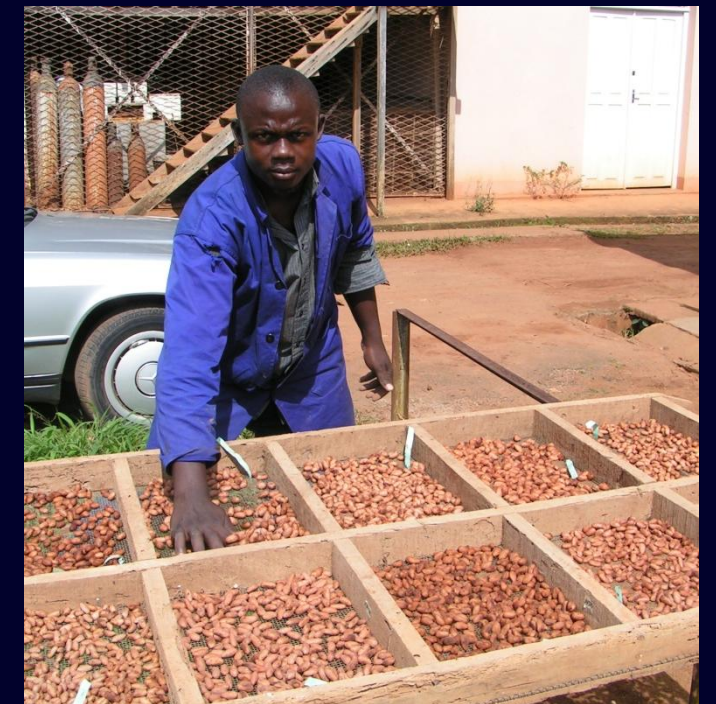
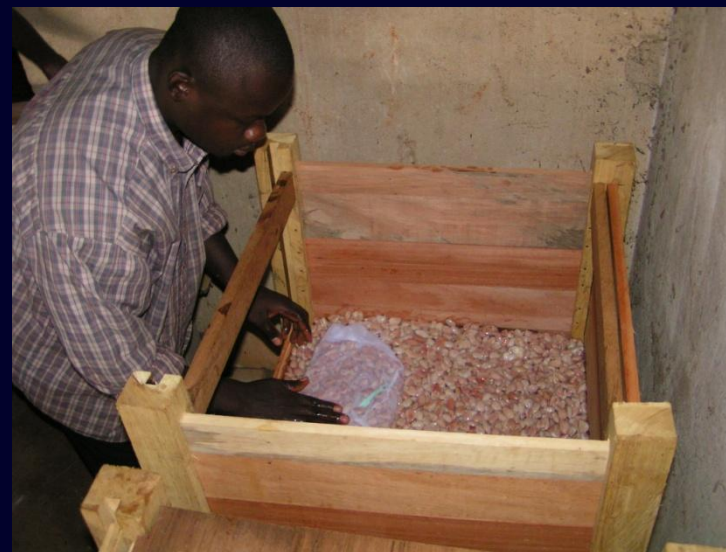


Fine cocoa production in Cameroon: potential and strategy



Context

Dramatical increase of cocoa production in Cameroon during the last five years

200,000 tons produced during the 2008/09 campaign

5th cocoa producing country in the world

5% of world cocoa production

Around 600,000 cocoa farmers

Around 2 million persons living directly or indirectly from cocoa

Context

Severe alteration of cocoa quality during the last 20 years, caused by:

absence of financial incitation for good quality cocoa

mixture of different quality cocoa batches before exportation

proper post-harvest practices rarely applied by cocoa farmers:

not known

seen as useless constraints

Genetic origin of cocoa cultivated in Cameroon

History

First cultivated local varieties = german cocoa = amelonado

Release of high yielding amelonado and Trinitario clones in the 1950s

Release of hybrids issued from crosses among three different genetic groups, since the early 1970s:

Upper amazon Forastero

Amelonado

Trinitario

Genetic origin of cocoa cultivated in Cameroon

Results from a recent molecular biology study (Efombagn, 2008)

400 cocoa trees randomly sampled in cocoa farms in Cameroon

→ 40% of the trees with at least one Trinitario ancestor



Possible presence of fine flavours in cocoa from Cameroon?



Analyses of cocoa cultivated in Cameroon

Sample preparation (microfermentation)



75 kilos of fresh cocoa



16 samples (1 kilo)



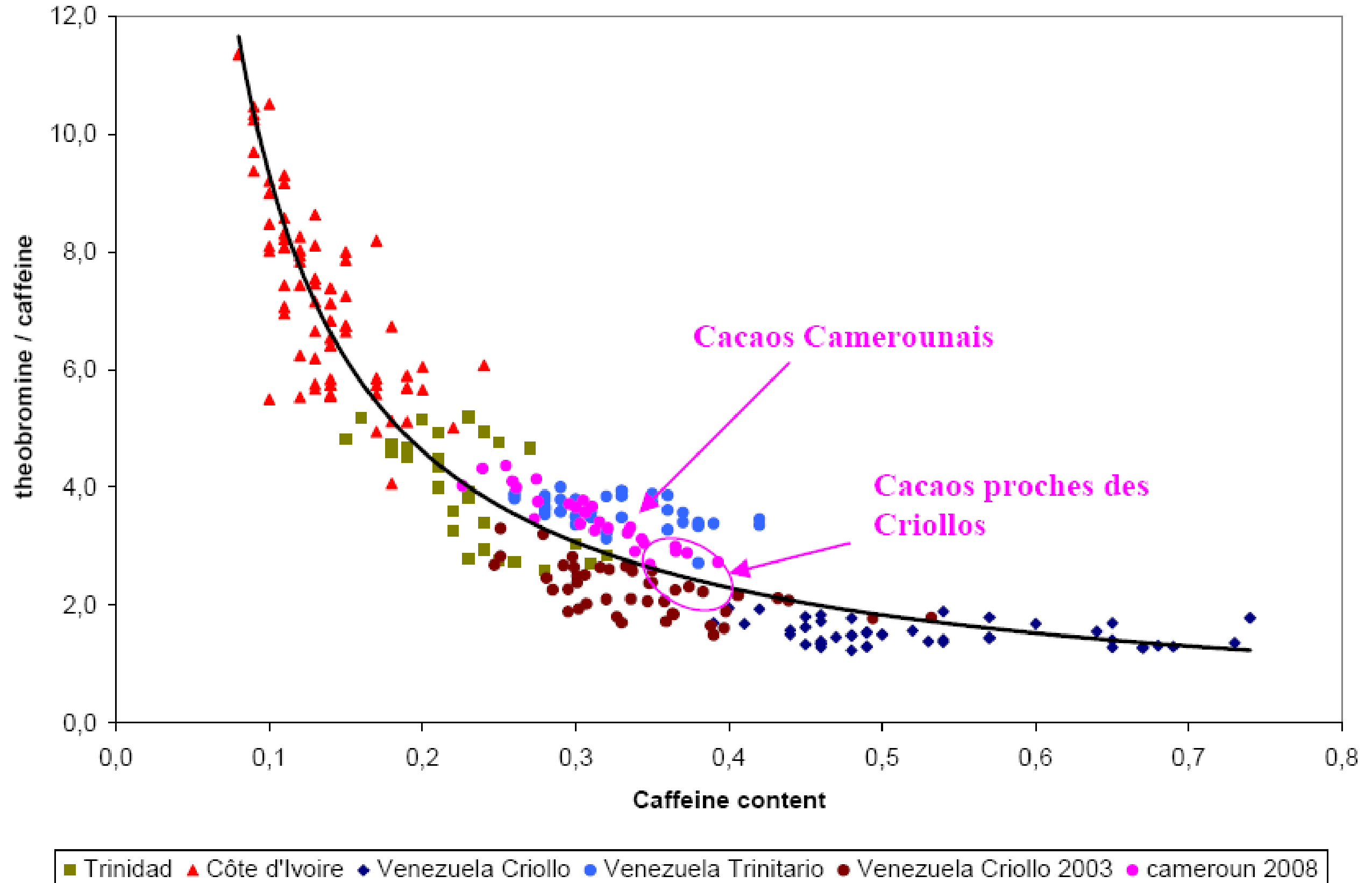
Physical analyses of cocoa cultivated in Cameroon

Near Infrared Spectrophotometry (NIRS) analysis performed at CIRAD (France) on 28 of the prepared samples



Theobromine / caffeine ratio

Physical analyses of cocoa cultivated in Cameroon



Organoleptic assessment of cocoa cultivated in Cameroon

Organoleptic assessment of the cocoa samples prepared using microfermentation

CIRAD panel (France)

28 assessed samples



7 with specific flavors: fruity, floral, spicy and caramel

Mars panel (U.S.A)

14 assessed samples



4 with fruity flavors

Organoleptic assessment of cocoa cultivated in Cameroon

If properly fermented, some of the cocoa issued from cocoa fields in Cameroon reveals specific flavors

Organoleptic assessment of cocoa cultivated in Cameroon

Cocoa prepared by local farmers

IRAD panel (trained in December 2009)

23 assessed samples



5 with a fruity flavor



3 of them assessed by a local French high quality chocolate manufacturer
(Brossard)



2 of them confirmed for fruity flavour



Organoleptic assessment of cocoa cultivated in Cameroon

Cocoa prepared by local farmers

CIRAD panel

20 assessed samples



2 with a fruity flavor and 2 with a floral flavor

Other panels

One sample tested by several panel (Le Criollo (France), ccms (Switzerland))



Strong fruity flavor

Organoleptic assessment of cocoa cultivated in Cameroon

Cocoa prepared by local farmers

CIRAD panel

20 assessed samples



2 with a fruity flavor and 2 with a floral flavor

Other panels

One sample tested by several panels (Le Criollo (France), ccms (Switzerland))



Strong fruity flavor



Organoleptic assessment of cocoa cultivated in Cameroon

Local cocoa farmers from different regions from Cameroon are able to produce fine flavour cocoa

Organoleptic assessment of cocoa cultivated in Cameroon

20 out of the 85 assessed cocoa samples were attributed favourable flavors (fruity, floral, spicy, caramel...)



Around 20% of our samples seemed eligible for being considered as fine cocoa



It appears reasonable to estimate that 10% of the cocoa produced in Cameroon could be turned into fine flavor cocoa

**The potential exists but.....a strategy is needed
to turn this potential into a reality**

constraints

Fine flavor cocoa exists in Cameroon but is mixed with average and poor quality cocoa



Need to create a separate system for the production and the commercialization of this fine flavor cocoa



Need for a long term strategy

Strategy

First step : identification of fine flavor cocoa producers (IRAD)

Collecting of cocoa samples



Priority given to large cocoa fields (>30 ha)



Local quality assessment (IRAD panel)



Selection of promising samples



Secund Assessment (panels from Europe and USA)



**Identification of fine
flavor cocoa batches,
ready for export**



**Identification of potential
fine flavor cocoa producers**

Strategy

identification of fine flavor cocoa producers (IRAD)

Collecting of cocoa samples from farmers identified as potential fine cocoa producers



Local quality assessment (IRAD panel)



Selection of promising samples



Secund Assessment (panels from Europe and USA)



Identification of fine cocoa batches, ready for export



Identification of actual fine cocoa producers

Strategy

commercial aspects (O.N.C.C workplan 2011-2015)

Setting up of a database on fine flavor cocoa producers in Cameroon

Improving contact and trade between chocolate manufacturers and fine cocoa producers

Networking of the fine flavor producers for grouped exportation

Strategy

technical aspects (SODECAO, O.N.C.C and IRAD)

Increase the release of improved varieties (hybrids between Forastero and Trinitario)

Training farmers to proper post-harvest techniques

Present situation

identification of fine flavor cocoa producers

One cocoa farmer organization already identified as actual fine cocoa producer

Six cocoa farmers already identified as potential fine cocoa producers

Present situation

commercial aspects

One French chocolate manufacturer (« LeCriollo », Besançon, France) bought 2 tons of cocoa in 2009 with a quality premium price and prepared chocolate from it (CONAPROCAM)



Intends to buy 8 tons during the 2010-11 campaign



One Swiss chocolate manufacturer (FAVARGER) eager to order 15 tons of cocoa from Cameroon

Perspective

Cameroon already has the potential for fine flavor cocoa production and is ready to set up a program based on local and external quality control in order to be able to export high quality cocoa

Our experimental results indicate that 10% of the cocoa produced in Cameroon has the potential to be considered as fine flavor cocoa

Joined efforts of research, extension and trading bodies are expected to allow the proportion of fine flavor cocoa produced in Cameroon to reach 5% within the next five years

Thank you for your attention!

