Creating & Enabling Environment for Higher Productivity in Coffee: The case of Colombia

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Coffee in Colombia is very important.

More than 500,000 coffee families are involved.

More than 2 millions of persons directly or indirectly linked to coffee.

Coffee means something like 11% agricultural GDP.
Structure of Coffee Production in Colombia

- Coffee Farms: 666,578
- Coffee Municipalities: 598
- Coffee Growers: 541,198
- Coffee Plots: 1,895,378
- Total área cultivated: 914,261 ha

1.37 ha in coffee/farm
National Coffee Production 2006 - 2017

National Production [60 kg bags]

Coffee bags


Niña Phenomenon
Coffee Leaf Rust

60 kg bags
Coffee Rust in susceptible variety - 2010
National Coffee Productivity 2006 - 2017

Coffee bags

Dynamic of Coffee Productivity

Niña Phenomenon
Coffee Leaf Rust

Improving Productivity
During the last years have not been quality coffee problems, as a general situation.

In the first semester of 2016, specifically, there was a strong Niño phenomenon that affected some coffee areas. The main damage was reflected in the development of the berries.
Coffee Berry Borer, that has been a problem for years, in this one the levels of infestation are very low, up to now.
There are several reasons that have pushed up coffee productivity:

1. Promotion and Adoption of Resistant Varieties.
Reasons for Improving Productivity

Evolution of Resistant Varieties in Colombia

[thousands of ha]
Reasons for Improving Productivity

2. Increasing the density of population of coffee trees/ha.

Coffee Trees/ha [density of population]

- 2006: 4,543 trees/ha
- 2012: 5,006 trees/ha
- 2017 (Jun. 30): 5,160 trees/ha

Δ 617 trees/ha
Δ 13.6%
3. Decreasing the average age of the coffee plantations.

Reasons for Improving Productivity

Average Age of Coffee Plantations [years]

- 6.6 years
- 49.2,6%
4. Soil management.

Since 2016 a Extension Campaign started in order to promote two things:

- a. Higher doses of fertilizer and,
- b. To correct the PH of the soil.

There is a hope that this campaign will have positive effects in the future.
5. Shade conditions

Cenicafe is looking for wider knowledge in agroforestry systems.
Coffee Regions by Latitude

Reasons for Improving Productivity

- Cosecha principal (marzo abril mayo junio)
- Cosecha principal (marzo abril mayo junio) mitaca (octubre noviembre)
- Cosecha principal (septiembre octubre noviembre diciembre)
- Cosecha principal (septiembre octubre noviembre diciembre) mitaca (abril mayo)
Reasons for Improving Productivity

Designing Production Systems according to Latitude. Latitude plays a role in shade conditions.

Demonstrative Plots of right productions systems, according to latitude. 200 plots.
6. Research

Cenicafé is the National Center of Coffee Research. Next year will get 80 years working for coffee. The results of its research is transferred to the coffee growers through the extension service.
Research by Disciplines

- Quality
- Pathology
- Plant Breeding
- Soils
- Experimentation
- Agronomy
- Entomology
- Agroclimatology
- Postharvesting
- Biometrics
- Economy
- Fisiology
There are technologies to support different production systems.
One of the main focus of Cenicafé is generate technologies that improve coffee productivity. In this way is looking for new coffee varieties and new perspectives about coffee production systems.

New Varieties
Reasons for Improving Productivity

7. Postharvesting management

One of the Cenicafe’s focus is on saving water in postharvesting and to manage properly the water pollution used in the process.

Ecomill  Becolsub  Tina Tank

All of them save more than 95% of water used, compared to traditional method
8. Our Extension Service

The FNC, has a Extension Service working beside the coffee growers. At now, there are 960 extensionists [mainly agronomists], delivering the technology generated by Cenicafé with the goal of increase productivity and making coffee sustainable.
9. Credit

Since 2008 up to 2016, there was a Credit Scheme to promote the planting of new coffee and resistant varieties.

The FNC, worked together with the main public bank and some private ones.

This program reached:
- a. 233,000 credits
- b. 200,000 ha.
Remarks:

1. This is a general description about how Colombia and the FNC are working in order to reach higher productivities, than previous one.

2. A key goal is to support Economic Sustainability, as a first step to look for making coffee profitable.
Thanks