Corpoica
Corporación Colombiana de Investigación Agropecuaria

Cacao Research in CORPOICA

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Innovation Manager.

MINAGRICULTURA

TODOS POR UN NUEVO PAÍS
PAZ EQUIDAD EDUCACIÓN

Presentation content

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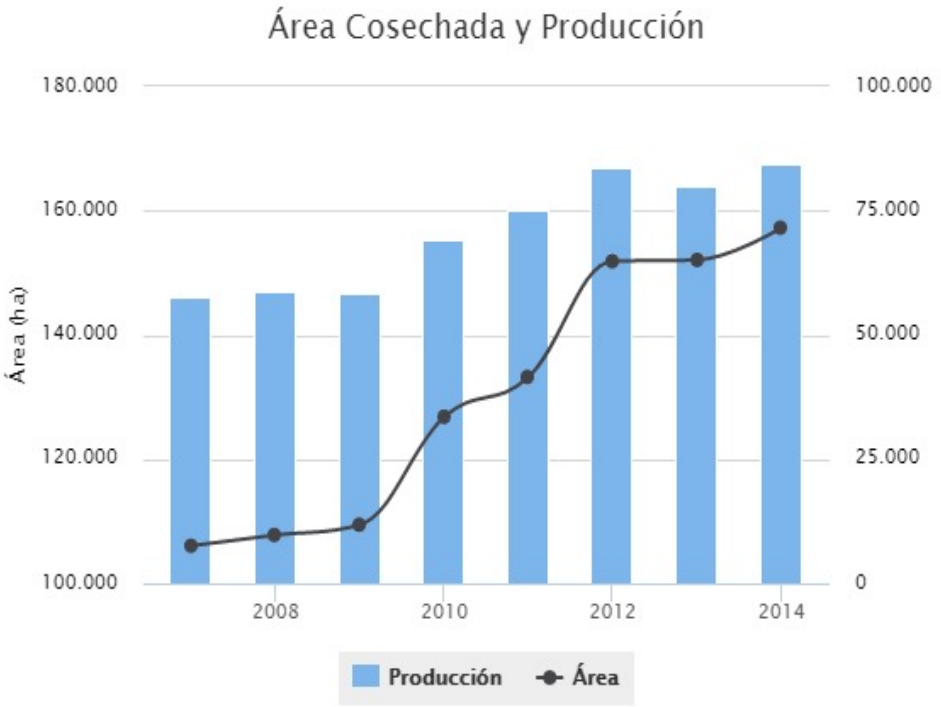
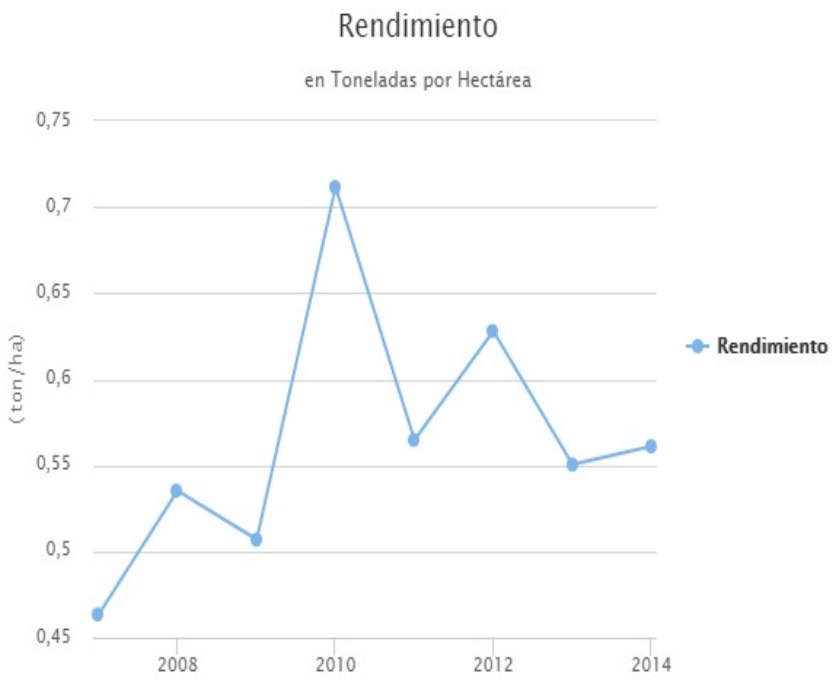
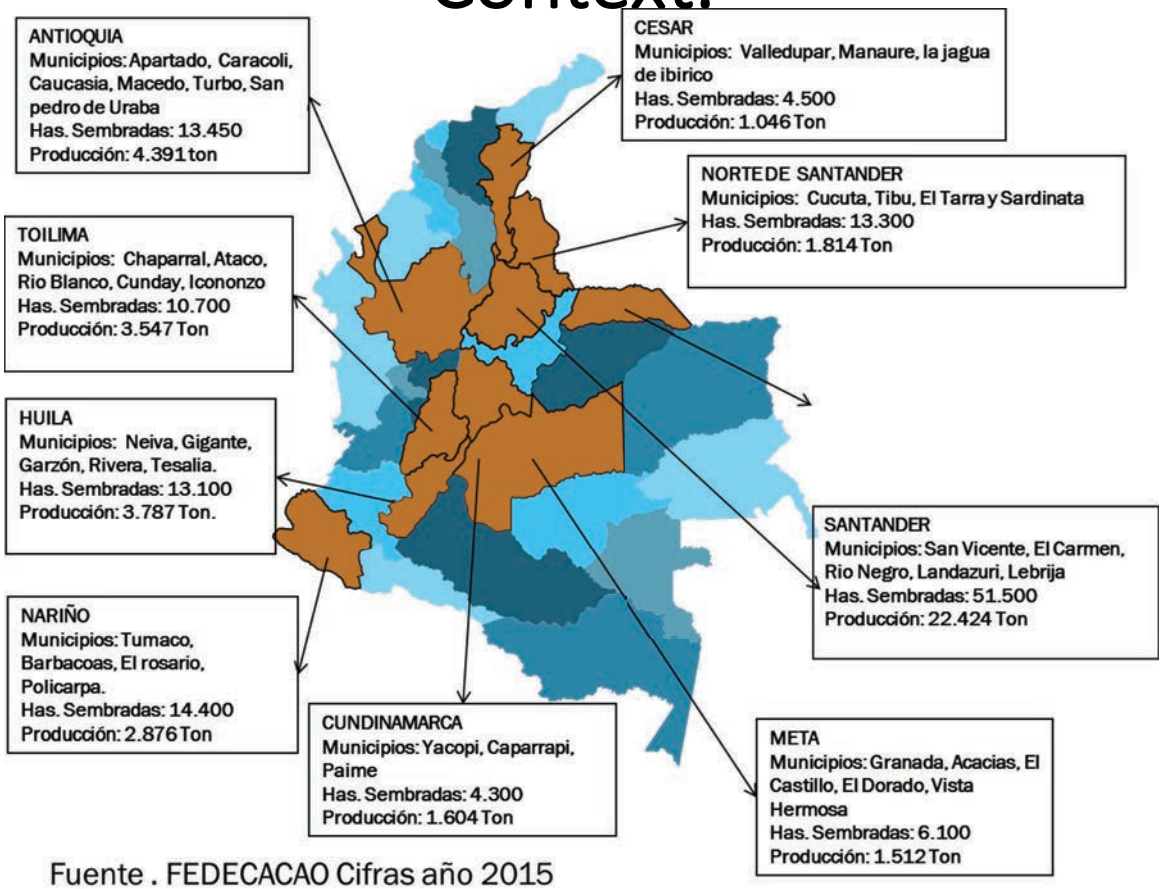
2) CORPOICA: Strategic Pillars
3) Cacao Research Netwok.
4) Granted Large-scale Projects.
5) Strategic Corporate Framework (2018-2028).

Cacao-Chocolate Production Chain: National Context.





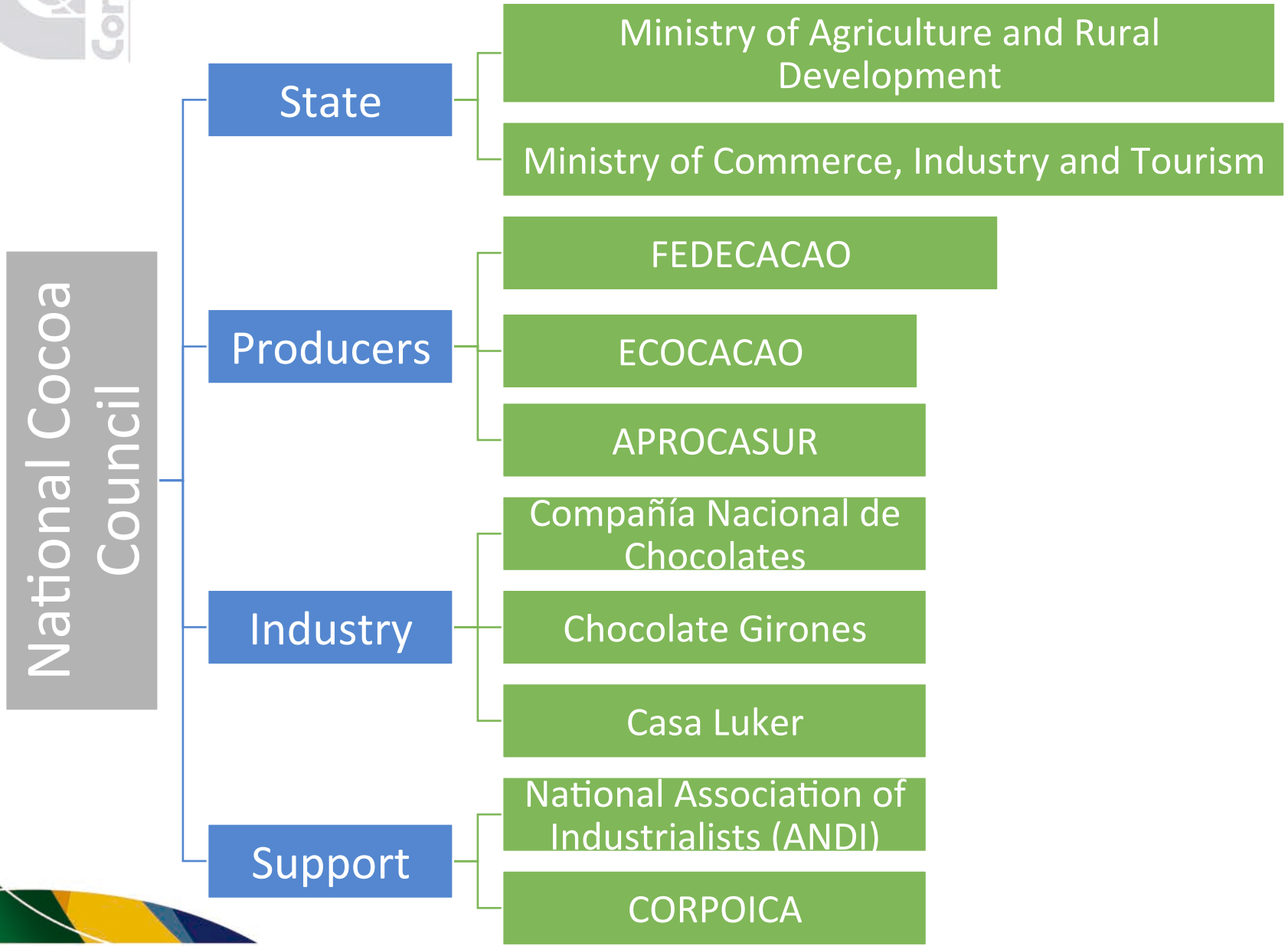
Cacao-Chocolate Production Chain: National Context.



Fuente . FEDECACAO Cifras año 2015

Variable	2012	2013	2014	2015	2016
Area (ha)	151.156	153.144	155.014	165.000	180.000
Production (Ton)	45.500	46.739	47.732	54.750	56.785
Yield (Ton/ha)	0,41	0,41	0,42	0,43	0,46

Institutionalism



CORPOICA: Strategic Pillars

Contribute to technical change to improve the productivity and competitiveness of the country's agriculture, by acting as: Engine, Actor y Support (Motor, Actor y Soporte in Spanish MAS)

To be a worldwide reference organization for its sustainability and concerted and coordinated capacity for action in the generation of knowledge and innovation products that contribute to the competitiveness of the Colombian agricultural sector.

Innovation Networks

Vegetables and Aromatic Plants Network

Perennial Crops Network

Roots and Tubers Network

Transitory and Agroindustrial Network

Innovation Networks

Cacao Network

Fruit Crops Network

Livestock Network

Cacao Research Network

31 Researchers (PhD, MSc and Professional)

Cacao Network

2 vinculation professionals support (transfer Technology)

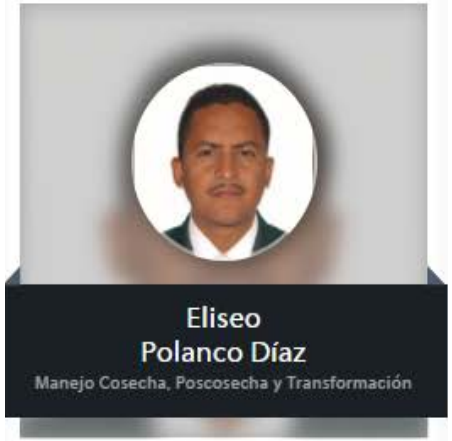
24 Support Professionals and Assitants

Plant Breeding and Reproductive Material

C.I La Suiza (Santander)

C.I El Nus (Antioquia

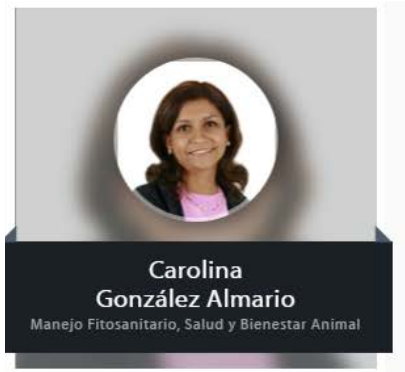
C.I Palmira (Valle del Cauca)

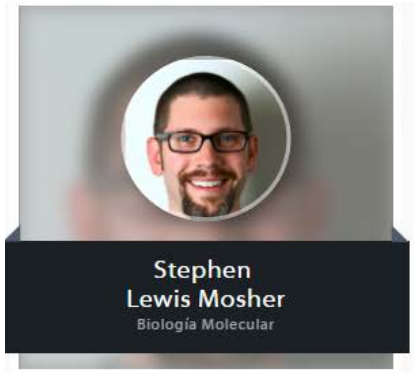


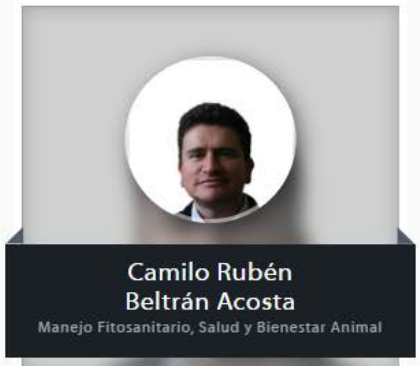
C.I Nataima (Tolima)

C.I Tibaitatá (Cundinamarca)

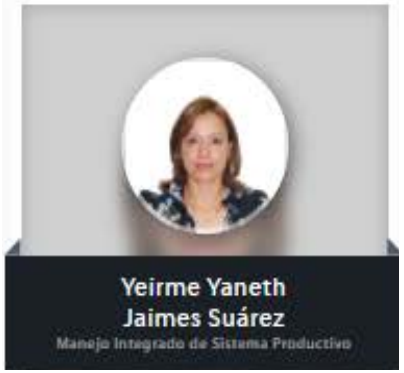
Integrated Management of Plant Diseases





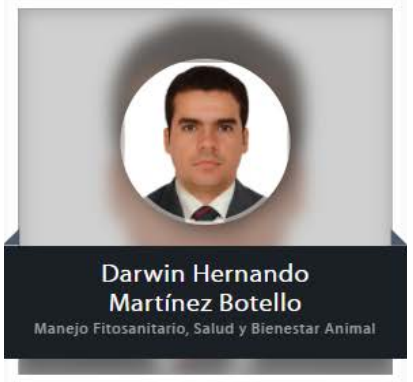


C.I Tibaitatá (Cundinamarca)



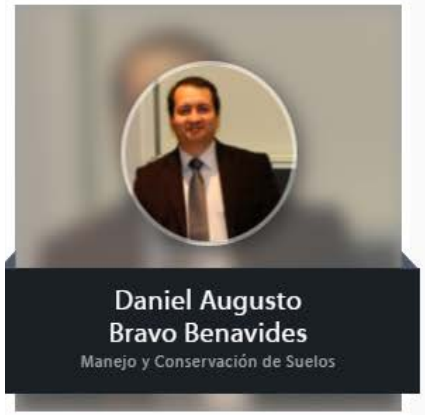
C.I La Suiza (Santander)

C.I El Mira (Nariño)



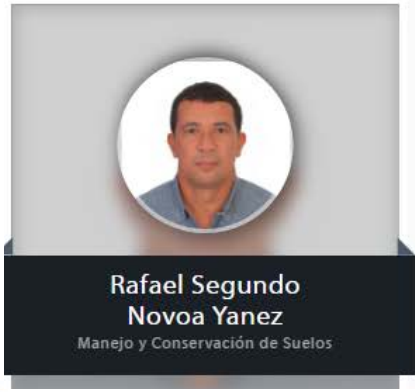
C.I Turipaná (Cordob

Soil Management And Conservation



C.I Tibaitatá (Cundinamarca)

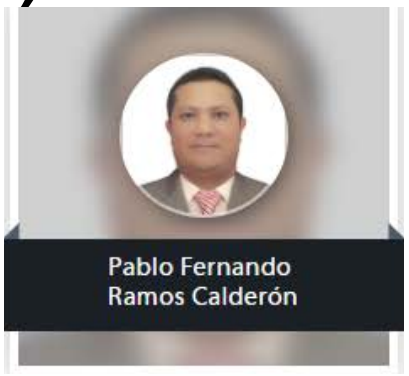
C.I La Suiza (Santander)



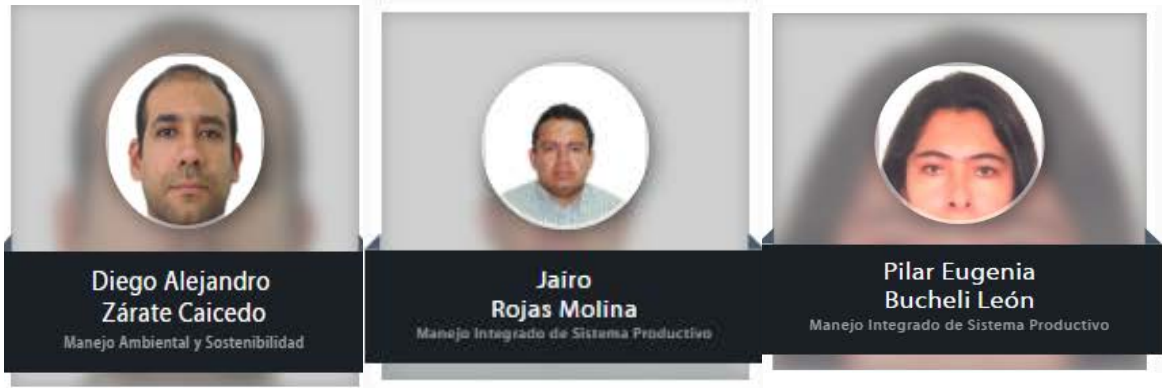
Sede Carmen de Bolivar (Bolivar)

Integrated Management of the Production System (Agroforestry)

C.I El Mira (Nariño)

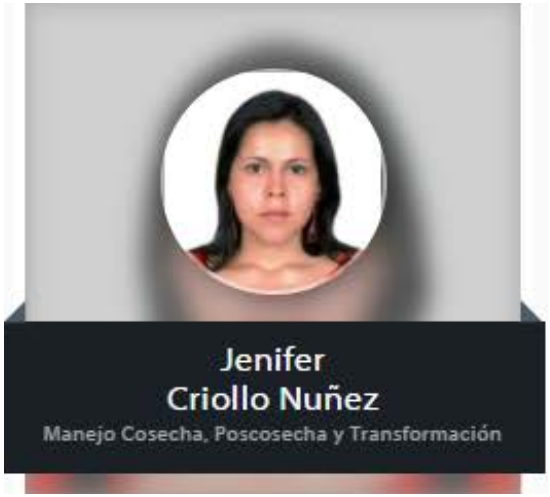


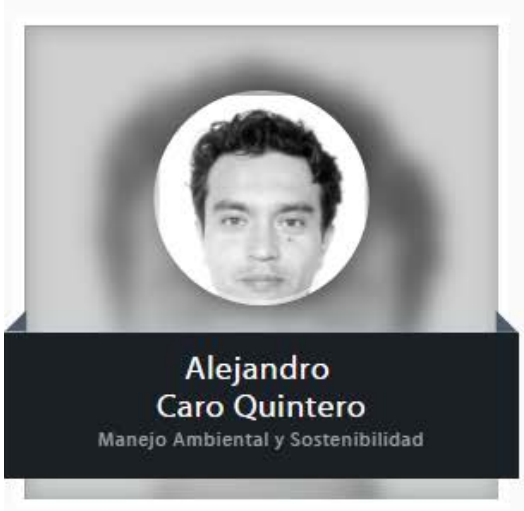
Sede Florencia (Caquetá)



C.I La Suiza (Santader)

Post-Harvest Management





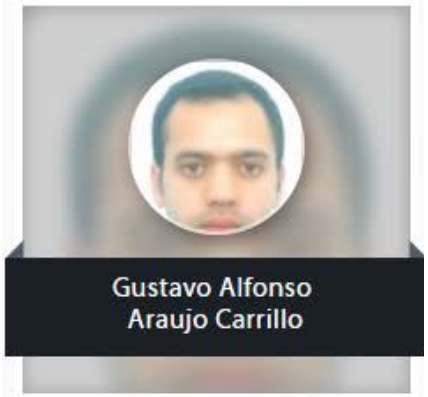
C.I Nataima (Tolima)

C.I Tibaitatá (Cundinamarca)

Socioeconomics, GIS and Technology Transfer

C.I La Suiza (Santander)

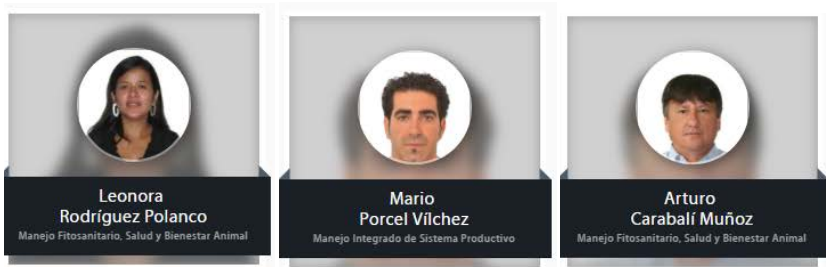
C.I Nataima (Tolima)



C.I Tibaitatá (Cundinamarca)

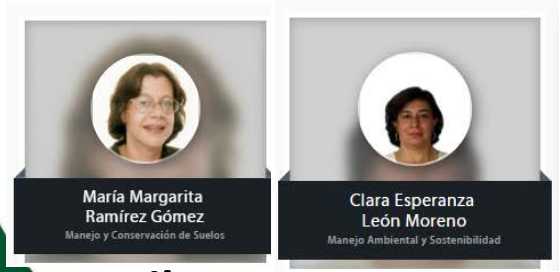
Inter-Network Collaboration

Post-Harvest Management



Integrated Managament of pests and diseases

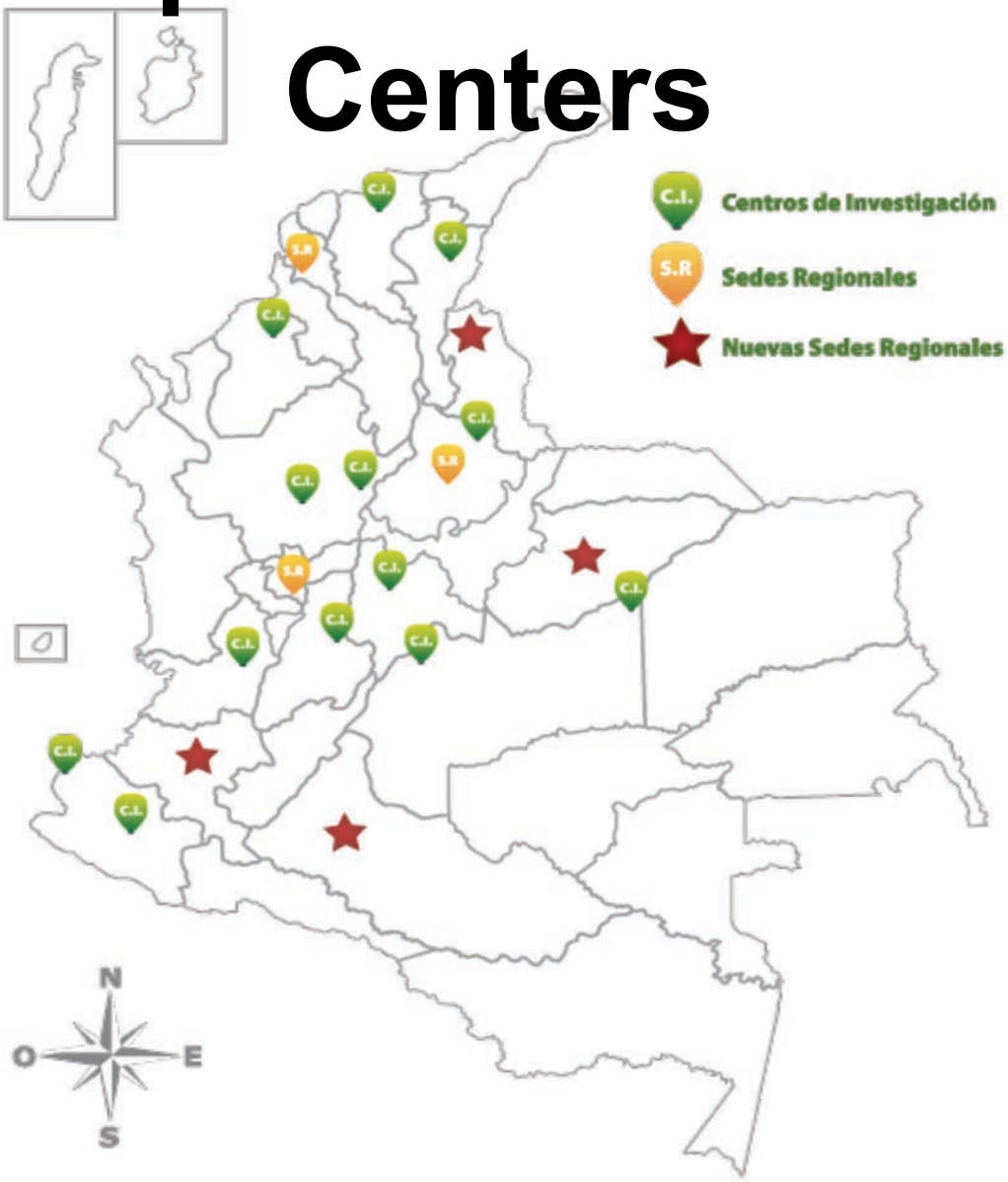
Integrated Management of production system



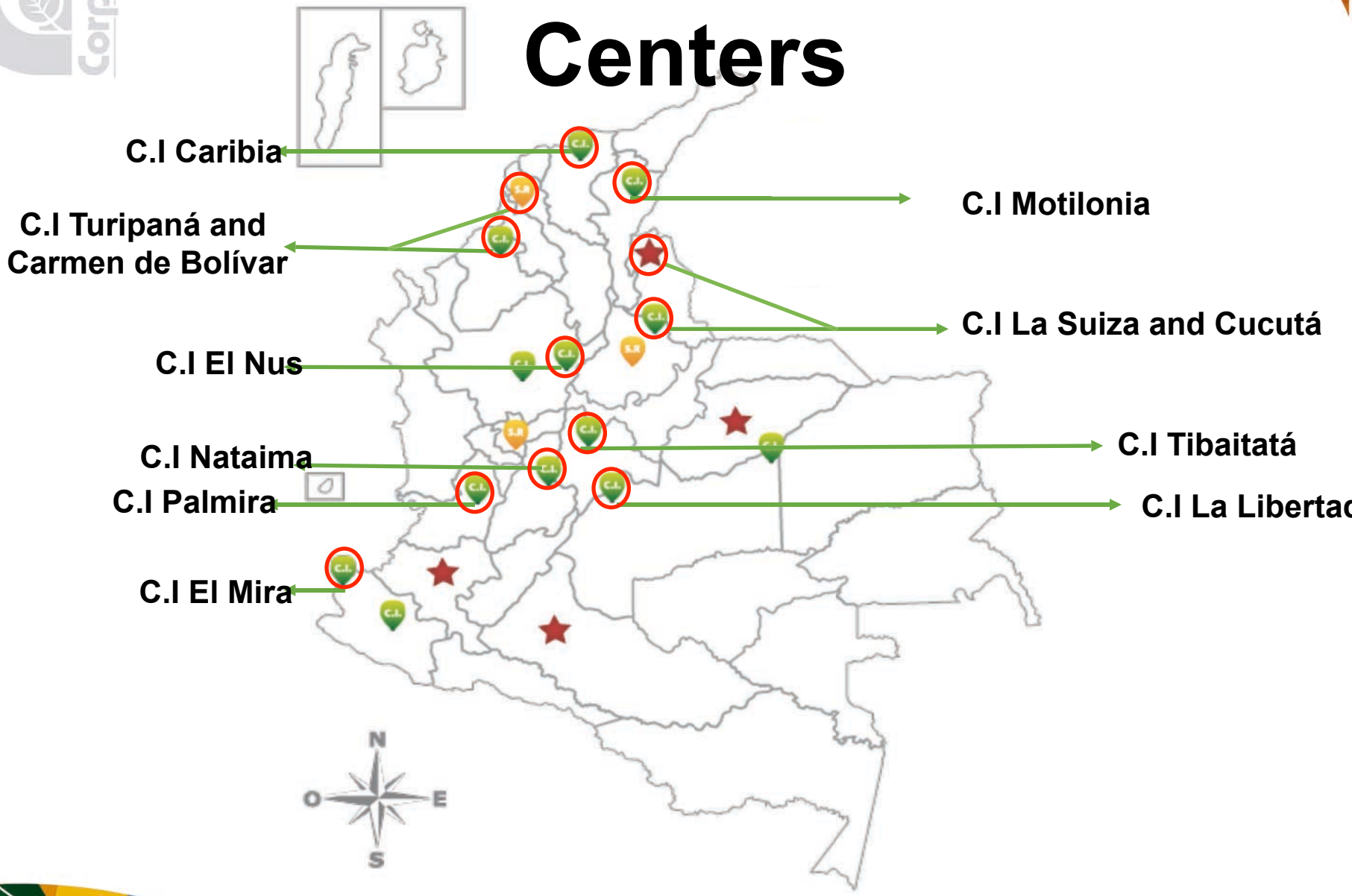
Soils managment

Plant Breeding Program

Corpoica Research Centers



Corpoica Research Centers



Granted Large-Scale Projects

Technological strategies to strengthen Colombian Cocoa Production

Genetic yield improvement program in Cocoa as a strategy to strengthen Colombian Cocoa production

Development and Innovation in Cocoa crop under Agroforestry Systems

Colombian Germplasm Bank for food and agriculture (Subdivision of Plants)

Production of quality seeds of i. improved varieties and ii. regional materials, to increase small farmers capabilities

Granted Large-Scale Projects

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Granted Large-Scale Projects

Technological strategies to strengthen Colombian Cocoa Production.

-Technical recommendations of alternatives production systems (traditional and intensive) with emphasis in agroforestry systems.

-Integrated Management of Pests and Diseases.

-Management of rootstocks / grafts for the establishment of new areas and renovation / rehabilitation of plantations.

- Technological strategies of harvesting and fermentation of cocoa beans to improve their quality.

- Soil management strategies to reduce the presence of cadmium in cocoa beans.

- Structure of production cocoa system costs in the Santandereana mountain sub-region

Genetic yield improvement program in Cocoa as a strategy to strengthen Colombian Cocoa production

- Parental selection by traits of interest: molecular characterization, characterization by quality, cadmium absorption and disease resistance.

- Evaluation of selected genotypes by value interest in different regions of Colombia.

- Genetic recombination of cocoa populations.

- Improvement of the productivity and sensory quality of cacao in Nariño.

Strategic Corporate Framework (2018-2028)

Focus N°1	Action Lines
INTEGRAL MANAGEMENT: Integrated management practices focused on improving the competitiveness of the cocoa system in 16 departments prioritized to reduce in the long term the unit cost of production (kg) of cocoa, increase the areas with Sustainable management practices, conservation or recovery and generate (in the medium term) effective partnerships.	L-1.1: Rehabilitation of plantations to recover productive capacity
	L-1.2: Pruning practices for the crop maitenance
	L-1.3: Management practices for the mitigation of wáter stress
	L-1.4: Strengthening alliances for the investigation and transfer technology
	L-1.5: Integrated fertilization strategies (regional focus)
	L-1.6: Analysis of the productive effect of agronomic practices

Strategic Corporate Framework (2018-2028)

Focus N°2	Action Lines
AGROFORESTERIA: Environmentally sustainable family farming production systems through the use of agroforestry systems and efficient water management practices that lead to diversification of cash flow and access to certifications or distinctions that in the long term allow in 16 prioritized cocoa departments : A) increase areas with sustainable management practices, conservation, recovery and adaptation, b) reduce the effects of variability and climate change, c) reduce unit costs of production, d) increase the value added Of cocoa by accessing special markets with differentiated prices, and (e) generating effective alliances.	L-2.1:Identification, characterization and utilization of tree species
	L-2.2:Validation of agroforestry designs at territorial level
	L-2.3: Zoning and socioeconomic and typing aptitude for planting cocoa
	L-2.4:Evaluation of biophysical interactions
	L-2.5: Efficient Water Management Practices
	L-2.6: Model validation of intensive production
	L-2.7: Strengthening alliances for the investigation and transfer technology

Strategic Corporate Framework (2018-2028)

Focus N°3	Action Lines
POST-HARVEST AND TRANSFORMATION: Improvement of the post-harvest processes and agroindustrial transformation of the cocoa bean and by-products of the system in 16 prioritized departments, through the design and use of protocols and prototypes for the processing of the seed and system's by-products , increasing in the Long-term safety, value-added and productive units with new species, and generate effective alliances in the medium term	L-3.1:Ensure a sustainable and differentiated quality through the design and use of protocols and prototypes (Processes in field and laboratory) that allow to innovate in the transformation of the cocoa seed.
	L-3.2:Design and adjustment of protocols and prototypes for the agroindustrial transformation of by-products of the system as a value added strategy.
	L-3.3: Reduction of mycotoxins through the adjustment, in post-harvest and storage processes, of the environmental conditions that minimize the appearance of contaminants
	L-3.4: Characterization of microbial populations involved in fermentation to improve efficiency and quality.
	L-3.5: Strengthen and generate alliances to develop research and transfer technology.

Strategic Corporate Framework (2018-2028)

Focus N°4	Action Lines
MITIGATION OF HEAVY METAL ABSORPTION: Reduction of the absorption of heavy metals to ensure the long-term safety of cocoa at permissible levels for commercialization, increasing productive units with new species and generate effective alliances in 16 prioritized departments	L-4.1: Characterization of cacao genotypes by cadmium absortion.
	L-4.2:Generation and validation of strategies based on bioremediation
	L-4.3: Validation of agricultural practices for the production of presence of heavy metals in soils.
	L-4.4:Strengthen and generate alliances to develop research and transfer technology

Strategic Corporate Framework (2018-2028)

Focus N°5	Action Lines
MANEJO FITOSANITARIO: Implement integrated management schemes that reduce the incidence of phytosanitary problems, contributing to the reduction of unit costs of production and generating effective partnerships.	L-5.1:Evaluation of chemical molecules for pest and disease control.
	L-5.2: Identification and Characterization of biocontrol
	L-5.3: Strengthen and generate alliances to develop research and transfer technology

Strategic Corporate Framework (2018-2028)

Enfoque N°6	Action Lines
PLANT BREEDING: Composite varieties resistant to diseases, with greater productivity and quality that allow the 16 departments prioritized reduce in the long term the unit costs of production, increase the value added to access specialized markets, and generate effective alliances.	L-6.1: Broaden the genetic basis for the improvement of the species through the characterization and utilization of genetic resources of the genus Theobroma.
	L-6.2:Obtaining segregating populations with characteristics of interest.
	L-6.3: Strengthen and generate alliances to develop research and transfer technology

CORPOICA FACILITIES

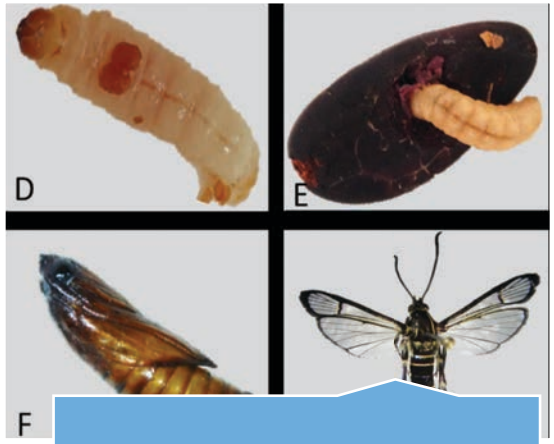
Laboratories

Agricultural Microbiology

Molecular Genetics

Analytical Chemistry

Post-Harvest



Entomology

CORPOICA FACILITIES

Field Evaluation Areas

Evaluation Plots (New clones)

Experimental Areas

Plant Nuseries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