

# WCF African Cocoa Initiative

## Soil Fertility Workshop Recommendations

*The Case for Côte d'Ivoire*



World Cocoa  
Foundation

*Abidjan, Côte d'Ivoire*

# Background of Soil Fertility Management

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- The traditional cocoa cultivation has been dependent on the exploitation of soil fertility built up under the forest.
- This has led to soil nutrient depletion and land degradation.
- This continued use of depletive extensive farming system rather than intensive farming system has led to prevailing low per hectare yields from most cocoa fields.
- The continuous decline in soil fertility is also due to nutrient export through harvested cocoa pods and beans and other loss pathways without the requisite replenishment.



# **Some Staggering Facts about Soil Nutrient Replacement**

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- **Several other nutrients are removed from the soil besides NPK.**
- **Nutrient removal per ton of cocoa is equivalent to 145kg.**
- **Annual nutrient removal from cocoa fields in West/Central Africa is about 400,000 tons from the total production of 2.7 million tons of cocoa.**
- **Nutrient requirements for a 6-7 year old cocoa farm (of approximate 1,100 plants/ha) is about 2,000kg.**
- **Therefore, fertilizer needed for nutrient replacement in cocoa fields in West and Central Africa is equivalent to 800,000 tons annually.**



# **Sub-Regional Workshop on Soil Fertility Management for Cocoa Production**

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- Workshop held from 26<sup>th</sup> to 28<sup>th</sup> February, 2013 in Grand Bassam, Côte d'Ivoire.
- Over 70 representatives participated in the workshop
- Though most farmers in Côte d'Ivoire are aware of the benefits in applying fertilizer and other soil fertility practices but do not use them due to:
  - High cost of fertilizer versus low price of cocoa.
  - Fertilizers are general not available and accessible to smallholder farmers.



# Workshop Recommendations for Côte d'Ivoire

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- Remedial actions on soil fertility:
  - Formulation of a general cocoa fertilizer with higher P and Ca at competitive price and cheaper than old formulations
  - For e.g. a “broad spectrum” formulation like the rock phosphate/super phosphate could be promoted for adoption by farmers right away ( with support from IDH, Company members, Conseil etc.).
  
- The recommendations are in three (3) parts:
  - Scientific recommendations
  - Commercial recommendations
  - Policy recommendations



# Soil Fertility Management

## Recommendations for Côte d'Ivoire

Recommendations	Key Activities to Achieve Recommendations	Responsibility/ Point Organization	Collaborators	Activity Time Frame	
				Start	End
<b>Scientific</b>					
Compilation and evaluation of agroforestry experience and recommend a list of key species to be promoted in cocoa cultivation in Côte d'Ivoire.	Conduct an inventory of all agroforestry studies and practices in the cocoa sector in Côte d'Ivoire.	CNRA/ICRAF /ANADER	ACI/ WCF members	Jul-13	Dec-14
	Incorporating cocoa agroforestry in the farmer training curricula.				
Supporting CNRA and other research institutions in continuing with the composting programs	Scale-up current composting research work using cocoa pod to develop farmer friendly approaches to composting that reduces bulk.	Research Fellows in CNRA, Universities etc.	WCF/ Private sector (cocoa exporters, input supply companies etc.)	Jul-13	Dec-14
Updating training tools for the extension services to include soil fertility management	Soil Scientists in Côte d'Ivoire review GAP curriculum using best soil fertility management practices identified from regional workshop	CNRA /ANADER	ACI/CLP; Private sector (cocoa exporters, input supply companies etc.)	Jul-13	Feb-14
	Master trainers trained to provide training to Extension staff on the updated GAP curriculum.			Mar-14	Aug-14
Formulation and production of good quality site-specific fertilizer	Conduct studies to determine soil fertility zones to develop soil fertility maps	CNRA (Soil Scientists)/ MINAGRI/Conseil du Café Cacao	National Platform; Private sector	Jul-13	Dec-13
	Using results of the soil mapping work with fertilizer formulation companies to develop and produce site/regional specific cocoa fertilizers in Côte d'Ivoire.	CNRA/Conseil du Café Cacao/ MINAGRI/Input supply companies	Private sector (input supply companies etc.)	Jan-14	Dec-14



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				Start	End
<b>Commercial</b>					
Developing innovative ways to make the fertilizer available and accessible to small holder cocoa farmers at the right time	Mapping of in-country current distribution chains, constraints and opportunities; and proposed to the fertilizer companies to enhance availability and accessibility of fertilizers to farmers	Private sector (input supply companies, cocoa exporters, etc.) /Conseil	IDH/ACI-CLP	Jul-13	Dec-13
	Scale up lessons learnt from IDH Cocoa Fertilizer Initiative pilot in Cote d'Ivoire to address fertilizer availability and accessibility issues.	Private sector (input supply companies, cocoa exporters, etc.) /Conseil	IDH/ACI-CLP	Mar-14	Dec-15
Making fertilizers affordable to farmers by providing credit facilities with requisite arrangements for loan recovery	Scale up lessons from TechnoServe pilot input credit scheme in Côte d'Ivoire	Private sector (input supply companies, cocoa exporters, etc.) /Conseil/ MINAGRI/ Financial institutions	IDH/ACI-CLP	Jul-13	Jun-15
	Facilitate the establishment of guarantee facility by both the public and private sectors to cover potential non-repayment by farmers.				



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## Recommendations for Côte d'Ivoire

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				Start	End
<b>Policy</b>					
Mainstreaming agroforestry in cocoa research to enhance the planting and utilization of trees and other tree crops in cocoa fields.	A clear policy directive from government to national cocoa research institutes on mainstreaming agroforestry in cocoa research.	CNRA and other research institutes	National Platforms	Jul-13	Dec-14
Incorporation of agroforestry in training of extension service personnel at the agriculture and forestry faculties in the Universities.	A policy directive from government to national agricultural training institutes to incorporate agroforestry in cocoa training curricula and training modules.	Agricultural Universities; Agricultural Colleges; NARs	National Platforms	Jun-13	Dec-14
Setting up or reinforcing the fertilizer regulatory mechanism	Facilitate the enactment (if not in existence) fertilizer policy or law and appropriate regulations to regulate the fertilizer trade (production, supply & distribution) and fertilizer use.	MINAGRI; input supply companies	National Platforms	Jul-13	Jun-14
Establishment of surveillance system for quality control and quality assurance of fertilizers on the market.	Establishment of teams of field inspectors in country to check fertilizers on the market for plant nutrient deficiencies, misbranding, adulteration, short weight, bagging quality etc.	MINAGRI; Conseil Café du Cacao	Private sector (input supply companies, cocoa exporters, etc.)	Jul-13	Dec-13
Government support in creating an appropriate environment for the importing and exporting of fertilizers.	Lobby government to reduce or eliminate import tax on fertilizer to help reduce cost.	Private sector (input supply companies, farmer organizations, cocoa exporters, etc.)		Aug-13	Jul-14





# THANK YOU

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