



OP204

UNLOCKING SOIL NUTRIENTS THROUGH BIOLOGY

Practical Soil & Nutrient Management for Oil Palm



HRD CORP CLAIMABLE	FOCUS AREA (FA)	2 DAYS	PROGRAMME NO. 10001756435
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WHY OP204?

OP204 is a two-day practical oil-palm programme combining soil and nutrient-management principles with substantial supervised field application. Participants assess soil/root-zone/palm conditions, design an approximately 100-palm Soil Food Web demonstration, prepare the agreed biological consortium and inoculated-biochar treatment, set up/calibrate application equipment and complete approximately 3.5 hours of supervised field application. Biological approaches complement sound agronomy and responsible fertilizer management; they are not presented as a guaranteed fertilizer replacement.

WHO SHOULD ATTEND?

Plantation / Estate Managers • Assistant Managers • Agronomists • Plantation / Field Executives • Sustainability & Soil Management Personnel • Supervisors / Technical Officers • Plantation Owners • Smallholder Cooperative Leaders

EXPECTED OUTCOMES — WHAT PARTICIPANTS WILL LEAVE WITH

- Explain how physical, chemical and biological soil conditions influence nutrient availability, root access and fertilizer-use efficiency.
- Identify common soil and nutrient-cycling constraints and explain the Soil Food Web, including bacteria, fungi, mycorrhizal associations, organic matter and stable carbon.
- Design an approximately 100-palm demonstration with baseline and treatment/comparison records where site conditions permit.
- Prepare the agreed biological consortium and inoculated-biochar treatment, set up/calibrate application equipment, and participate in the supervised field application.
- Establish a practical monitoring framework for soil, palm and operational responses, with 90-day / 180-day management review before wider implementation.

UNDERSTAND → DIAGNOSE → DESIGN → PREPARE → APPLY → RECORD → MONITOR → REVIEW

OP204 • PRACTICAL COURSE OVERVIEW

Unlocking Soil Nutrients Through Biology: Practical Soil & Nutrient Management for Oil Palm

TWO DAYS OF UNDERSTANDING, DIAGNOSIS, DESIGN & HANDS-ON FIELD APPLICATION

1 Nutrient Efficiency, Soil Degradation & Oil Palm Productivity

Nutrient supply vs availability; physical, chemical and biological constraints; integrate biology with responsible fertilizer management.

2 Soil Food Web & Biological Nutrient Cycling

Soil as a living system; bacteria, fungi, mycorrhizae, organic matter, stable carbon, rhizosphere processes and what biology can/cannot do.

3 Practical Soil, Root-Zone & Palm Assessment

Select the area; assess structure, compaction, moisture, ground cover, roots and palms; basic checks where available; establish baseline records.

4 Design the ~100-Palm SFW Demonstration

Match intervention to diagnosed constraints; integrate biomass/biochar/biological inputs and existing fertilizer; prepare layout, protocol and work plan.

5 Prepare SFW Treatment & Equipment

Handle biological consortium and inoculated biochar; mixing/dilution; pump setup/calibration; PPE, safety and field handling.

6 ~100-Palm SFW Field Application

Confirm palms and baseline records; prepare batches; supervised application; dosage/coverage consistency; QC, troubleshooting and documentation.

7 Monitor Soil, Palm & Operational Response

Track soil/root-zone and palm indicators, input/FFB records where appropriate, photographs, field records, frequency and responsibilities.

8 From Demonstration to Management Decision

Compare treatment and business-as-usual; consider cost/operational feasibility; conduct 90/180-day review; decide whether to adjust, extend or scale.

SUBSTANTIAL SUPERVISED FIELD PRACTICAL

Approximately 3–4 hours of Day 2 are devoted to preparing and applying the agreed SFW treatment to an approximately 100-palm demonstration area.

Every participant takes an active supervised role in preparation, equipment setup, palm allocation, application, QC and recording.

Treatment/comparison palms are identified where site conditions permit for structured 90/180-day review.

IN-HOUSE ONLY • 2 DAYS / 14 HOURS • PRACTICAL-CENTRIC • ~3.5 HOURS SUPERVISED FIELD APPLICATION • PRACTICAL MATERIALS INCLUDED

TRAINER & ORGANISATION



Nip Wing Kan

Chairman, Persatuan Petani Organik dan Regeneratif Sabah (SORFA)
SORFA Lead Trainer • Regenerative Agriculture Practitioner • Soil Biology & Nutrient Management • Field Practitioner

Training draws on SORFA's practical oil-palm work in soil restoration, biological inputs, biochar, nutrient cycling, field application and monitored trials in Sabah.

COURSE ENQUIRY & IN-HOUSE ARRANGEMENT

SORFA — Sabah Organic & Regenerative Farmers Association

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HRD Corp Training Programme No. 10001756435 • Focus Area (FA) • 2 Days / 14 Hours • In-House Only



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