



Globalization of economies, health and nutrition awareness, and growth of global food markets are driving demand for tropical fruits, both in and outside Latin America and the Caribbean (LAC).<sup>1</sup> To tap this potential, CIAT's Tropical Fruits Program provides farmers, partners, local agencies, and entrepreneurs with the tools, technologies, and methodologies needed to implement more sustainable production systems, and better select likely products for their successful development, production, processing, and marketing.

## Outputs and impact

The Tropical Fruits Program is focusing in three thematic areas that we feel respond best to demands we receive from our partners in research and development.

- **Design and promotion of eco-efficient production systems** to reduce postharvest losses, reduce the incidence of pests and diseases, increase the resilience of the system, and act as a mitigation strategy to climate change in a way that it generates real income opportunities to farmers.
- **Use and characterization of genetic diversity of tropical fruits** to characterize the genetic diversity of fruits to select materials that improve existing production systems, enhance the nutrition of consumers and producers, and improve competitiveness in the market.
- **Create access to equitable markets for small farmers** by facilitating access and developing new and existing markets, using different mechanisms, associations, and partnerships.

## Main activities

- Build our expertise to develop production systems following an agroecological approach.
- Promote agricultural conversion of the fruit sector, through the search and development of alternatives to reduce the accumulation of harmful chemical residues in the environment and end products that go to consumers.
- Investigate solutions to phytosanitary problems of widespread occurrence and distribution

causing great economic losses, through resistant germplasm or changes in production systems that reduce their impact and reduce negative environmental effects.

- Use best available climate change models to design and recommend resilient production systems, including the selection of species or strains, and studying the distribution of pests and diseases affecting fruit crops.
- Develop indicators of eco-efficient production systems, taking into account the ecological footprint of fruit crops.
- Promote production systems that contribute to mitigation and adaptation to climate change.

## Recently finished and ongoing projects

- Added value lulo: Alternatives for smallholder producers.
- Collection, characterization, and clonal multiplication of avocado (*Persea americana*) with emphasis on identification of lines tolerant to *Phytophthora* spp.
- Reduction of agrochemical inputs in plantain through technological innovations and strengthened value chains.
- More competitive naranjilla and Andean blackberry growers through the participatory selection of elite clones, integrated crop management, and strengthened value chains.
- Sustainable plantain production systems through innovative disease management strategies.
- Bioethanol, a new market opportunity for small banana and plantain growers.
- Standardization of micropropagation techniques for young explants of coconut palms, and resistant germplasm to solve coconut plant health problems in Colombia.

1. For an explanation of acronyms and abbreviations see [www.ciat.cgiar.org/newsroom/pdf/acronyms\\_syntheses.pdf](http://www.ciat.cgiar.org/newsroom/pdf/acronyms_syntheses.pdf)

- Strengthen the peach palm chain in the Municipality of Buenaventura, southwest Colombia.
- New soil management strategies and nutrition for plantain.
- Physico-chemical studies of the diversity of peach palm fruit (*Bactris gasipaes*) in Colombia and the Amazon Basin. Understanding consumer preferences.
- A business model to promote cashew cultivation and industry in Colombia.
- Benchmark of passion fruit and guava management and production in the Colombian Eastern Plains.
- Characterization, collection, and micropropagation of coconut hybrids and definition of the entomological complex as a long-term strategy to solve the phytosanitary issues of coconut in the Pacific Coast of Colombia.

### Partners and collaborators

**Australia:** University of Queensland • **Austria:** BOKU • **Colombia:** CORPOICA; UCO; UNAL; UNICAUCA; UNISARC • **Ecuador:** ESPOL; INIAP  
 • **Italy:** University of Bologna • **Sweden:** SLU  
 • **USA:** Iowa State University; University of California–Riverside; University of Georgia  
 • **Venezuela:** INIA

### Private companies

**Colombia:** ASLUBEL; ASOHOFrucOL; FEDEPLATANO; Productora de Jugos S.A.; PROFRUTALES Ltda.; SAG • **Costa Rica:** Cooperativa de Caficultores de Dota R.L.  
 • **Ecuador:** PLANOFA

### International agricultural research organizations

ACICAFOC • APHIS • Cirad • CRS • INRA • JIRCAS • Plant Health • SCRI • USDA

### CGIAR center

Bioversity International

### Donors

ASOHOFrucOL • Cirad • Colciencias • European Community • FONTAGRO • INRA • JIRCAS • MADR • USAID • Local Government

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