

TERM OF REFERENCE

National Seminar and Workshop

Sustainable Management of Soil Fertility and Fertilizer for Indonesian Cocoa

Organized By:



KEMENTERIAN PERTANIAN
REPUBLIK INDONESIA



CSP



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Sustainable Management of Soil Fertility and Fertilizer for Indonesian Cocoa

Jakarta, 20-21 July 2016

Background

When cocoa was introduced in Sulawesi, in the early 1970s, the soil was fertile, as generally it had not been used for intensive agriculture previously. Large and extensive cocoa production began in 1980s, and coincided with the beginning of the national government intervention (programs) on several estate cops; cocoa was one of them. Since its cultivation, considerable volume of cocoa beans have been harvested from every hectare of cocoa land for years, and a lot of nutrients have been removed from the soils without replacement through proper and balanced fertilization, and appropriate organic matter management. As a result, the soils of cocoa farms in Sulawesi are greatly nutrient depleted, and unable to support optimum cocoa yield. Numerous demo-plots in Sulawesi revealed that, optimum cocoa yield cannot be achieved without proper fertilization; if fertilized correctly, cocoa yield may be increased three to four times than what is currently achieved.

The absence of fertilization or proper nutrient management in smallholder cocoa production practices is a result of complex problems in the field involving technical, economical and social constraints. These include knowledge of both farmers and field facilitators on fertilizers and fertilizing, availability of/access to fertilizers (physical and economical), farming practices for effective fertilizing, income management, and smallholder commitment for change.

Such complicated problems need comprehensive solutions for both short- and mid-terms needs. The short-term goal is to stimulate conditions (knowledge, fertilizer availability and affordability, and field technical assistance) for influential/lead farmers to apply fertilizers as a routine practice in cocoa production; while, the mid-term target is to create a conducive environment (involving all stakeholders) so that the soil health on cocoa farms is improved and maintained through wide adoption of correct, site-specific nutrient/organic matter management (plus liming – if needed) in the main cocoa producing regions in Indonesia.

CSP members and cocoa stakeholders in Indonesia understand the importance of fertilizers for sustainability and improved cocoa yield. The CSP roadmap and many results of research institutions as well as universities clearly indicates that, without fertilizer application, the target cocoa yield cannot be achieved. The roadmap also suggests that, CSP should align and convene its members and related stakeholders to work together in addressing the issues and eliminating the hinderance factors in fertilizer application.

Objectives

Different objectives are set for the event based what we want to achieve from the different activities.

Day 1, Seminar – 20 July 2016:

1. to build a research and practice-based foundation for sustainable soil fertility management for cocoa farms under different environmental and climatological regimes;
2. to understand current versus ideal application of fertilizers which are affordable, available and appropriate for sustainable cocoa production;

Day 2, Workshop – 21 July 2016:

3. to develop recommendations and principles for sustainable soil fertility management on smallholder farms to support the goals for CSP Roadmap as well as the Government Programme and increase the value of the land assets;
4. to define a multi-stakeholders plan for soil health, nutrition, and fertilizer and to clarify the Roles and Responsibilities of the different players.

Outputs

The expected outputs for the events are:

Day 1, Seminar – 20 July 2016:

1. Provide a scientific foundation for sustainable management of soil fertility and fertilizer in cocoa production on smallholder farms;
2. Document principles and current practices and conditions;

Day 2, Workshop – 21 July 2016:

3. Recommendations for sustainable soil fertility management on smallholder farms to achieve the targets of the CSP Roadmap and the national sustainable cocoa development program;
4. Plan for an industry initiated integrated fertilizer program;
5. Draft CSP Position Statement on sustainable soil management for professional cocoa production.

Location

Ministry of Agriculture (Kementerian Pertanian)
Auditorium of Building F (Gedung F)
Jl. Harsono R. M. No. 3, Ragunan
Jakarta Selatan

Participants

Participation in this event will be targeted to:

1. Cocoa and chocolate industry
2. National Ministries
 - a. Coordinating Ministry of Economic Affairs (Kemenko)
 - b. Ministry of Agriculture -- Directorate General of Estate Crops (Ditjenbun); Directorate General of Agriculture Facilities and Infrastructure (Ditjen PSP); Assessment Institute for Agricultural Technology (BPTP); Indonesian Center for Estate Crops Research and Development (Puslitbangbun), and others
 - c. Ministry of Industries -- Directorate General of Chemical Industries (Ditjen Industri Kimia), and others
 - d. Ministry of Cooperative and Small/Medium Enterprises – Integrated Business Service Center (PLUT)
3. Provincial and District Estate Crop Offices
4. Key farmers
5. Indonesian Association of Fertilizer Producers (Asosiasi Produsen Pupuk Indonesia)
6. Fertilizer companies
7. Banks and Financial Institutions
8. Cocoa associations (APKAI, ASKINDO, AIKI, APIKCI, etc.)
9. World Agroforestry Institute (ICRAF)
10. Universities – Bogor Agricultural Institute (IPB), Hasanuddin University, Gadjah Mada University, Brawijaya University, and others
11. Indonesian Coffee and Cocoa Research Institute (ICCRI)
12. Soil Research Institute (Pusat Penelitian Tanah)
13. National Estate Crop Research Center (Riset Perkebunan Nusantara)
14. International Plant Nutrition Institute (IPNI)
15. IDH The Sustainable Trade Initiative
16. CSP Members
17. International Cocoa Soil Management group (INCOSOM, a newly formed working group of INCOCOA)
18. Plantation companies (PTPN XII and private plantations)
19. Others

For the seminar on the first day, the expected number of participants will be about 100 persons plus speakers and for the workshop on the second day the expected number of participants will be about 50 active participants who will work on developing recommendations and a roadmap/plan for sustainable management of soil fertility and fertilizer that is appropriate for smallholder cocoa farmers.

Organizers

This event will be jointly organized by the Cocoa Sustainability Partnership (CSP), Ministry of Agriculture, and the Indonesian Cocoa Board (Dekaindo).

Day I: July 20th, 2016 – Seminar

Time	Scope	Speakers
Opening Session		
08:30 - 09:00	Registration	Organizing Committee
09:00 - 09:05	Indonesian Anthem “Indonesia Raya”	All
09:05 - 09:15	Welcoming Remarks CSP DEKAINDO	Rini Indrayanti Dr. Soetanto Abdoellah
09:15 - 09:30	Opening Remarks	Ir. Gamal Nasir, MS. <i>Director General of Estate Crops, Ministry of Agriculture</i>
09:30 - 10:00	Keynote Speech: The Indonesian Government Policy on Fertilizer	Dr. Ir. Muhrizal Sarwani, M.Sc. <i>Director of Fertilizer and Pesticide, Ministry of Agriculture</i>
10:00 - 10:20	<i>Cocoa Break</i>	<i>All</i>
Theme I: The important roles of fertilizer applications in achieving sustainable cocoa production Moderator: Dr. Soetanto Abdoellah		
10:20 - 10:40	Cocoa physiology and nutrient needs	Dr. Nicholas Cryer <i>Mondelez</i>
10:40 - 11:00	Properties and management of soils: Cocoa Farmers’ Perspective	Prof. Sikstus Gusli <i>Hasanuddin University</i>
11:00 - 11:20	Managing environmental aspects of cocoa fertilization	Dr. Thomas Orberthur <i>IPNI</i>
11:20 - 11:40	Management of soils organic matter in smallholder farmings	Prof. Kurniatun Hairiah <i>Brawijaya University</i>
11:40 - 12:00	Cocoa Fertilization: An Experience from Malaysia	Dr. Rozita Osman <i>Malaysian Cocoa Board</i>
12:00 - 13:00	Q & A	All
13:00 - 14:00	<i>Lunch</i>	<i>All</i>
Theme II: Current situation on cocoa fertilizer: technology, policy and practice Moderator: Wisman Djaja		
14:00 - 14:20	Getting the farm ready to respond to fertilizer application	Peter van Grinsven <i>Mars</i>
14:20 - 14:40	Demonstration on Good Soil Management & Key Learnings from Africa Fertilizer Initiatives	Lucian Peppelenbos, Ph.D. <i>IDH</i>
14:40 - 15:00	Experience from the field: successful use of fertilizer in increasing cocoa production sustainably	Dr. John Bako Baon <i>ICCRI</i>
15:00 - 15:20	Cocoa farmer economy: family income management and access to finance	Manfred Borer <i>Swisscontact</i>
15:20 - 15:35	<i>Cocoa Break</i>	<i>All</i>
15:35 - 16:15	Q & A	All
16:15 - 16:30	Wrap up and closing	Dr. Imam Suharto <i>CSP SB Chairman</i>

Day 2: July 21st, 2016 – Workshop

Time	Scope	Speakers
08:30 - 09:00	Registration and Group Assignments	Organizing Committee
09:00 - 09:05	Introduction to the workshop proceedings	Rini Indrayanti
09:05 - 09:15	Video on Farmers' Practices and Experience with Fertilizer	Armin Hari
09:15 - 09:25	Setting Expectations for Working Group Outputs	Imam Suharto
09:25 - 10:25	Working Group Discussion	All
10:25 - 10:40	<i>Cocoa Break</i>	<i>All</i>
10:40 - 12:30	Working Group Output and Recommendations	All
12:30 - 13:30	<i>Lunch and Prayer Break</i>	<i>All</i>
13:30 - 16:30	Working Group Output Presentation and Discussion 10 min PowerPoint presentation, 20 minutes group discussion (30 min cocoa break to be arranged) (1) Working Group 1 (2) Working Group 2 (3) Working Group 3 (4) Working Group 4 (5) Working Group 5	Presentation by WG Representative Discussion facilitated by William Jones
16:30 - 16:45	Summary and Presentation of Draft Position Statement on Sustainable Management of Soil Fertility and Fertilizer for Indonesian Cocoa	CSP Advisory and Supervisory Board
16:45 - 17:00	Closing	Musdalifah Machmud <i>Deputy of Food and Agriculture, Coordinating Ministry of Economic Affairs</i>

Working Group I:

Fertilizer Ready Farms

<p>Objectives:</p> <ol style="list-style-type: none">1. Define fertilizer ready farms2. Propose convenient methods to measure fertilizer-readiness3. Outline steps for farmers to get farms fertilizer ready	
<p>Facilitator: Peter van Grinsven - Mars Co-facilitator: Rini Indrayanti - CSP EO</p>	
<p>Required participants competence:</p> <ul style="list-style-type: none">• Knows about ecosystems• Knows about soils• Knows about agro-economics• Knows about crop science	<p>Targeted participants:</p> <ul style="list-style-type: none">• ICCRI• ICRAF• Government (Ditjenbun, Ditjen PSP, Disbun)• Farmers/Farmer organizations• Australian Centre for International Agricultural Research• Fertilizer companies• CSP Task Forces – Agro-Inputs and Planting Material (AIPM), Knowledge Management (KM), Service Delivery (SD)• CSP members

Working Group II:

Maintaining Organic Matter in the Soil

Objectives:

1. Identify existing challenges
2. Propose practical and scalable solutions

Facilitator: **Prof. Sikstus Gusli** - UNHAS

Co-facilitator: **Muhammad Amin** - CSP EO

Required participants competence:

- Soil science
- Have practical knowledge on organic matter/making compost application and cost of application
- Have practical knowledge on integrated farming
- Farmers

Targeted participants:

- Farmers
- Brawijaya University
- ACIAR
- Government (Ditjen PSP, Ditjenbun, Disbun)
- AIPM CSP Task Force
- Fertilizer companies
- ICCRI
- CSP members

Working Group III:

Fertilizer Appropriateness and Affordability

Objectives

1. Define affordability and appropriateness for smallholder farmers
2. Recommend solutions that address the need for long-term financing and that consider short- and long-term return on investment for fertilizer
3. Address needs for adoption of fertilizer, including farmer readiness to use fertilizer
Propose practical and scalable solutions

Facilitator: **Barbora Tumova** - Swisscontact

Co-facilitator: **Desy Martina** - CSP EO

Required participants competence:

- Knowledgeable about agro-finance
- Knowledgeable about smallholder economics
- Knowledgeable about fertilizer application
- Knowledgeable about adoption challenges by cocoa farmers

Targeted participants:

- Swisscontact
- Yayasan Sahabat Cipta
- Finance institutions (Rabobank, Andara, BRI, BTPN, ACA, BPD)
- Fertilizer companies
- Rural financing consultants
- Agro economists
- Government (Kemenko, Ditjenbun, Disbun)
- International Finance Corp. (IFC)
- Farmers
- CSP members
- Community Economic Institute (LEM Sejahtera)
- PLUT

Working Group IV:

Generic Nutrient Replenishment for Cocoa Fertilizer (Cocoa-Specific Fertilizer)

Objectives:

1. Propose a practical path to a commercialization of a cocoa fertilizer package based on replacement of nutrients removed from the farm (in beans)
2. Address affordability, availability, and practical steps and identify service delivery mechanism that can work for farmers
3. Identify research needs for cocoa specific fertilizer

Facilitator: **William Jones** - Mondelez

Co-facilitator: **Suharman Sumpala** - Swisscontact

Required participants competence:

- Soil science
- Crop science
- Service Delivery Model
- Government

Targeted participants:

- Fertilizer companies (Government and Private)
- Government
- Cocoa farmer groups
- Farmers
- ICCRI
- Fertilizer testing laboratories
- ACIAR
- Puslitbangbun
- BPTP
- AIPM CSP Task Force

Working Group V:

Farm Specific Fertilizer Based on Soil Analyzis

Objectives:

1. Propose practical methods for farmers to test soil and identify nutrient needs of co-coa trees (signs of deficiency)
2. Practical steps to address availability (including subsidized fertilizer)
 - a. Identify key stakeholders to be engaged and roles of cocoa farmer groups and government
 - b. Address affordability and availability of fertilizer ingredients to the farmer
3. Identify research needs for cocoa specific fertilizer

Facilitator: **Dr. Soetanto Abdoellah** - DEKAINDO

Co-facilitator: **Toha Arifin** - CSP EO

Required participants competence:

- Soil science
- Crop science
- Service Delivery Model
- Government

Targeted participants:

- Mondelez
- Fertilizer companies
- Government
- Farmers
- ICCRI
- Laboratories
- ACIAR
- Estate Crop R&D Center
- BPTP
- TF AIPM
- CSP members