hotel El Panama Universidad de Panama Food Safety S.A. Analytical Lab FISA Agency/Company FEPRINCO | jp_miranda@yahoo.com siulres@hotmail.com malena-1922@hotmail.com omaris.vergara@yahoo.com pjaar@foodsafetypanama.com renatty_anet@hotmail.com <u>E-Mail</u> ana.sagales@gmail.com |
| Juan Pablo Miranda Luis Alberto Horna Resende Malena Meneses Omaris Vergara Patricia Jaar Renatty Palma Paraguay Ana Sagales Andrea Aglio | PCLI PST, PCLI PCLI PCLI PCLI PCLI Rule TTT PCLI PCLI | Presidente Ingeniero Agrónomo Food Safety Administrator Profesor Owner Product Development Técnica Title Regulatory Manager Jefa Seccion de la Inocuidad | Protection COPCYTA Department of Food Protection, Ministry of Health Hotel El Panama Universidad de Panama Food Safety S.A. Analytical Lab FISA Agency/Company FEPRINCO INAN-Instituto Nacional de Alimentacion y Nutricion | jp_miranda@yahoo.com siulres@hotmail.com malena-1922@hotmail.com omaris.vergara@yahoo.com pjaar@foodsafetypanama.com renatty_anet@hotmail.com <u>E-Mail</u> ana.sagales@gmail.com andreaaglio@gmail.com |
| Juan Pablo Miranda Luis Alberto Horna Resende Malena Meneses Omaris Vergara Patricia Jaar Renatty Palma Paraguay Ana Sagales Andrea Aglio Elsi Ovelar | PCLI PST, PCLI PCLI PCLI PCLI PCLI PCLI PCLI PCLI | Presidente Ingeniero Agrónomo Food Safety Administrator Profesor Owner Product Development Técnica Title Regulatory Manager Jefa Seccion de la Inocuidad Asesora Técnica | Protection COPCYTA Department of Food Protection, Ministry of Health Hotel El Panama Universidad de Panama Food Safety S.A. Analytical Lab FISA Agency/Company FEPRINCO INAN-Instituto Nacional de Alimentacion y Nutricion INAN-Instituto Nacional de Alimentacion y Nutricion | jp_miranda@yahoo.com siulres@hotmail.com malena-1922@hotmail.com omaris.vergara@yahoo.com pjaar@foodsafetypanama.com renatty_anet@hotmail.com E-Mail ana.sagales@gmail.com andreaaglio@gmail.com oelsi@hotmail.com |

| Laura Mendoza | PCLI | Directora Técnica | INAN-Instituto Nacional de Alimentacion y Nutricion | dralmendoza@gmail.com |
|-------------------------------|--------------|---|--|--------------------------------|
| Laura Vera | PCLI | Professional of quality and safety | SENAVE- Dirección de Calidad, Inocuidad | laura.vera06@gmail.com |
| Lorena Blasco Sapena | PCLI | Bachelor of Food science and technology | Sector Privado | loreblasco@hotmail.com |
| Mirtha Carrillo de Vera | PCLI | Analytical Chemist | Servicio Nacional de Calidad y Salud Animal (SENACSA)-DIGELAB | mcarrillo@senacsa.gov.py |
| Patricia Echeverría | PCLI | Jefa Direccion de Registros | INAN-Instituto Nacional de Alimentacion y Nutricion | pecheverria640@gmail.com |
| Ricardo Miret | PCLI | Inspection Manager | Servicio Nacional de Calidad y Salud Animal (SENACSA)-DIGECIPOA | rmiret@senacsa.gov.py |
| Peru | Rule TTT | Title | Agency/Company | E-Mail |
| Alfredo Caycho | PST | Ingeniero | Consorcio de Productores de Fruta | acaycho@cpf.com.pe |
| Ana Maria Coronado Nunez | PST, PCLI | Ingeniero Alimentario | AMCNSOLUCIONES | ana.coronado@amcnsoluciones.pe |
| Carmen Galeno Coronado | PCLI | Officer | Dirección General de Salud Ambiental (DIGESA)-Ministerio de Salud | carmen_galeno@hotmail.com |
| Consuelo Orihuela (Abarca) | PCLI | Head of integrated management systems | CAMPOSOL | corihuela@camposol.com.pe |
| Erika Soto Cárdenas | PST, PCLI | Especialista Sanidad Agropecuaria e Inocuidad Alimentaria | IICA-Peru | erika.soto@iica.int |
| Ernesto Velarde | PCLI | Officer | Conservacion Amazonica ACCA | ernestovelardev@gmail.com |
| Fabiola Quicio Sernaque | PCLI | Head of quality assurance | Gandules INC S.A.C. | fquicio@gandules.com.pe |
| Fredy Chavez Cruzado | PCLI | Gerente de Gestion de Proyectos | DANPER | fchavezc@gmail.com |
| Gonzalo R. Ibanez | PST | Ś | FDA | gibanezr@yahoo.com |
| Ivonne Granda Osorio | PCLI | Jefe de Aseguramiento de Calidad e Innovación | Deltagen del Peru S.A. | ivonne.go@gmail.com |
| Javier Delgado | PST | Quality Assurance Manager | ECOSAC AGRICOLA S.A.C. | javierdelgado@ecosac.com.pe |
| Juan Carlos Peralta Dez) | PCLI | Officer | Dirección General de Salud Ambiental (DIGESA)-Ministerio de Salud | jperalta@digesa.minsa.gob.pe |
| Laura Urteaga | PST | Medico Veterinario | Global Food Safety | lurteaga@gfs.com.pe |
| Michele Fontanot | PST, PCLI | PS Manager LATAM | 3M Perú S.A. | michele.fontanot@gmail.com |

| Patricia Maribel Bardales Abanto | PCLI | CODEX Technical Coordiantor | Dirección General de Salud Ambiental (DIGESA)-Ministerio de Salud | patrimaba2@gmail.com |
|-------------------------------------|--------------|--|--|---------------------------------|
| Sara Fernandez Garcia | PCLI | Consultora | GM&S Consulting Quality Group S.A.C. | sarha.fernandez@gmail.com |
| Walter Ivan Garrido More | PST | Técnico Agropecuario | СЕРІВО | walter1816@gmail.com |
| Jaime Flores | PCLI | Especialista Sanidad Agropecuaria e Inocuidad Alimentaria | IICA-Peru | jaime.flores@iica.int |
| Jaime Romero | PST, PCLI | Especialista Sanidad Agropecuaria e Inocuidad Alimentaria | IICA-Peru | jaime.romero@iica.int |
| Rosa María Cerna Zeta | PCLI | Officer - Ing. Ind. Alimentarias - Coordinadora de Acreditación de Organismos de Inspección/Certificación | INACAL-Instituto Nacional de Calidad | rcerna@inacal.gob.pe |
| Lida Lopez | PST | Ingeniero | Inspectorate Services Perú S.A.C. a Bereau Veritas Company | lidalopez.bv@gmail.com |
| Lida Lopez Suarez | PCLI | Engineer | Inspectorate Services Perú S.A.C. a Bereau Veritas Company | lida.lopez@pe.bureauveritas.com |
| Rossana Chavez Idrogo | PST | Jefe de Planta | Jayanca Fruits | rossanachavez@jayancafruits.com |
| Hilda Yauri | PST | Ingeniero | Luna Verde S.A.C. | hildayauri88@gmail.com |
| Paola Fano Castro | PCLI | Sub Gerente de Aseguramiento de la Calidad y Asuntos Regulatorios | Molitalia S.A. | pfano@molitalia.com.pe |
| Maria De la Colina- Ochoa | PCLI | Consultora | Panaderia San Jorge S.A. Global Food Safety SAC | mdelacolina@gfs.com.pe |
| Andrea Camila Parreño Fernández | PST, PCLI | Coordinadora Oficina Regional de Exportación Sur Oeste | PROMPERU | andrea.camila.pf@gmail.com |
| Claudia Solano Oré | PST, PCLI | Coordinadora del Departamento de Gestión de Calidad | PROMPERÚ | csolano@promperu.gob.pe |
| Javier Silva | PST, PCLI | Agroindustrial Engineer | PROMPERÚ | javierjsch1988@gmail.com |
| Erasmo Justiniano Aysanoa | PST | Ingeniero Agrónomo | Servicio Nacional de Sanidad Agraria (SENASA) | erasmojustiniano@gmail.com |
| Flora Lora Zonia Ordonez Turpo | PST | Ingeniero Agrónomo | Servicio Nacional de Sanidad Agraria (SENASA) | floraordonez@yahoo.es |
| Hebert Eduado Pisfil | PST | Biólogo | Servicio Nacional de Sanidad Agraria (SENASA) | hpisfil@senasa.gob.pe |

| Javier Aguilar Zapata | PST | Specialist in Agro-Food Safety | Servicio Nacional de Sanidad Agraria (SENASA) | jaguilar@senasa.gob.pe |
|----------------------------------|--------------|---|--|---|
| Javier Neptalí Aguilar Zapata | PCLI | Specialist in Agro-Food Safety | Servicio Nacional de Sanidad Agraria (SENASA) | jaguilar@senasa.gob.pe |
| Jesus Julio Vega Celedonio | PST | Ingeniero Agrónomo | Servicio Nacional de Sanidad Agraria (SENASA) | jjvega24@hotmail.com |
| Jose Ortiz Rojas | PST | Instructor Training | Servicio Nacional de Sanidad Agraria (SENASA) | jortiz@senasa.gob.pe |
| Juan Carlos Martos | PST | Especialista de la Subdirección de Insumos Agricolas | Servicio Nacional de Sanidad Agraria (SENASA) | jcmartos@senasa.gob.pe |
| Juan Miguel Rumay Centurión | PST | Especialista en Inocuidad Agroalimentaria | Servicio Nacional de Sanidad Agraria (SENASA) | jmrumayc@gmail.com |
| Julian Pasquel Loarte | PST | Ingeniero Agrónomo | Servicio Nacional de Sanidad Agraria (SENASA) | jpasquel@senasa.gob.pe |
| Julio Diaz | PST | Ingeniero Agrónomo | Servicio Nacional de Sanidad Agraria (SENASA) | JDIAZZ@senasa.gob.pe |
| Lilian Timana Mayanga | PST | Ingeniero Agrónomo | Servicio Nacional de Sanidad Agraria (SENASA) | ltimana@senasa.gob.pe |
| Marisela Yabar | PST | Ingeniero Agrónomo | Servicio Nacional de Sanidad Agraria (SENASA) | myabar@senasa.gob.pe |
| Mercedes Flores Cancino | PCLI | Specialist in Agro-Food Safety | Servicio Nacional de Sanidad Agraria (SENASA) | mflores@senasa.gob.pe |
| Mirtha Zapata Gallo | PST | Agronomia | Servicio Nacional de Sanidad Agraria (SENASA) | mirtha_karon@yahoo.es |
| Orlando Dolores Salas | PST | Ingeniero Agrónomo | Servicio Nacional de Sanidad Agraria (SENASA) | odolores@senasa.gob.pe |
| Patricia Marañon | PST | Ingeniero Agrónomo | Servicio Nacional de Sanidad Agraria (SENASA) | inocuidad02@senasa.gob.pe |
| Rosalia Huapaya Sotelo | PST | Agri-Food Safety Specialist | Servicio Nacional de Sanidad Agraria (SENASA) | rmhuapaya@senasa.gob.pe |
| Susan Dioses | PST, PCLI | Especialista en Inocuidad Agroalimentaria | Servicio Nacional de Sanidad Agraria (SENASA) | sdioses@senasa.gob.pe |
| Victor Martin Zapana Flores | PST | Ingeniero Agrónomo | Servicio Nacional de Sanidad Agraria (SENASA) | martinvzf@hotmail.com |
| Yani Marilu Valdez Vera | PST | Ingeniero Agrónomo | Servicio Nacional de Sanidad Agraria (SENASA) | mvaldez@senasa.gob.pe; yanivaldezv@gmail.com |
| Enma Lila Yauri Siguenas | PST | Ingeniera | Sociedad Agricola la Piramide S.A.C. | enmalila@gmail.com |
| Silvia Gonzalez | PST | Graduate in Food Engineering | SuperMercados Peruanos | silvia.gonzalez@spsa.com.pe |
| Patricia González Zapata | PCLI | Profesora | Universidad Cientifica del Sur | patygonzalez.pg13@gmail.com |

| Elena Elizabeth Lon Kan Prado | PST, PCLI | Director of Nutrition School | Universidad Le Cordon Bleu/Universidad Nacional Federico Villarreal | elena.lon-kan@ulcb.edu.pe |
|-----------------------------------|--------------|--|--|--|
| Pamela Diaz Romani | PST, PCLI | Ingeniero en Industrias Alimentarias | Universidad Nacional Agraria La Molina | pameldiaromani@gmail.com; pdiaz@lamolina.edu.pe |
| Ana Rosario Mercado del Pino | PCLI | Profesora/ Researcher/ Consultora | Universidad Nacional del Callao | mercado.anna@gmail.com |
| Jeanne Alba | PCLI | Bióloga-Microbióloga | Universidad Nacional Mayor de San Marcos | jalbaluna@gmail.com |
| Cesar Augusto Ortega Jimenez | PST | Ingeniero | Universidad San Ignacio de Loyola | caorji@gmail.com |
| Mirna Zuzunaga | PST, PCLI | Ingeniero Agrónomo | Universidad San Ignacio de Loyola | mirnazuzu@yahoo.es; mirna.zuzunaga@usil.pe |
| Moises Viacava | PST | Profesor | Universidad San Ignacio de Loyola | moises.viacava@gmail.com |
| Paola Angella Dulanto Bejarano | PCLI | Profesora | Universidad San Ignacio de Loyola | padb271@gmail.com |
| Paula Ramirez Garcia | pst, pcli | Ingeniero en Industrias Alimentarias y MgSc en Tecnologia de Alimentos | Universidad San Ignacio de Loyola | paularamirezg@yahoo.es; paularamirezg10@gmail.com |
| José Antonio Dulanto Bejarano | PST | Ingeniero Agrónomo | Viveros Genesis S.A.C | jadb261966@gmail.com; jdulantob@yahoo.com |
| St. Lucia | Rule TTT | Title | Agency/Company | E-Mail |
| Euthalia Philgence | PCLI | Consultant | Masters in HACCP/food safety | euthaliacass@yahoo.com |
| St. Vincent | Rule TTT | Title | Agency/Company | E-Mail |
| Kemston Cato | PST | Food Technologist | Winfresh Ltd | kcato@winfresh.net |
| Trinidad and Tobago | Rule TTT | Title | Agency/Company | E-Mail |
| Anne-Marie Gajar | PCLI | Food Technologist | National Agricultural Marketing and Development Corporation (NAMDEVCO) | agajar@namdevco.com |
| Ayoub Mohammed | PST | Agricultural Officer/Engineer | Ministry of Agriculture | youbsy@gmail.com |
| Christian George | PCLI | Research Officer | Trinidad & Tobago Manufacturers Association (TTMA) | trade@ttma.com |
| Devi Yankataso | PST, PCLI | Consultant-Quality Assurance | Independent | deviyankataso@gmail.com |
| Eric Bogers | PST, PCLI | General Manager/Consultant | Orange Horizon TT | ericbogers@hotmail.com |
| Erna Amsterdam | PST, PCLI | International and National Food Safety Consultant | Food Safety Consulting Services | ernaabiola@hotmail.com |

| Farz Khan | PCLI | Chief Chemist and Director Food and Drugs | Ministry of Health | farz_khan@hotmail.com |
|------------------------------|--------------|---|--|---------------------------|
| Ganesh Gangapersad | PST | Manager | Independent | ggangapersad@yahoo.co.uk |
| Helen Kennedy | PST, PCLI | Manager (Southern Caribbean) | Technological Solutions Limited | helen.kennedy@tsltech.com |
| Janelle Yarde- Blackman | PCLI | Quality Assurance Manager | Vemco A Division of Caribbean Distributors Partners Ltd. | janelleyarde@gmail.com |
| Lisa Harrynanan | PST, PCLI | Agricultural Health and Food Safety Specialist | IICA-Trinidad and Tobago | lisa.harrynanan@iica.int |
| Melissa Agbeko | PCLI | Food Technologist | Division of Agriculture, Tobago House of Assembly | m2agbeko@gmail.com |
| Nirmala Debysingh- Persad | PCLI | Chief Executive Officer | National Agricultural Marketing and Development Corporation (NAMDEVCO) | npersad@namdevco.com |
| Richard Guy | PST | Packinghouse Manager (Ag.) | National Agricultural Marketing and Development Corporation (NAMDEVCO) | rguy@namdevco.com |
| Sandra R. Williams | PST | Postharvest Technologist | Division of Agriculture, Tobago House of Assembly | sandra.timothy@gmail.com |
| Shoba Marimuthu | PST | Field Officer II, Quality Assurance Department | National Agricultural Marketing and Development Corporation (NAMDEVCO) | shoba.marimuthu@gmail.com |
| Vandanna Singh- Bogers | PCLI | Manager | Food Labeling TT & Nestle Foods | vandanna.singh@yahoo.com |

PARTICIPANT BREAKDOWN TABLES

| Table 7: FAST Training Particip | ant Demogr | aphics-Cumulo | ative 2014-2018 | | | | |
|---------------------------------|------------------|---------------|-------------------------|--------------------|-------|--------|--------|
| | | Type of Tre | aining Participant | | | Sex | |
| Country | Civil Society | Producers | People in Government | People in Firms | Male | Female | Total |
| Barbados | 12 | 13 | 129 | 118 | 144 | 128 | 272 |
| Colombia | 147 | 868 | 246 | 1,093 | 1,274 | 1080 | 2,354 |
| Costa Rica | 64 | 451 | 154 | 390 | 558 | 501 | 1,059 |
| Dominica | 2 | 19 | 17 | 9 | 32 | 15 | 47 |
| Dominican Rep. | 112 | 325 | 384 | 345 | 745 | 421 | 1,166 |
| El Salvador | 57 | 36 | 57 | 430 | 322 | 258 | 580 |
| Grenada | 3 | 0 | 13 | 13 | 19 | 10 | 29 |
| Guatemala | 174 | 585 | 87 | 555 | 1,063 | 338 | 1,401 |
| Haiti | 4 | 16 | 34 | 67 | 78 | 43 | 121 |
| Honduras | 189 | 176 | 157 | 698 | 833 | 387 | 1,220 |
| Jamaica | 42 | 277 | 257 | 286 | 395 | 467 | 862 |
| Nicaragua | 8 | 3 | 16 | 19 | 21 | 25 | 46 |
| Panama | 12 | 24 | 95 | 111 | 104 | 138 | 242 |
| Paraguay | 18 | 46 | 209 | 186 | 144 | 315 | 459 |
| Peru | 299 | 241 | 288 | 1,027 | 923 | 932 | 1,855 |
| St. Kitts/Nieves | 0 | 0 | 4 | 1 | 2 | 3 | 5 |
| St. Lucia | 4 | 6 | 8 | 6 | 16 | 8 | 24 |
| St. Vincent & the Grenadines | 0 | 8 | 9 | 11 | 14 | 14 | 28 |
| Trinidad & Tobago | 19 | 50 | 194 | 216 | 195 | 284 | 479 |
| Other- | 48 | 47 | 42 | 153 | 173 | 117 | 290 |
| Total | 1,214 | 3,191 | 2,400 | 5,734 | 7,055 | 5,484 | 12,539 |

| Table 8: Produce S | afety Rule P | articipant and T | rainer Demograph | nics | | | | | | |
|------------------------------|------------------|------------------|-------------------------|--------------------|------|--------|-----------|-----|------|-------|
| | | Type of Trai | ning Participant | | Ger | nder | Certifico | | | |
| Country | Civil Society | Producers | People in Government | People in Firms | Male | Female | PSG | PST | PSLT | Total |
| Barbados | 7 | 1 | 20 | 6 | 15 | 19 | 28 | 6 | | 34 |
| Colombia | 124 | 722 | 114 | 463 | 855 | 568 | 1373 | 50 | 6 | 1423 |
| Costa Rica | 13 | 279 | 31 | 97 | 285 | 135 | 410 | 10 | | 420 |
| Dominican Rep. | 0 | 16 | 1 | 1 | 14 | 4 | 17 | 1 | 4 | 18 |
| Dominica | 64 | 268 | 181 | 70 | 426 | 157 | 549 | 34 | | 583 |
| El Salvador | 0 | 9 | 8 | 2 | 16 | 3 | 18 | 1 | | 19 |
| Guatemala | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 |
| Haiti | 114 | 481 | 38 | 321 | 785 | 169 | 929 | 25 | | 954 |
| Honduras | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| Jamaica | 96 | 128 | 28 | 362 | 462 | 152 | 578 | 36 | | 614 |
| Miami | 29 | 106 | 86 | 69 | 163 | 127 | 265 | 25 | | 290 |
| Nicaragua | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| Panama | 0 | 7 | 9 | 1 | 8 | 9 | 15 | 2 | | 17 |
| Paraguay | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| Peru | 200 | 166 | 98 | 501 | 564 | 401 | 921 | 44 | 4 | 965 |
| St. Kitts/Nieves | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| St. Lucia | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| St. Vincent & the Grenadines | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | | 1 |
| Trinidad & Tobago | 3 | 25 | 60 | 31 | 60 | 59 | 109 | 10 | | 119 |
| Total | 650 | 2208 | 674 | 1925 | 3654 | 1803 | 5212 | 245 | 19* | 5457 |

*=PSLT numbers not included, already in PST count

| Table 9: Preventive C | ontrols for Human | ı Foods Rule Par | ticipant and Traine | er Demographics | | | | | |
|---------------------------------|-------------------|------------------|-------------------------|-----------------|-------|--------|------------------|-------------|-------|
| Country | | Type of Trai | ning Participant | | Ger | nder | Certifi Recei | cate ved | Total |
| Country | Civil Society | Producers | People in Government | People in Firms | Male | Female | PCQI | PCLI | |
| Barbados | 1 | 1 | 36 | 70 | 52 | 56 | 97 | 11 | 108 |
| Colombia | 19 | 67 | 79 | 367 | 233 | 299 | 429 | 28 | 618 |
| Costa Rica | 39 | 122 | 60 | 230 | 204 | 247 | 429 | 22 | 451 |
| Dominican Rep. | 0 | 3 | 15 | 8 | 16 | 10 | 26 | 0 | 26 |
| Dominica | 26 | 46 | 128 | 226 | 232 | 194 | 407 | 19 | 426 |
| El Salvador | 33 | 21 | 26 | 299 | 201 | 178 | 362 | 17 | 379 |
| Guatemala | 1 | 0 | 10 | 12 | 16 | 7 | 22 | 1 | 23 |
| Haiti | 38 | 74 | 32 | 164 | 188 | 120 | 290 | 18 | 308 |
| Honduras | 4 | 10 | 2 | 20 | 19 | 17 | 33 | 3 | 36 |
| Jamaica | 71 | 26 | 94 | 255 | 251 | 195 | 429 | 17 | 446 |
| Miami | 1 | 122 | 100 | 130 | 132 | 221 | 340 | 13 | 353 |
| Nicaragua | 7 | 3 | 13 | 15 | 15 | 23 | 34 | 4 | 38 |
| Panama | 2 | 7 | 20 | 70 | 46 | 53 | 92 | 7 | 99 |
| Paraguay | 10 | 37 | 113 | 133 | 90 | 203 | 280 | 13 | 293 |
| Peru | 89 | 51 | 114 | 457 | 268 | 443 | 680 | 31 | 711 |
| St. Kitts/Nieves | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| St. Lucia | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 |
| St. Vincent & the Grenadines | 0 | 8 | 7 | 6 | 11 | 10 | 21 | 0 | 21 |
| Trinidad & Tobago | 5 | 7 | 80 | 167 | 92 | 167 | 247 | 12 | 259 |
| Total | 346 | 626 | 932 | 2,692 | 2,094 | 2,502 | 4,379 | 217 | 4,596 |

| Table 10: Local Collaboratin | ng Organizations |
|------------------------------|---|
| Barbados | Barbados Investment and Development Corporation |
| | Inter-American Institute for Cooperation on Agriculture (IICA) |
| | National Agricultural Health and Food Control Programme |
| Colombia | ACIA (Colombian Association of Agronomists) |
| | Colombia Productiva |
| | Colombo Americana Chamber of Commerce (AMCHAM) |
| | Instituto Colombiano Agropecuario (ICA) |
| | Instituto Interamericano de Cooperación para la Agricultura (IICA) |
| | Instituto Nacional de Vigilancia de Medicamentos y Alimentos (INVIMA) |
| | Ministerio de Comercio, Industria y Turismo (MINCIT) |
| | Pontificia Universidad Javeriana |
| | ProColombia |
| Costa Rica | El Servicio Fitosanitario del Estado(SFE) y el Servicio Nacional de Salud Animal(SENASA) del Ministerio de Agricultura y Ganadería de Costa Rica |
| | Instituto Interamericano de Cooperación para la Agricultura (IICA) |
| | Instituto Nacional de Aprendizaje de Costa Rica (INA) |
| | Ministerio de Agricultura y Ganadería-Servicio Fitosanitario del Estado (SFE) |
| | Ministerio de Economía Industria y Comercio |
| | Universidad de Costa Rica (CITA) |
| Dominican Republic | Asociación Dominicana de Exportadores (ADOEXPO) |
| | Asociación Dominicana de Exportadores de Vegetales Orientales (ADEXVO) |
| | Centro de Exportación e Inversión de la República Dominicana (CEI-RD) |
| | Centro para el Desarrollo Agropecuario y Forestal (CEDAF) |
| | Fundación REDDOM |
| | Instituto Interamericano de Cooperación para la Agricultura (IICA) |
| | International Study Abroad |
| | Ministerio de Industria Comercio y MiPymes (MICM)-Dirección de Administración de Acuerdos y Tratados Comerciales Internacionales (DICOEX) |
| | Ministerio de Salud Pública de la República Dominicana |

| | Mnisterio de Agricultura-Departamento de Inocuidad Agro-alimentaria (DIA) |
|-------------|---|
| | USDA Programa Exporta Calidad/IESC |
| El Salvador | COEXPORT |
| | Fundación Salvadoreña para el Desarrollo Económico y Social (FUSADES) |
| | Instituto Interamericano de Cooperación para la Agricultura (IICA) |
| | Universidad Centroamericana |
| | Universidad José Matías Delgado |
| Guatemala | DIRECCIÓN DE INOCUIDAD, Viceministerio de Sanidad Agropecuaria y Regulaciones VISAR |
| | Instituto Interamericano de Cooperación para la Agricultura (IICA) |
| | Ministerio de Agricultura, Ganadería y Alimentación- Programa Integral Protección Agrícola y Ambiental (PIPPA) |
| Haiti | Agri-Cert S.A. |
| | Inter-American Institute for Cooperation on Agriculture (IICA) |
| | Ministry of Agriculture, Natural Resources and Rural Development (MARNDR) |
| Honduras | Cargill |
| | Instituto Interamericano de Cooperación para la Agricultura (IICA) |
| | Servicio Nacional de Sanidad e Inocuidad Agroalimentaria (SENASA) |
| | Zamorano University |
| Jamaica | Bureau of Standards Jamaica- Food Safety Modernization Secretariat |
| | Inter-American Institute for Cooperation on Agriculture (IICA) |
| | Ministry of Industry, Commerce, Agriculture and Fisheries (MICAF) |
| | Rural Agricultural Development Authority (RADA) |
| | University of the West Indies |
| Nicaragua | Instituto Interamericano de Cooperación para la Agricultura (IICA) |
| | Universidad Nacional Autónoma de Nicaragua- UNAN León |
| Panama | Instituto Interamericano de Cooperación para la Agricultura (IICA) |
| | Universidad de Panamá |
| Paraguay | Instituto Interamericano de Cooperación para la Agricultura (IICA) |
| | Instituto Nacional de Alimentación y Nutrición (INAN) |
| | Servicio Nacional de Calidad y Salud Animal (SENACSA) |

| Peru | Asociación de Exportadores de Perú (ADEX) |
|-------------------|---|
| | Instituto Interamericano de Cooperación para la Agricultura (IICA) |
| | Ministerio de Agricultura y Riego (MINAGRI) |
| | Ministerio de Comercio Exterior y Turismo (MINCETUR) |
| | Ministerio de Salud (MINSA)-Dirección General de Salud Ambiental (DIGESA) |
| | PROMANGO - ASOCIACION PERUANA DE PRODUCTORES DE MANGO |
| | PROMPERU |
| | Servicio Nacional de Sanidad Agraria (SENASA) |
| Trinidad & Tobago | ExportTT |
| | Inter-American Institute for Cooperation on Agriculture (IICA) |
| | Ministry of Health |
| | Ministry of Trade and Industry |
| | National Agricultural Marketing and Development Corporation (NAMDEVCO) |
| | Trinidad and Tobago Manufacturers Association (TIMA) |

PHOTOGRAPHS



Preventive Controls TTT participants, Jamaica, September 2016



Preventive Controls TT participants, Dominican Republic, March 2017



Preventive Controls TTT participants, Colombia, April 2017



Preventive Controls TTT, Peru, May 2017





Produce Safety TTT participants, Jamaica, August 2017



Produce Safety TTT, Dominican Republic, October 2017



Produce Safety TTT, Peru, November 2017



Produce Safety TTT participants, Guatemala, October 2017

Produce Safety Colombia, December 2017 (no photo)



Produce Safety TTT participants, Honduras, March 2018



Government FSMA Roundtable, Jamaica, June 2018



Private Sector FSMA Roundtable, Colombia, October 2018

ACTIVITIES FROM INCEPTION²

| Activities | BB | со | CR | DR | ES | GT | HA | HN | JA | NI | PA | PY | PE | Π |
|---|----|----|----|----|----|----|----|----|----|----|----|----|----|---|
| PHASE I (2014-2015) | | | | | | | | | | | | | | |
| 1. U.S. Stakeholder Meeting | | | | | | | | | | | | | | |
| 2. FSMA Awareness Workshops | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Ś | Х | Х | Х |
| 3. FSMA Readiness Assessments | Х | Х | Х | Х | Х | Х | | Х | Х | | Х | Х | Х | Х |
| 4. FSMA Rules Webinars | Х | Х | Х | Х | Х | Х | | Х | Х | Х | Ś | Х | Х | Х |
| 5. Country Stakeholder Missions | Х | Х | Х | Х | | Х | Х | | Х | | | | Х | Х |
| PHASE II (2016-2018) | | | | | | | | | | | | | | |
| 6. PC Curriculum Translation into Spanish | | | | | | | | | | | | | | |
| 7. PC TTT for PC Lead Instructors (PCLIs) course | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х |
| 8. PCLIs Payback training for Qualified Individuals | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х |
| 9. PS TTT for PS Trainers course | Х | Х | Х | Х | Х | Х | | Х | Х | | Х | | Х | Х |
| 10. PS Trainer (PST) Payback training for Growers | Х | Х | Х | Х | | Х | | Х | Х | | | | Х | Х |
| 11. Produce Safety Lead Trainer Scale-Up | | Х | | Х | | Х | | | | | | | Х | |
| PHASE III (2018) | | | | | | | | | | | | | | |
| 12. U.S. Importers FSMA Roundtable | | | | | | | | | | | | | | |
| 13. FSMA Readiness Assessments | | Х | | | | | | | Х | | | Х | Х | Х |
| 14. Government FSMA Roundtables | Х | Х | | | | | | | Х | | | Х | Х | Х |
| 15. Food Safety Road Maps | | Х | | | | | | | Х | | | | Х | Х |
| 16. Private Sector FSMA Roundtable | | Х | | | | | | | | | | | | |
| 17. FSMA Messaging Resources | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х | Х |

- PC= FSMA Preventive Controls for Human Foods Rule
- PS= FSMA Produce Safety Rule

² BB-Barbados, CO-Colombia, DR-Dominican Republic, ES-El Salvador, GT-Guatemala, HA-Haiti, HO-Honduras, JA-Jamaica, NI-Nicaragua, PA-Panama, PY-Paraguay, PE-Peru-TT-Trinidad and Tobago

ACTIVITY DESCRIPTIONS

PHASE I (2014-2015)

- 1. U.S. Stakeholder Meeting- October 6-7, 2015, FAS hosted a 2-day Stakeholder Meeting in DC with participation from USAID, FDA, IICA, and the FDA Alliances for the FAST project. The first day the USAID-USDA cooperative agreement and data collected by the staff was reviewed and updates from FDA on the specific FSMA rules that had been published. The second day moderated group sessions identified priorities and approaches for trainings in the countries and sub-regions and how to best combine the FAST efforts with the education efforts of the FDA and the Alliances. A Phase I draft work plan was developed that ensured communication channels and next steps for each institution. The meeting engaged the various partners and gained commitment to continue with the implementation of the FAST project.
- 2. FSMA Awareness Workshops- A series of 2-day trainings on FSMA and how to meet U.S. regulations for the export of food. Presentations by experts from IICA, the FDA and Texas Tech University; Day 1: overall global food safety system and U.S. agencies involved in food import and export requirements and Day 2: presentations on the proposed FSMA regulations. At the beginning of each workshop the country's food safety agencies presented on the structure of their food safety systems and regulations to: 1) describe their structure/system similarities and differences to the U.S. system, and 2) assess how to identify compliance with both domestic and international food safety standards and regulations, including FSMA. Export groups were invited to present on main exports to the U.S.
- 3. FSMA Readiness Assessments- A sample of small/medium-sized production, packing and processing facilities were assessed to gauge the general readiness of compliance for the proposed FSMA regulations. FSMA experts conducted the assessments, accompanied by government representative observers, to estimate levels of readiness by facilities for information on the country's needs for additional training on FSMA. The basis for the assessment was a FSMA Readiness Tool, an excel based self-assessment tool developed by Dr. Marcos Sanchez when at IICA and then Texas Tech. Time at facilities, 5-6 hours. Information was gathered formally through the Readiness Tool and informally through conversations and discussion. At each visit conclusion, findings were shared with the companies for a better understanding of the FSMA proposed rules and requirements.
- 4. FSMA Rules Webinars- FAST funded a 3-part FSMA webinar series with simultaneously Spanish and English language on three proposed FSMA regulations. The series was facilitated by IICA at 35 local IICA offices with 754 participants.
- 5. Country Stakeholder Missions- The FAST Food Safety Advisor conducted TDY missions to socialize FSMA with country government stakeholders, identify potential public and private sector collaborators, and coordinate with incountry FAS Posts and USAID Missions on the FAST project's purpose and activities. Applicants for the Train-the-Trainer activity were solicited.
- 6. PC Curriculum Translation into Spanish- The translation of official Food Safety Preventive Controls Alliance (FSPCA) course materials necessary for the FAST project to conduct the Lead Instructor TTT courses directly in Spanish. The FAST team secured a translation company and established a Technical Working Group (TWG). The TWG of native Spanish speakers (USDA/FAS, FDA, and university professors) reviewed and edited the translated 16 chapters and presentation materials (~500 pages). The TWG provided technical expertise using FDA's glossary terms and Codex Standards on General Principles of Food Hygiene Document vocabulary, verifying language consistency, and reviewing for cultural adaptability and sensitivity for the international audience. The TWG met biweekly to efficiently complete the task within two-months. Materials included the Instructor's Manual, Participant's Manual, workbook exercises and food modules. The Spanish materials are now used worldwide by the FSPCA trainers and available to other public and private entities and the general public in print and digital form.

PHASE II (2016-2018)

7. PC Train-the-Trainer (TTT) for PC Lead Instructors (PCLIs) course- The 4-day PC Rule TTT course was sanctioned by the FSPCA and officially recognized by the FDA as a means for individuals to receive certification as a train-thetrainer for the PC Rule. The PC TTT course trained FSPCA approved and FAS vetted candidates to become trainers and assist companies producing human food in complying with the preventive controls regulations that are part of FSMA. Participants successfully completing the training received designation of PC Lead Instructors authorizing them to train others as Qualified Individuals, a designation required at processing plants to comply with the PC Rule if exporting to the U.S.

- 8. PCLIs Payback training for Qualified Individuals- Following the TTT model to disseminate FSMA information, individuals completing the PC TTT PCLI course were obligated to train others on the technical aspects and implementation of the PC Rule. The pay-back trainings used FDA-sanctioned materials and upon completion participants received certificates as PC Qualifying Individuals (PCQIs).
- 9. PS TTT for PS Trainers course- The 4-day PS Rule TTT course was sanctioned by the Produce Safety Alliance (PSA) and officially recognized by the FDA as a means for receiving certification as a train-the-trainer for the PS Rule. The PS TTT course trained FAS vetted candidates to assist fruit and vegetable growers in complying with the produce safety regulations that are part of FSMA. Participants successfully completing the training received designation of PS Trainers. PS Trainers can aid in developing Farm Safety Plans, a requirement under the PS Rule of production farms exporting to the U.S.
- 10. PS Trainer (PST) Payback training for Growers- Following the TTT model to disseminate FSMA information, participants completing the no-fee FAST project's PS Trainer course were obligated to train others on the technical aspects and implementation of the FSMA Produce Safety Rule. The pay-back trainings used FDA-sanctioned PSA materials and upon completion participants received USDA participation certificates.
- 11. Produce Safety Lead Trainer Scale-Up- As follow-on to the PS TTT course in four countries, PS Trainers with advanced produce safety knowledge, experience and commitment to further train others received coaching for application to the PSA PS Lead Trainer designation. The PSTs also shadowed PSA Trainer-Of-Trainers experts and co-taught sections at PS Grower trainings.

PHASE III (2018)

- 12. U.S. Importers FSMA Roundtable- FAS hosted a one-day program in Miami for U.S. importer and broker companies who source produce from SMEs in LAC. FSMA experts and FDA, CBP and FAS representatives addressed concerns and provided newest FSMA compliance information.
- 13. FSMA Readiness Assessments- A sample of packing and processing facilities in South America and the Caribbean exporting to the U.S. had visits and virtual consultation to assess each facility's FSMA readiness, and to assist them in developing a Food Safety Plan, records, and facility improvements for FSMA compliance. The sample gave a snapshot of the general state of the country's facility readiness and interest in compliance.
- 14. Government FSMA Roundtables- A two-day activity of gathered representatives from ministries responsible for food safety (e.g. Health, Trade, Agriculture) to discuss the FSMA regulations and potential issues that may impede or block their country's export sector in compliance. Inter-ministerial groups considered how their country's current regulations harmonized with FSMA regulations. Each country group drafted a collaborative "road map" plan to take ownership of and advance their food safety regulations taking into consideration harmonization with FSMA. FAS gained a greater understanding of each country's current and planned food safety policies that can be used for future government to government supported activities.
- 15. Food Safety Road Maps- A follow-on to the FSMA Government Roundtable activity was an offer to the country inter-ministerial groups for consult on their food safety road map exercise. The road map exercise was an activity for the inter-ministerial groups to plan and assume responsibility for their country's food safety regulations. The road map would also be a documented foundation of where next assistance programs or offices could consider support after the FAST project concluded.
- 16. Private Sector FSMA Roundtable- Six FSMA Roundtables held in three locations in Colombia (Bogota, Cali and Medellin) for private sector companies that export to the U.S. The roundtables were not training sessions, but a group consultation activity facilitated by FSMA experts. The Preventive Controls Rule roundtable, addressing regulations for processed products, was 2-days and the Produce Safety Rule roundtable for fresh produce regulations was 1-day. Participants were the company's food safety coordinator or quality control manager.
- 17. FSMA Messaging Resources- Over the past four years while training on the new FSMA rules in the Latin America and Caribbean region FAS staff and consultants found areas of repeated need for basic FSMA information. In general, it was learned that individuals did not go to or found the FDA websites confusing. To address this, 10 FSMA videos of 3 minutes or less and corresponding information sheets both in English and Spanish were developed and uploaded to youtube and numerous collaborator and other web sites.

List of Acronyms

| FAS | USDA Foreign Agricultural Service |
|--|---|
| FAST | Food Safety and Agricultural Sustainability Training project |
| FDA | US Food and Drug Administration |
| FFP | USDA Food for Progress Program |
| FSMA | Food Safety Modernization Act |
| FSPCA | Food Safety Preventive Controls Alliance |
| FSTI | Food Security and Trade Integration Program |
| FSVP | Foreign Supplier Verification Program |
| IESC | International Executive Service Corps |
| IICA | Inter-American Institute for Cooperation on Agriculture |
| JIFSAN | Joint Institute for Food Safety and Applied Nutrition |
| LAC | Latin American and Caribbean region |
| PC | FSMA Preventive Controls for Human Food Rule |
| | |
| PCLI | Preventive Controls Lead Instructor |
| PCLI PCQI | Preventive Controls Lead Instructor Preventive Controls Qualified Individual |
| PCLI PCQI PS | Preventive Controls Lead Instructor Preventive Controls Qualified Individual FSMA Produce Safety Rule |
| PCLI PCQI PS PSA | Preventive Controls Lead Instructor Preventive Controls Qualified Individual FSMA Produce Safety Rule Produce Safety Alliance |
| PCLI PCQI PS PSA PSLT | Preventive Controls Lead Instructor Preventive Controls Qualified Individual FSMA Produce Safety Rule Produce Safety Alliance Produce Safety Lead Trainer |
| PCLI PCQI PS PSA PSLT PST | Preventive Controls Lead Instructor Preventive Controls Qualified Individual FSMA Produce Safety Rule Produce Safety Alliance Produce Safety Lead Trainer Produce Safety Trainer |
| PCLI PCQI PS PSA PSLT PST PSG | Preventive Controls Lead Instructor Preventive Controls Qualified Individual FSMA Produce Safety Rule Produce Safety Alliance Produce Safety Lead Trainer Produce Safety Trainer Produce Safety Grower |
| PCLI PCQI PS PSA PSLT PST PSG SME | Preventive Controls Lead Instructor Preventive Controls Qualified Individual FSMA Produce Safety Rule Produce Safety Alliance Produce Safety Lead Trainer Produce Safety Trainer Produce Safety Grower Small and Medium-Sized Enterprise |
| PCLI PCQI PS PSA PSLT PST PSG SME TOT | Preventive Controls Lead Instructor Preventive Controls Qualified Individual FSMA Produce Safety Rule Produce Safety Alliance Produce Safety Lead Trainer Produce Safety Trainer Produce Safety Grower Small and Medium-Sized Enterprise Trainer-Of-Trainers |
| PCLI PCQI PS PSA PSLT PST PSG SME TOT TTT | Preventive Controls Lead Instructor Preventive Controls Qualified Individual FSMA Produce Safety Rule Produce Safety Alliance Produce Safety Lead Trainer Produce Safety Trainer Produce Safety Grower Small and Medium-Sized Enterprise Trainer-Of-Trainers Trainer (training delivery method) |
| PCLI PCQI PS PSA PSLT PST PSG SME TOT TTT USAID | Preventive Controls Lead Instructor Preventive Controls Qualified Individual FSMA Produce Safety Rule Produce Safety Alliance Produce Safety Lead Trainer Produce Safety Trainer Produce Safety Grower Small and Medium-Sized Enterprise Trainer-Of-Trainers Train-the-Trainer (training delivery method) U.S. Agency for International Development |
| PCLI PCQI PS PSA PSLT PSG SME TOT TTT USAID USDA | Preventive Controls Lead Instructor Preventive Controls Qualified Individual FSMA Produce Safety Rule Produce Safety Alliance Produce Safety Lead Trainer Produce Safety Trainer Produce Safety Grower Small and Medium-Sized Enterprise Trainer-Of-Trainers Train-the-Trainer (training delivery method) U.S. Agency for International Development U.S. Department of Agriculture |