

# Recent Experiences of Coffee Replanting Programs in Colombia



CHANGING THE LANDSCAPE OF COFFEE PRODUCTION IN COLOMBIA

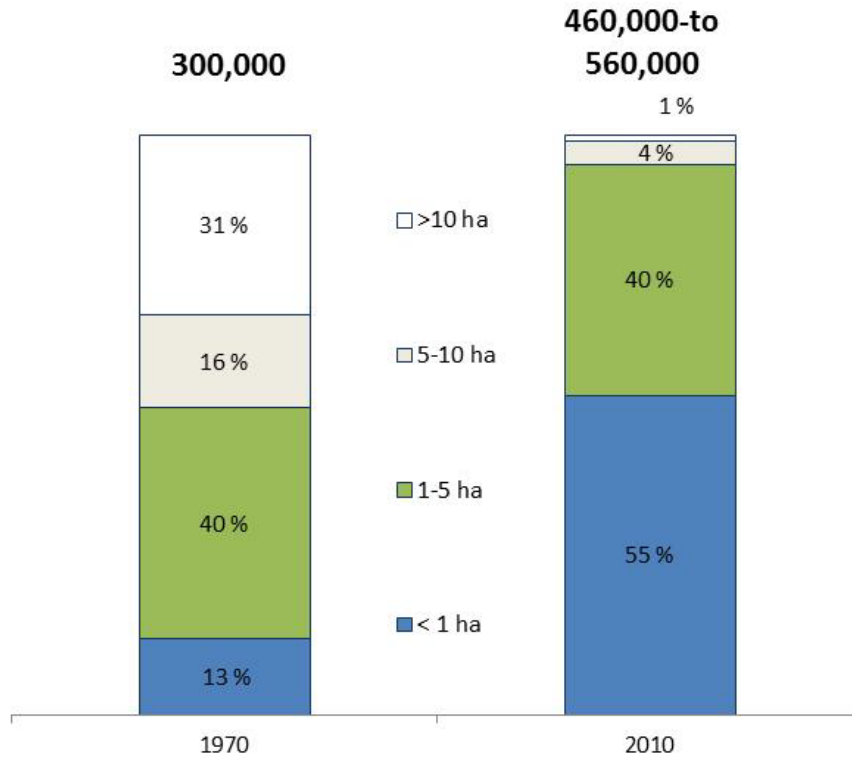
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By: Luz Diaz Rios  
Agribusiness Specialist, Sr.  
The World Bank.

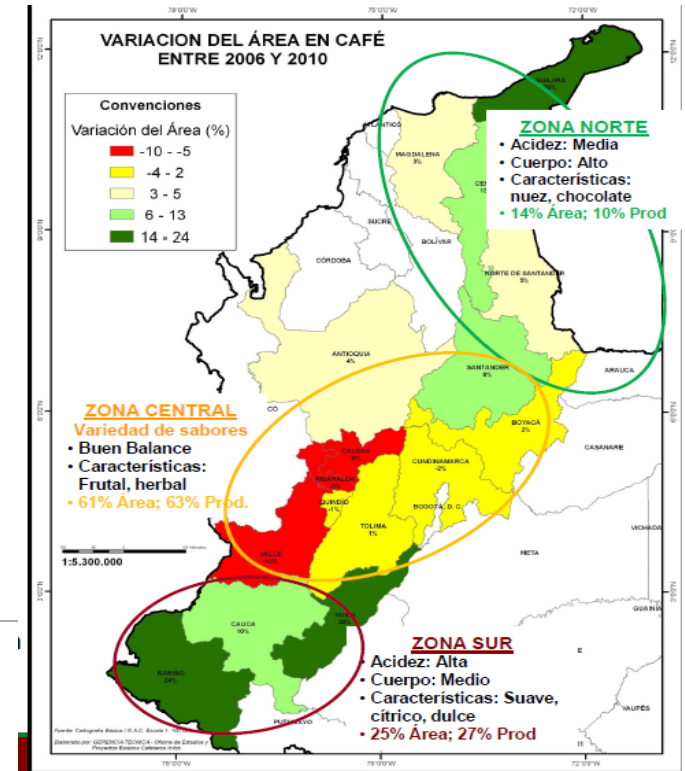
October 27, 2015

Photos: FNC

## Production Structure: Key Features



Source. Technoserve

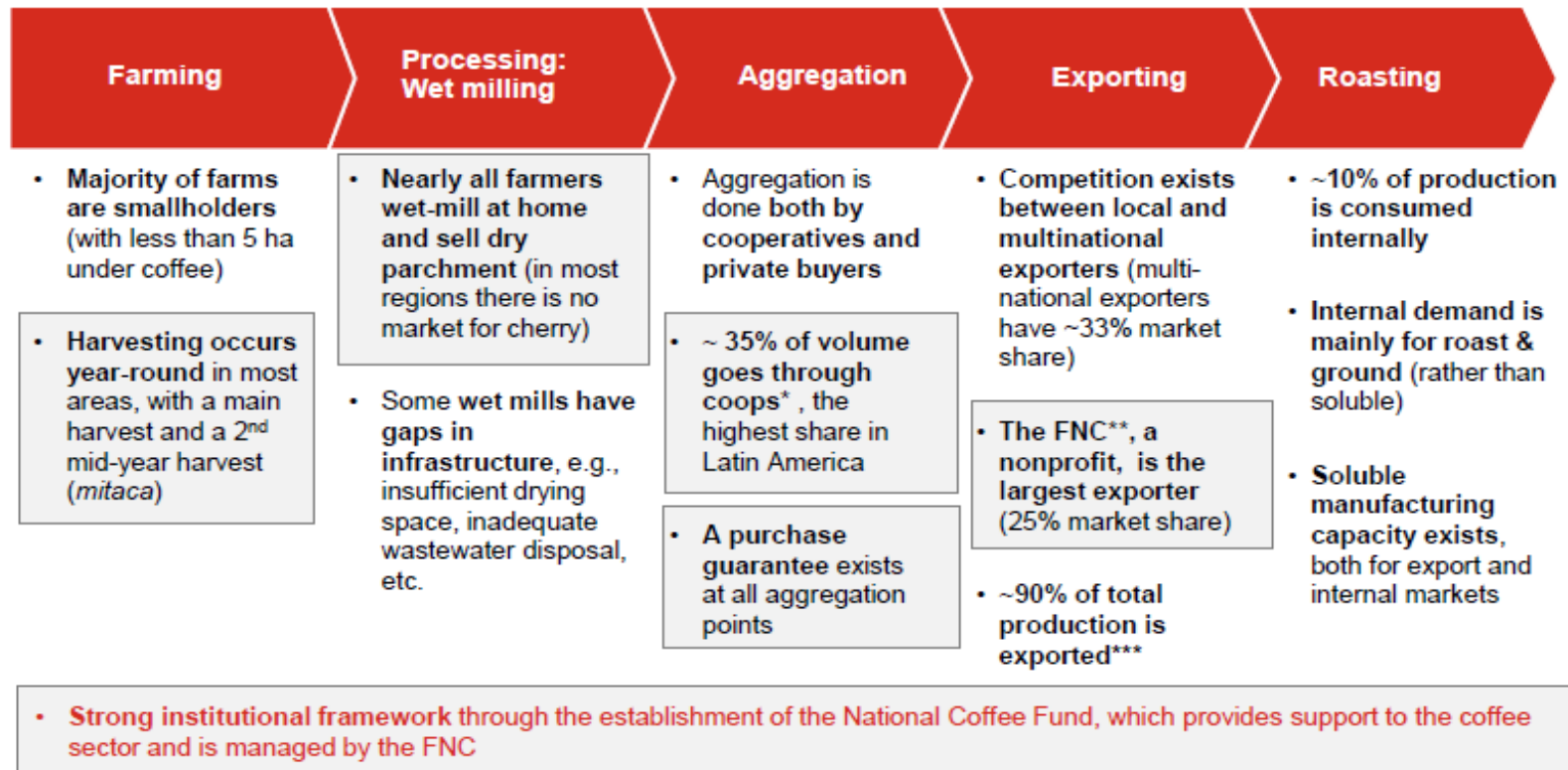


Source. FNC, 2010

## Supply Chain: Key Features

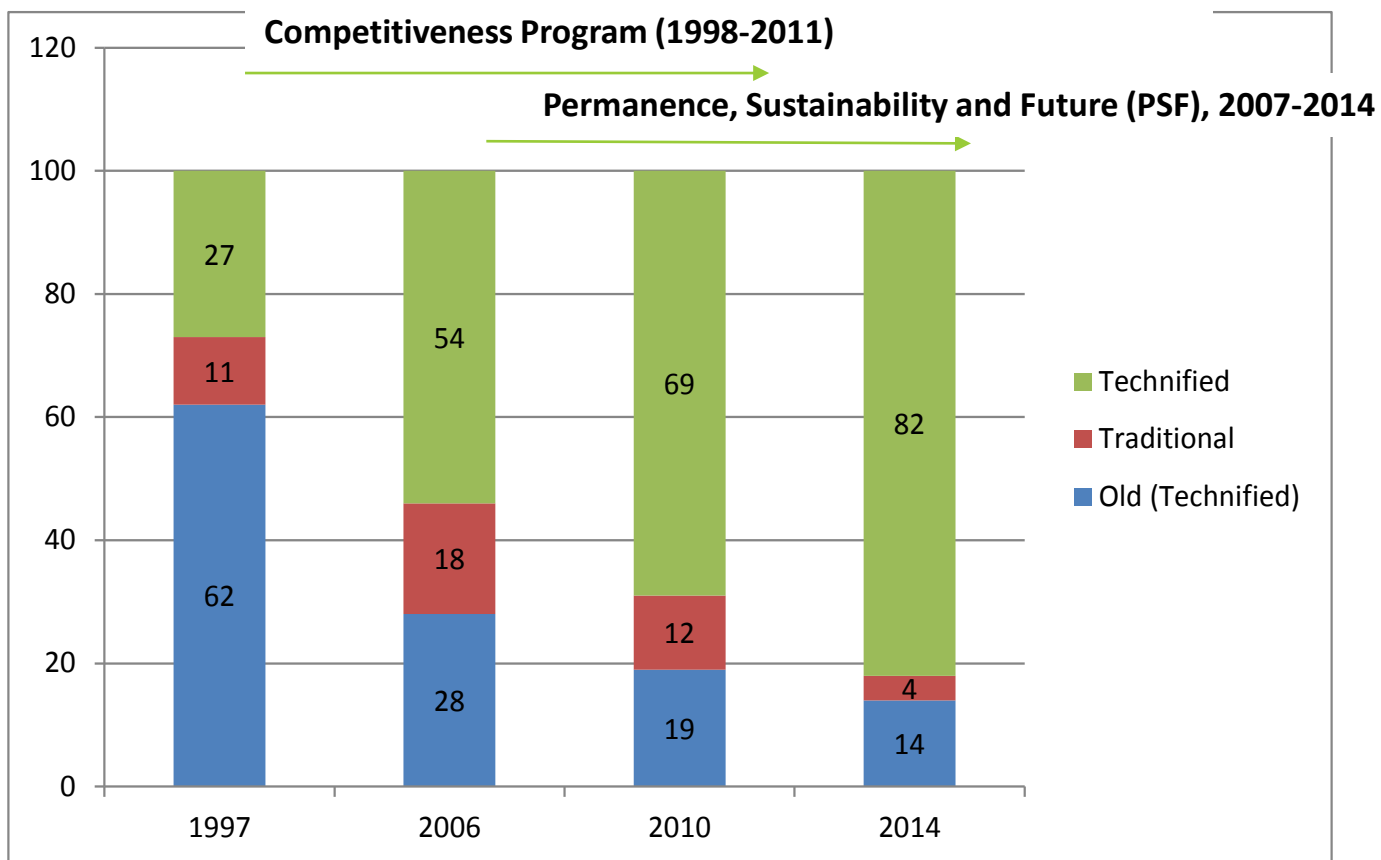
### Colombia's coffee supply chain (Arabica)

□ Distinctive to Colombia



Source. Technoserve

## Evolution of Coffee Production Systems (% of Total Planted Area)



## Competitiveness Program

- Monetary incentive per renewed plant
- Incentive to be used for fertilizer purchases
- In 1998 COL\$90/plant (full stumping or new plants)  
In 2011 COL\$ 70/plant (full stumping) and COL\$160 new plants

## PSF (Permanence Sustainability, Future)

- Flexible loan
- Incentive + Guarantees
- Loan repayment and grace period

# Coffee replanting program in Colombia



Andrés Lozano

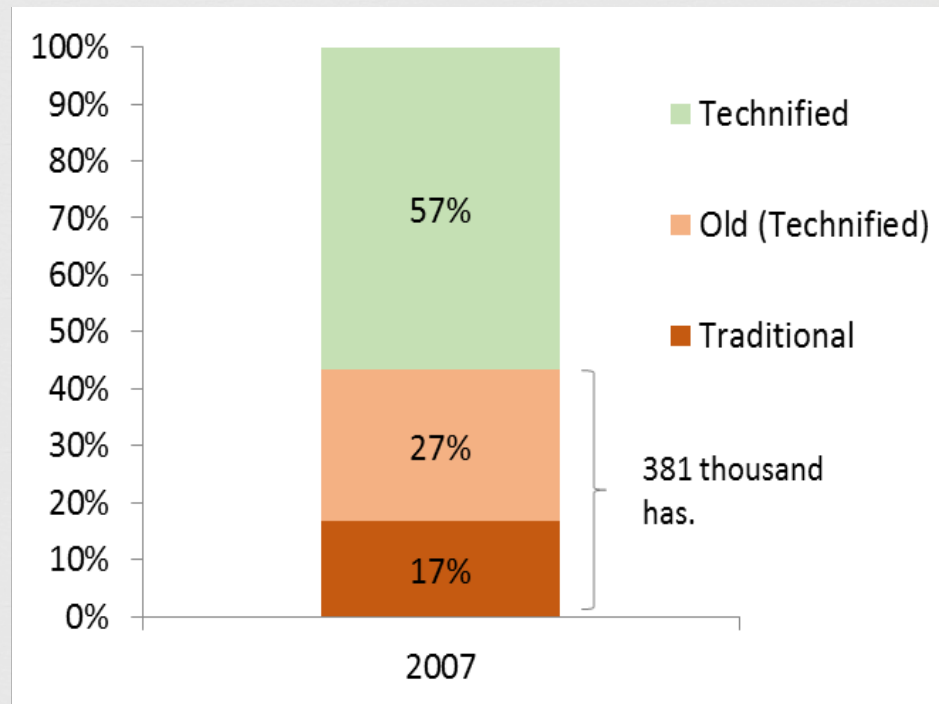
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# In 2007 almost half of the coffee area had low productivity



- 87% of Colombian coffee producers have farms with less than 5 ha (12,3 Acres).
- Most of them live in poverty.
- 43% of the coffee area had low densities or aged trees

## Colombian coffee crops distribution



# The Permanence, Sustainability and Future Program



## Main objectives:

- ☞ Increase the wellbeing of coffee producers and their families
- ☞ Rise the productivity of the coffee areas
- ☞ Increase the Colombia's share of world coffee production
- ☞ Increase the contribution made by coffee growers to the National Coffee Fund (Fondo Nacional del Café) - NCF



# Key actors: Producers Organization, Government and Peasants



## Colombian Coffee Growers' Federation

- Lead and structured the program
- Provision of technical assistance

- Agreement on the budget (size) of the subsidy.
- Establishment of conditions to obtain the subsidy

Additional guarantee (20%)

- Determine the amount, disbursements schedule and amortization of the credit
- Help the coffee growers with the paper work
- The NCF pays the interests of the credit

## Ministry of Agriculture

- Provides subsidies up to 40% of the replanting project value (ICR)

## FINAGRO

- Collateral Guarantee (80%)

## Banco Agrario

- Provides Loans

# The program was designed to increase the small coffee farms productivity



- ☞ Max. Replanting area: 1.5 ha (3,7 acres).
- ☞ Replanting density in alignment with the advise provided by the extension service.
- ☞ Replanting was mandatory. Farmers could not renew their plantation by cutting the trees
- ☞ All arabica varieties were accepted. (After two years only varieties resistant to the coffee rust were accepted)
- ☞ Goal: 300 thousand hectares to be replanted in five years

# Characteristics of the loan

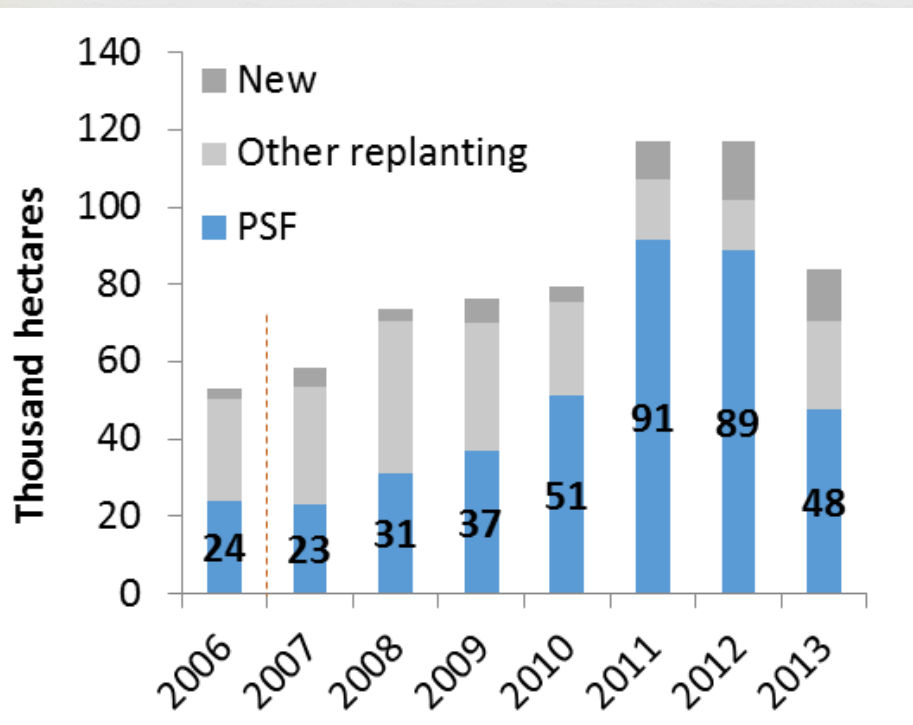


- ❧ The amount of the credit was calculated according to the value of the replanting project
- ❧ The disbursements were planned in order to maintain the income of the family during the non productive period
  - ❧ 1 disbursement = value of inputs
  - ❧ 19 disbursements = value of the income obtained by the previous old plantation
- ❧ Repayment: in seven years with the first two years off

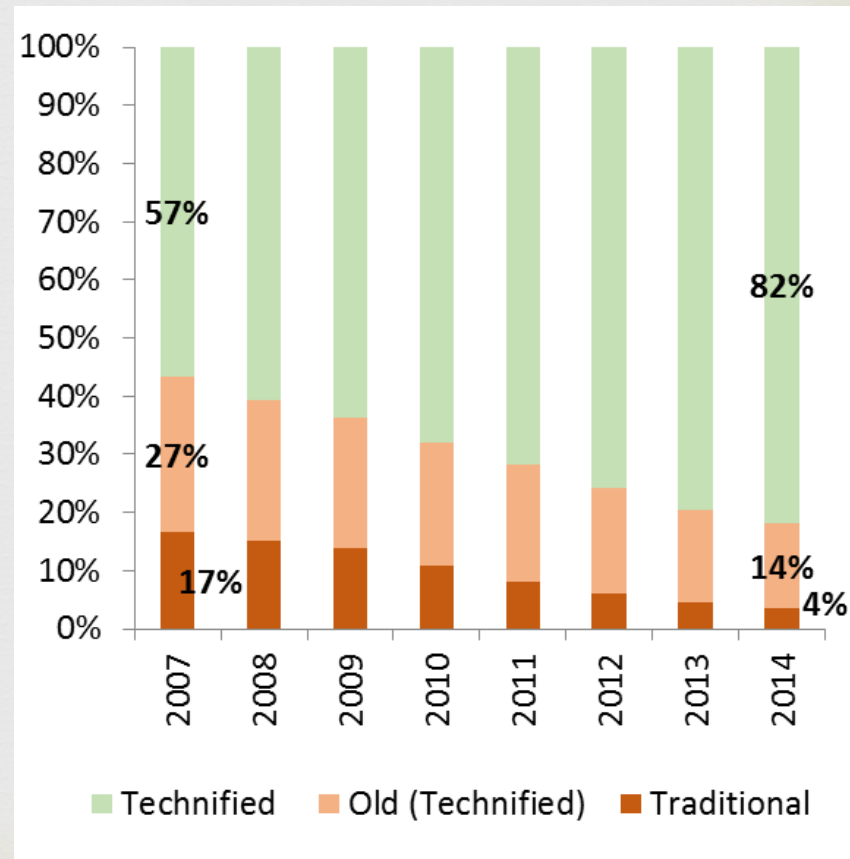
# The goals were reached but in a longer period than expected



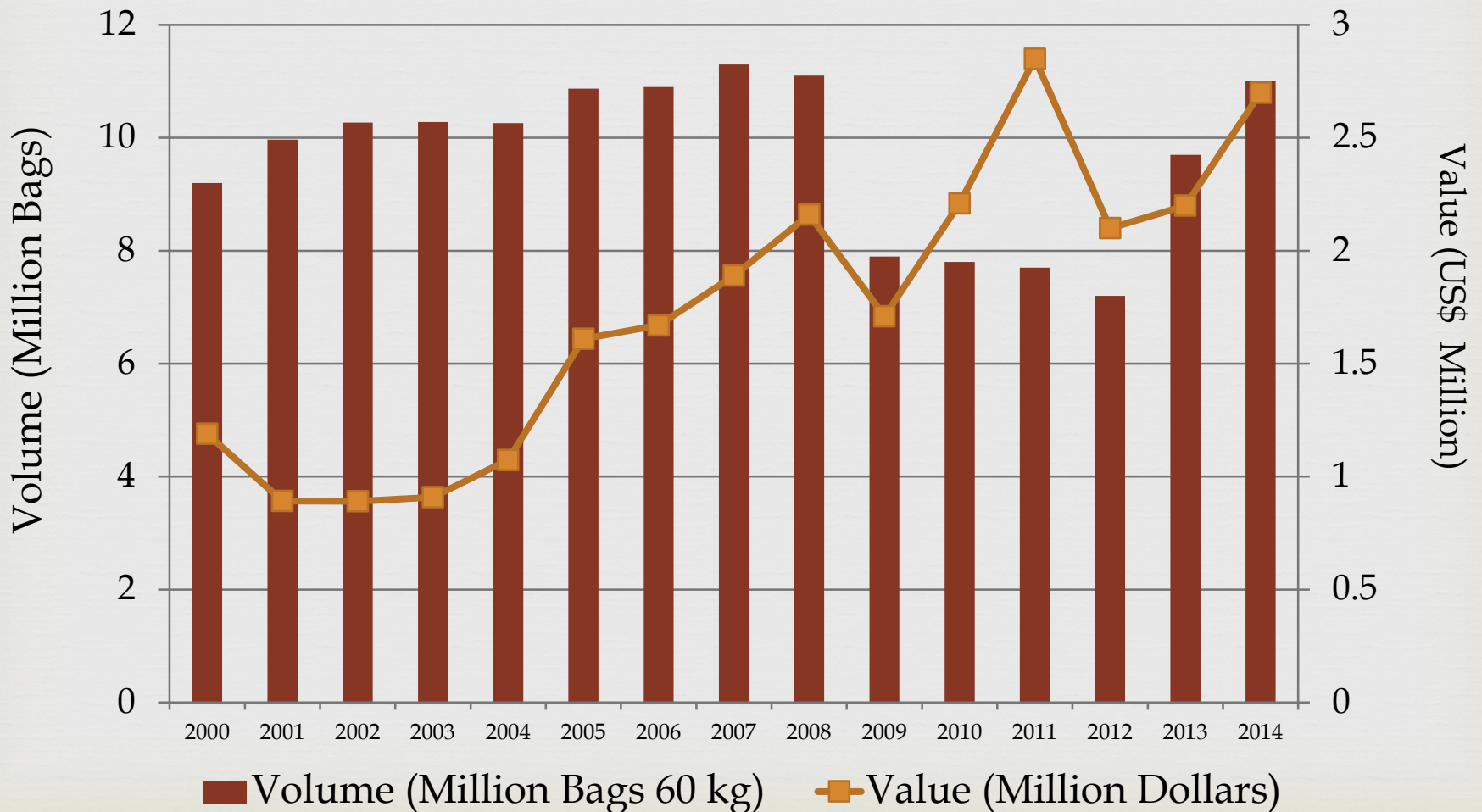
## New or renewed areas



## Coffee area distribution



# As a result, the Colombian coffee exports have increased since 2012



# Difficulties during the implementation



- ☞ It was not easy to start the program. Although the Federation put all its efforts to start in 2007, it was not until 2010 that the replanting program reached its objectives.
- ☞ The initial amount of credit needed in order to join the replanting program was not enough to fulfill the objectives of the program. When the amount of credit increased, NCF budget was too short to cover the interests of all coffee producers that joined the program. Fogacafé could give the additional guarantee for all the loans.
- ☞ The disbursement scheme was not maintained, since the operative work was too complex.

# Difficulties during the implementation



- ❧ Some producers manifested that they didn't want to work with FNC. The producer organization also had problems reaching all the coffee regions where peasants wanted to replant their plot .
- ❧ It was only until the coffee rust disease affected the coffee plantation that it was decided to oblige the producers to replant only with varieties resistant to that disease.
- ❧ Not all producers with old plantations agreed to join the program, because of their age or other reasons.
- ❧ The replanting program reduced the coffee production in Colombia . It happened at a time that the climate affected the production as well

# Key elements for the success




- ☞ The FNC implemented the replanting program using the existent subsidies provided by the Government
- ☞ The extension service was a key element in the filling of the documents to apply for the credit.
- ☞ There was a joint effort done by the FNC, the Government and the coffee growers





Thanks!



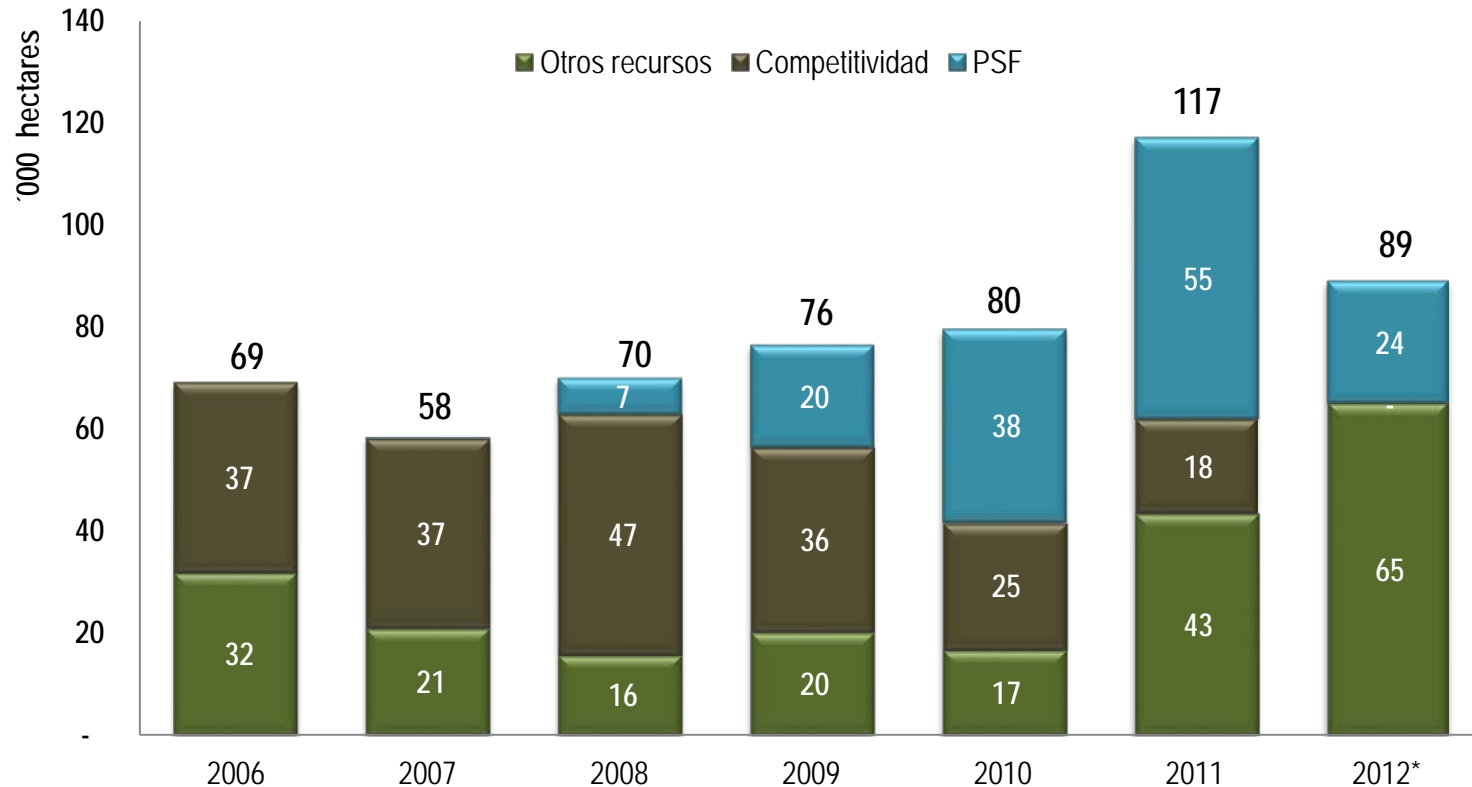
# Results of the Impact Evaluation for PSF and Competitiveness programs 2007-11

Santiago Silva Restrepo

October 27, 2015

# Renovation programs

Hectares of coffee renovated per program  
2007-12



Source: Gerencia Técnica - FNC  
2012\* hasta 30 de septiembre

# Summary

1

- Data

2

- Methodology

3

- Results

# Data

The data used came from FNC's SICA, which from 2007 it has stored panel data information of the following units of analysis:

- 20 departments
- 583 municipalities
- 560.000 coffee growers
- 1,8 million of production units

The data is constantly updated by the extension service of the FNC.

# Unit of analysis – Coffee grower

- Dependent variables:
  - Density
  - Age
  - Young technified area in coffee
  - Total area in coffee
- Treatment variables
  - PSF participation between 2008-11.
  - Competitividad participation between 2008-11.
- Control variables in base line (2007):
  - *Determinants of production: density, age, hectares by coffee tree type, shade type, total area of the coffee grower, number of plant per spot, and total area with coffee.*
  - Other: altitude over sea level, department, municipality and ecotopo.

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# Methodology

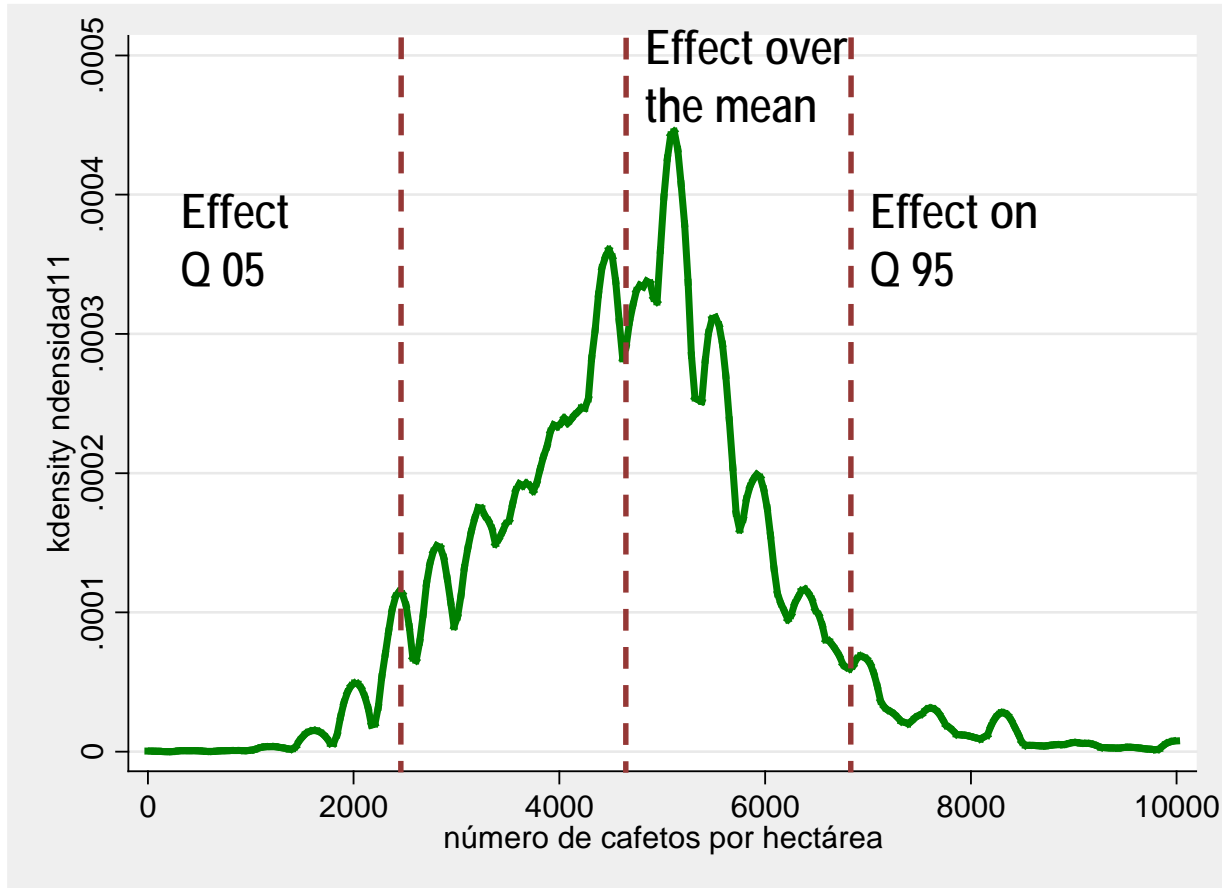
## 1. PSM-DD

- PSF -After balancing
  - Technified area (254,448 coffee growers)
  - Density, age and area in coffee (466,229 coffee growers)
- Competitividad – After balancing
  - Density, age, area in coffee (466,228 coffee growers)
  - Technified hectares (264,447 coffee growers)



# Methodology

## 2. Quantile regression



# Summary

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# Results

➤ Effects over the mean (DD and DD-PSM):

- Positive effect of both programs over density, age, technified hectares and area in coffee

- PSF

- ❖ ↑ Tree density 7.2% and 7.4%.
- ❖ ↓ Tree age 5.7 y 5.8 age.
- ❖ ↑ Technified area 39.1% and 41.8%.
- ❖ ↑ Total area in coffee 17.9% and 24.3%.


- Competitividad

- ❖ ↑ Tree density 0.34% and 1.28 %.
- ❖ ↓ Tree age 1.51 and 2.37 age.
- ❖ ↑ Technified area 21.1% and 23.11%
- ❖ ↑ Total area in coffee 10.5% and 14.19%.

# Results

## ➤ Local effects (Quantile regression):

- Larger positive effect of both programs over coffee growers with lower technification levels on their crops.
- The results were in line with international evidence around the concentration of benefits from direct transfer of fertilizer and crop expansion through credit programs.



# Results of the Impact Evaluation for PSF and Competitividad 2007-11

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October 27, 2015