

Cocoa Fertilizer Forum

October 13, 2014

Copenhagen



Anti Trust Statement

As participants in this group, we need to be mindful of the constraints of antitrust laws. During both the formal and informal parts of this meeting, participants shall not enter into discussions, agreements or concerted actions that may have as their object or effect the restriction of competition. This prohibition covers the exchange of competitively sensitive information including, but not limited to, information concerning individual prices, production, sales, capacities, costs, rates, coverages, market practices, claims settlement practices, company level investments, or any other competitive aspect of an individual company's operation.

The participants acknowledge that any efforts made by the cocoa industry to promote sustainable and enhanced product supply shall not result in any understandings or agreements to limit individual activities or efforts to the same ends.

Each participant is obliged to speak up immediately for the purpose of preventing any discussion falling outside these bounds.

Overview

Welcome by Conseil du Café Cacao

Progress

- CocoaAction & the Cocoa Fertilizer Initiative
- Fertilizer training
- Fertilizer research
 - Sneak preview fertilizer testing report season 2013/2014

Planning coming six months

Drinks



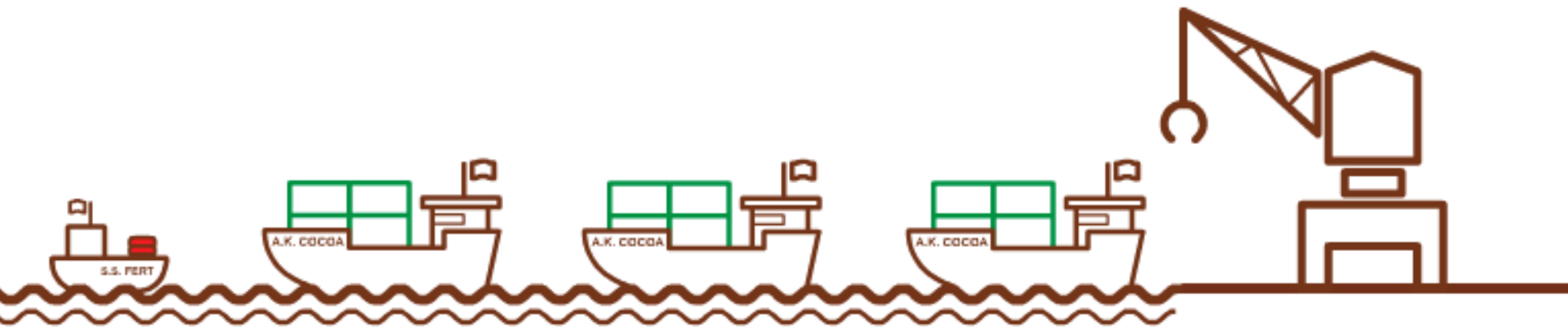
**Welcome by
Conseil du
Café Cacao**

Progress

CocoaAction & the Cocoa Fertilizer Initiative

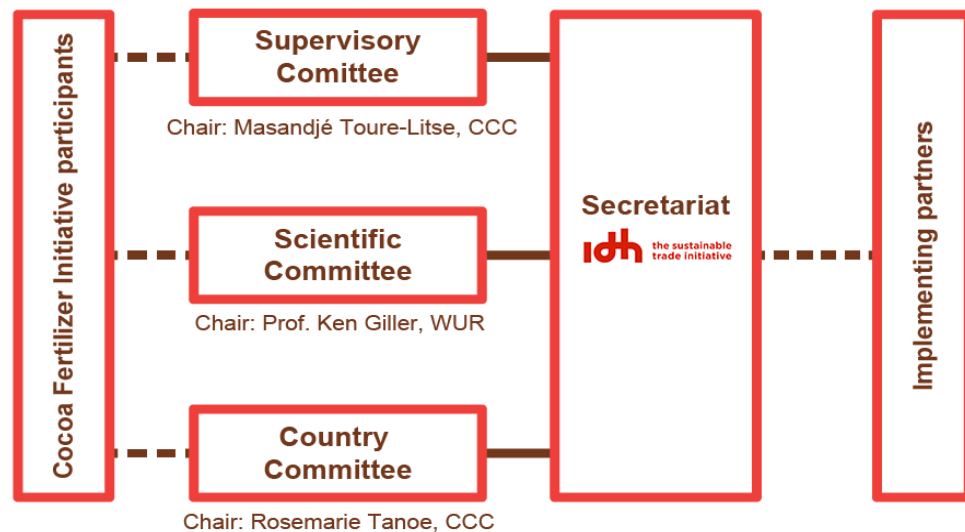
Collaboration to return soil fertility to key cocoa growing regions in West-Africa

- Cocoa Fertilizer Initiative launched in Nov 2012 in Abidjan
- Collaborates closely with CocoaAction to build a rejuvenated and economically viable cocoa sector in West-Africa
- **Objective for 200,000 cocoa farmers in Côte d'Ivoire to use cocoa specific fertilizer by 2020 as part of the full productivity package**
- Strategies to be developed for addressing soil fertility in Ghana and Nigeria



Governance

The Supervisory Committee is the decision making body of the Cocoa Fertilizer Initiative. Both the Scientific Committee and the Country Committee serve as advisory committees and report into the Supervisory Committee



The **Supervisory Committee** steers the strategy of the overall initiative. The **Scientific Committee** safeguards the independence and rigor of the Knowledge Agenda work stream of the initiative. The Scientific Committee members will assess the methodologies and reports from the initiative's research activities and will propose and build out new knowledge activities where needed. The **Country Committee** guides the proper implementation of the initiative's projects in the country, and ensures alignment with other cocoa sustainability programs and platforms.

Progress

**Fertilizer
training**

Training manual for Côte d'Ivoire

As part of a process by [le Conseil Café-Cacao](#), aligned with the 2QC strategy and in collaboration with consultants of FIRCA, the Cocoa Fertilizer Initiative contributed to the production and presentation of new cocoa manuals for farmers and for trainers in Côte d'Ivoire. With input from more than 20 partners from the cocoa sector and from fertilizer companies, [conditions and recommendations for fertilizer use have been established](#). This will support clear and joint messaging on fertilizer use to both farmers and trainers.

Progress and planning training manual for Côte d'Ivoire

Early
2014

- training manuals were developed by the members of the PPPP in Côte d'Ivoire

August
2014

- members of the Cocoa Fertilizer Initiative provided input for the fertilizer chapter

Early Oct
2014

- the complete manual has been approved by Le Conseil du Café Cacao

Oct-
March

- WCF and ANADER will test the manual in the field

Mid-
2015

- further input for the refinement of the manuals will be possible

Progress

**Fertilizer
research**

Scientific Committee

- Role & mandate
 - Safeguard the independence and rigor of the knowledge agenda of the Cocoa Fertilizer Initiative
 - Assess methodologies and reports of the research activities to advise on the work of the researchers
 - Propose and build out new research / knowledge activities where needed
 - Report to the Supervisory Committee with advice upon the strategy and implementation of the knowledge agenda

- First meeting held Aug 8, 2014

Scientific Committee

Members

Prof. Ken Giller (WUR)

Dr. Piet van Asten (IITA)

Dr. Kees Burger (WUR)

Dr. Louis Koko (CNRA)

Participants

David Malard (LDC)

Abdelmonim El Kanit (OCP)

Pascal Chapot (Nestlé)

Keith Ingram (Mars)

Juergen Kuesters (Yara)

Michiel Hendriksz (ADM)

Dr. François Ruf (CIRAD)

Bart van der Linden (WCF)

Recommendations Scientific Committee

| Recommendations after Aug 8 meeting | Follow-ups on outcomes |
|------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Need to include multiple fertilizer formulations in the fertilizer testing of CIRAD | New fertilizer formulations will be added at little additional costs |
| For good fertilizer recommendations there is the need to complement the soil mapping by CNRA with foliar analysis and yield measurement. | CNRA will include foliar analysis and use yield data of the 140 experimental plots and industry demonstration plots (half to three-quarters of all soil samples) |
| Recommended to triangulate soil mapping (wet chemistry) with spectral methods | Including of NIRS method being discussed between CNRA and ICRAF |
| Need for analytical summary of existing literature and data on cocoa nutrition | Proposal being , WUR proposed as implementor. Need for industry to share their existing knowledge. Due by Q2 2015. |

Close collaboration between CIRAD and CNRA



| | | |
|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Main objective | <ul style="list-style-type: none"> • Yield response to fertilizer • Business case for soil management • Farmers' readiness for fertilizer uptake | <ul style="list-style-type: none"> • Fertilizer recommendations per region • Updated soil fertility map of Ivorian cocoa belt |
| Key adaptations based on recommendations from the Scientific Committee | On each experimental site: <ul style="list-style-type: none"> - Control quadrat - 0-15-15 - 0-15-15 + Calcium nitrate - 0-23-19 + Calcium nitrate | Inclusion of foliar analysis Addition of NIRS analysis of the soil samples |
| Outcomes | First report on 2013/2014 season available in November 2014 | First research outcomes available by mid-2015 |

- On the 140 experimental plots **full scope data** will be collected: yield, soil, foliar, agronomic and socio-economic
- Additional soil samples will be collected for the **updated soil map** for the Ivorian cocoa belt
- **Triangulation** will take place with data from companies' research plots

Sneak preview

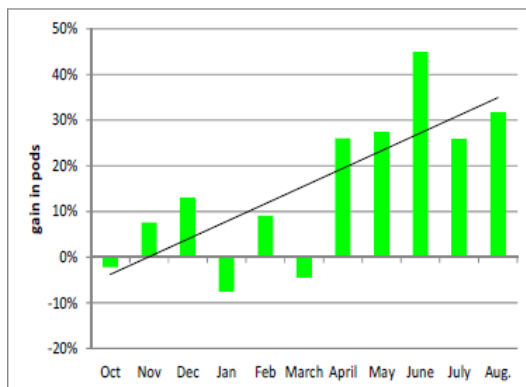
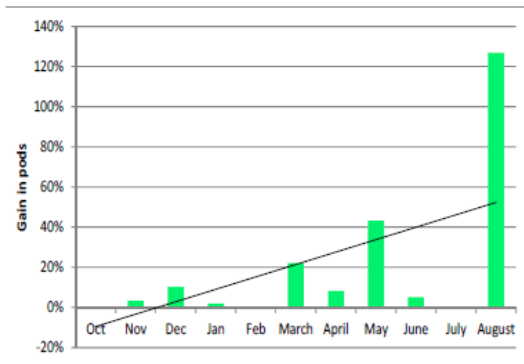
fertilizer testing report

season 2013/2014

Sneak preview fertilizer testing report season 2013/2014

Average number of harvested pods

- As expected, initial yield response is low. However notable differences between West and East: clear impact of fertilizer in period April-August for the West *but not (yet)* the East



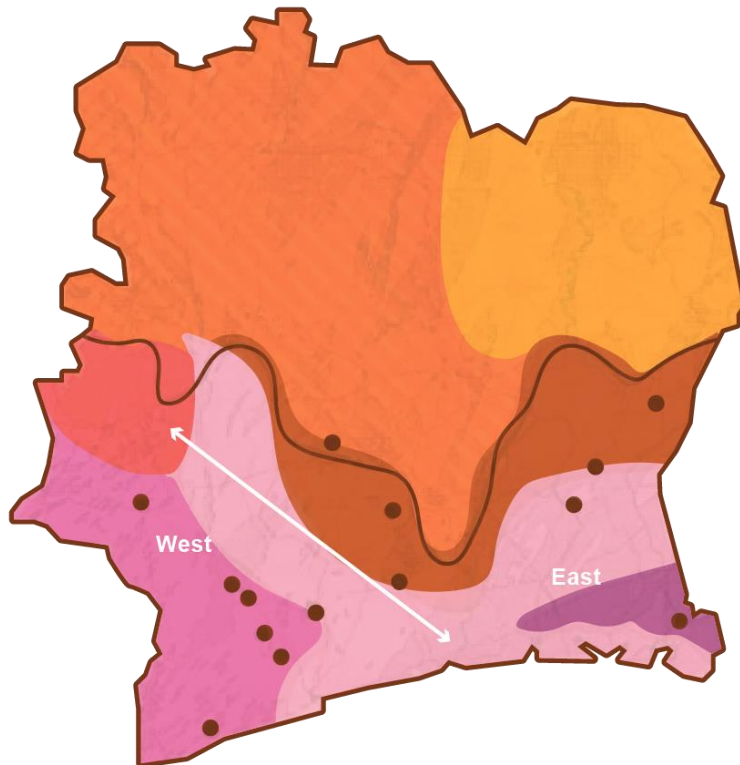
| | With fertilizer | Without fertilizer | Difference | Probability of error |
|----------------------------|-----------------|--------------------|-------------|----------------------|
| All 14 sites | 159.0 | 127.5 | 31.5 | < 0.03% |
| 7 sites in the East | 141.4 | 119.2 | 22.1 | N.S. (8%) |
| 7 sites in the West | 177.5 | 136.2 | 41.3 | < 0.06% |

- Gain in pods (see graphs) shows impact in the West
- Limited impact in absolute terms

Sneak preview fertilizer testing report season 2013/2014

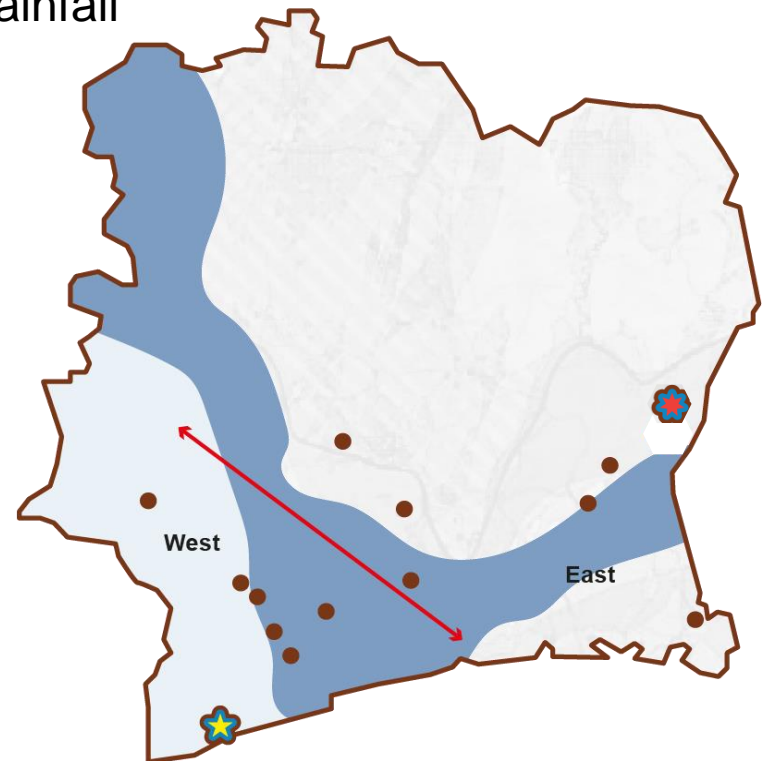
The soil factor

The 7 sites in the West, which was considered as too acidic and unsuitable to cocoa. Unsurprisingly, the response to a rockphosphoate is likely to be stronger in acidic soils



The rainfall factor

- ★ Bereby with the highest annual rainfall.
- ★ One of the weak responses is Agnibilikro among the cocoa regions with the lowest annual rainfall



Sneak preview fertilizer testing report season 2013/2014

- The human/technical interactions are currently under deep investigation and verification of data, with a double objective
 - Explain and understand the variance
 - Explain and understand farmers strategies regarding fertilizers.
- For the time being, returns to capital, land and labour look quite low the first year. They will be regularly updated
- The initiative is focused on chemical fertilizers. But our research needs to keep some perspective and build a larger framework and model of cocoa intensification (especially “agro-ecological” intensification).

The 2013/2014 report will be published after the review of the Scientific and Supervisory Committee by mid-November





**Planning
coming six
months**

| | Next steps Q4 2014 | Next steps Q1 2015 |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Côte d'Ivoire | <ul style="list-style-type: none"> • Start training ANADER, coordinated by WCF, with new CCC approved manuals • First report fertilizer testing research from CIRAD available in November 2014 • Alignment on fertilizer training approach CocoaAction companies • Finalize Company Action Plans (with stepwise approach) of all CocoaAction companies • Further scoping of development of agro dealer network & test of the risk sharing mechanism with AFAP | <ul style="list-style-type: none"> • Start implementation of Company Action Plans (with targeted farmers) • Signing of the agreements with funding partners CCC and fertilizer suppliers |
| Ghana | | <ul style="list-style-type: none"> • Defining CocoaAction strategy with COCOBOD • Explore potential collaboration with existing programs |
| Governance | <ul style="list-style-type: none"> • New IDH staff in Abidjan, as of November • Country Committee meeting, first week November • Steering Committee meeting, November 6 | <ul style="list-style-type: none"> • Next Scientific Committee meeting |
| Communication | <ul style="list-style-type: none"> • Online resource platform to be launched end October • Regular updates to all Initiative partners as of end October | |



Q&A

followed by drinks