

ESSENTIAL PALM OIL PLANTATION MANAGEMENT PROGRAM

***OPTIMIZE YIELD THROUGH KNOWLEDGE & SKILLS
EMBRACING ARTIFICIAL INTELLIGENCE A.I. APPLICATION***

HRD CORP APPROVED CLAIMABLE MODULES



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"The future of plantations lies not in bigger machines, but in better knowledge."

SUSTAINABLE FFB HARVESTING TECHNIQUES

Introduction

According to MPOB Malaysia June 2022 statistics, there are more than 40,000 small holders in Sarawak, which constituted 40% of the total revenue earned in this sector. Presently, the common problem encountered by estates are;

1. low FFB yield due to following the incorrect standard operational practice on harvesting technique and
2. incorrect maintenance skills of their estates on post harvesting practice.

Course Objective

At the end of the session, participants will learn how to:

- Design and implement the FFB harvesting techniques to create sustainable growth.
- Design an affordable AI package to impart the right skills and knowledge to assist estate operators to harvest the ripen FFB for better price
- This training program would, therefore, focus on how to obtain a high fresh fruit bunch (FFB) production by the estate holders based on per hectare area per year.



Learning Outcome

Upon Completion of this program, participants will be able to:

- Identify current FFB harvesting problems
- Develop harvesting strategies/plans and tactics to boost FFB yields
- Design innovative harvesting strategies for sustainable business growth
- Yield maximum oil extraction rates (OER) to fetch higher income
- Adhere to standard operational practice for estates and remain sustainable
- When applicable, using AI technology to monitor fully ripen FFB and no unharvest left over ripen FFB





**"To protect your yield,
first protect your
trees."**

FIELD PESTS & DISEASE CONTROL

Introduction

Presently, the most severe problems encountered by the small holders are as such:

1. Rats, tirathaba, and bag-worms infestation had apparently become the major pests of oil palm in Sarawak.
2. Incompetence and incorrect maintenance skills of pests and disease control.
3. Incorrect usage of rat baits, the types of chemicals and wrong timing of insecticides usage has become significant.
4. Damages caused by sucking insects, and leaf-eating caterpillars had become more severe and rampant too.
5. Lacking of skills and unaffordable means to use the most effective and efficient means of artificial intelligence (AI) technology for pests and diseases control.
6. These pests and diseases had caused lower FFB yield, especially among the small holders.

Course Objective

At the end of the session, participants will learn how to:

- Design a pests and disease control programmes by using the right methods and chemicals.
- This training program would, therefore, focus on how to eradicate pests and disease attack on the palm trees and result to obtain a high fresh fruit bunch (FFB) production and consequently, leading to higher income and sustainability.



Learning Outcome

Upon Completion of this program participants will be able to:

- Identify the availability of most up-to-date pests and diseases control programs and types of chemicals to minimize losses on pests and diseases attack
- Design and plan for a better pests and diseases control schedules for better performance of FFB
- Emphasizing on using the artificial intelligence (AI) methods of pests and disease control, by using drone as a means for mapping, spraying of chemicals, etc.
- Become more sustainable for both business growth and environmental sustainability.
- Strictly comply and adhere to the MSPO standard for the big and small estates.





"What you feed your soil is what your harvest becomes."



ESSENTIAL OIL PALM MANURING: BOOSTING FFB SUSTAINABILITY

Introduction

Presently, the main problem encountered by the estate holders are:

- attaining low FFB yields due to lack of knowledge on nutrients regimes
- low FFB yield due to following the incorrect standard operational practice on fertilizer application and
- incorrect maintenance skills of their estates on post fertilizer applications.

Course Objective

At the end of the session, participants will learn how to:

- Design and implement the fertilizer regime to create sustainable growth.
- Using artificial intelligence (AI) to identify and locate the exact location of those palms that are significantly facing nutrients deficiency
- This training program would, therefore, focus on how to obtain a high fresh fruit bunch (FFB) production by the estate holders based on tonnage of reaping per hectare per year.

Learning Outcome

Upon Completion of this programmes, participants will be able to:

- Identify the different types of nutrients and its purposes/functions.
- Design a fertilizer application regime for sustainable growth.
- Timely identify the significant nutrients deficient areas by using AI technology.
- Develop a balance NPK and micronutrients regime to boost FFB yields and sustainable business growth.
- Able to produce maximal oil yield or oil extraction rates, which will determine their income, and this would have to comply to a standard operational practice to remain sustainable.





"Weeds grow fast. So should your response."

Course Objective

At the end of the session, participants will learn how to:

- Design and implement the weeds control policies to create sustainable growth.
- Design a mechanical weeding: Can be an economically and ecologically viable option
- Plant cover crops: Can help conserve topsoil and soil fertility
- Understand the concept of integrated weeds management policies
- Sustainable management: Can include artificial intelligence (AI) for mechanical weeding and recording.

Learning Outcome

Upon Completion of this programme, participants will be able to:

- Identify the different types of weeds in the plantation.
- Design a weed control programme for sustainable growth.
- Use the right types of weeds control techniques.
- Learn the options of mechanical weeding, cover crops planting, as this would have to comply to a standard operational practice to remain sustainable.
- Less impact on the environmental, social and governance (ESG) if the right methods are applied.

INTEGRATED WEED MANAGEMENT & CONTROL PRACTICES

Introduction

Under open conditions, weeds can immobilize substantial amounts of plant nutrients, leading to crop losses due to competition for nutrients and water. Key issues caused by weeds include:

- Soil erosion, which exposes roots and reduces soil fertility.
- Water quality degradation, as improper herbicide use increases nutrient leaching.
- Yield losses, with weeds causing a reduction of 6–20%.
- Harvesting difficulties, as weeds make it harder to harvest oil palm fruit.
- Safety risks, as weeds can increase the likelihood of accidents.
- Fertilizer dependency, due to declines in soil fertility, leading to more fertilizer use.
- Finally, without proper weed control methods, plantation management risks increased accidents, violating occupational safety and health (OSH) policies.





"The strength of a plantation lies in the hands that lead it."



LEADERSHIP & SUPERVISORY SKILLS

Introduction

Presently, the main problem encountered by both the big and e small holders are:

- fetching lower FFB yields than the big plantation operators due to lack of knowledge of the lower and middle level supervisory staff
- Incorrect leadership and supervisory styles that had hindered the correct maintenance works carried out by most of the oil palm estates.

Course Objective

At the end of the session, participants will learn how to:

- Design and implement good supervisory and leadership strategies to create sustainable growth.
- This training program would, therefore, focus on how to guide participants to learn how to carry out planning, organizing, leading and monitoring skills and ultimately, achieving organizational goals and objectives.

Learning Outcome

Upon Completion of this programme, participants will be able to:

- Build your confidence and acquire supervisory and leadership skills in the oil palm plantation management sector such as in the area of leading a wining-team.
- Build up the ability to get ready to learn the necessary steps on job planning and administration, coordinate resources for job activities, monitoring job activities, reporting procedures and its costing techniques.
- Use and enhance the cutting edges skills and knowledge to carry out controlling of job activities and outcomes.
- Build the confidence to distinguish between "good" and "bad" agriculture practices on leadership and communication skills, and how to implement Good Leadership Practice (GLP) for supervisors.



PRINCIPAL FACILITATOR PROFILE



Dr. George Chen Nguk Fa

PhD (Business & Management, UTS)
MBA (Curtin)
B.AgriSc (Lincoln, NZ)

HRD Corp Accredited Trainer |

**Senior Facilitator & Consultant,
Nobel Konsult Sdn Bhd**

“When you grow people, you grow result.”
-Dr. George Chen



Education

PhD in Business & Management (UTS)
MBA , Curtin University
B.Agri.Sc, Lincoln University, NZ
Fluency in BM, English, Chinese, Iban

Teaching & Training

Lecturer for Incorporated Society
of Planters (ISP CPM Modules)

Open University Malaysia (Cert,
Dip & Masters Programmes)

Professional Experience

15+ years in oil palm plantation
training (Tradewinds, ISP,
smallholders)

Ex-Regional Manager, Fertilizer &
Chemical Sector (Sarawak)

Current smallholder planter in
Sarawak Central Region

Specialized Programmes

Leadership & Supervisory Skills

Manuring, Pest, Disease & Weed
Control in Oil Palm

MSPO Compliance & SDG-Aligned
Sustainability Programmes

CO - FACILITATOR PROFILE



Dr. Charles Chen QingNeng

CATTI Certified Interpreter
CATTI International Translator
HRD Corp Certified Trainer Trainer
TEFL/TESOL Trainer
Medical Doctor (M.D.)

HRD Corp Certified Trainer |

**Facilitator & Consultant,
Nobel Konsult Sdn Bhd**

“the aim is to impart knowledge & skills, with the objective to improve yields, enhance safety practices, and uphold sustainable management standards.”
- Dr. Charles Chen

Education

- Medical Doctor (M.D.), Russian National Research Medical University, Moscow (2009–2015)
- Certificate in Plantation Management (CPM), Incorporated Society of Planters (2024)
- TEFL/TESOL Teacher Training Certification, TEFL Express (2019)
- Train-the-Trainer (TTT), Human Resource Development Corporation (HRD Corp), Malaysia
- CATTI International Translator Certification (2024)

Professional Certifications

- HRD Corp Certified Trainer (TTT) — Trainer ID: 24317
- CATTI Certified Interpreter — Certificate No.: 20231201023000001492

Professional Experience

- Interpreter cum Translator, CatEagle Translation & Training.
- Freelance English Language Tutor & Proofreader.
- House Officer, Ministry of Health Malaysia, Hospital Sibul, Penang General Hospital.

*The **Essential Palm Oil Plantation Management Program** represents more than just a series of training modules. It is a platform dedicated to empowering plantation cadets, conductors, executives, managers, supervisors and estate holders with the essential knowledge and skills needed to manage oil palm estates efficiently, safely, and sustainably while embracing the use of Artificial Intelligence A.I. Application to optimize yield.*

Through operational mastery in harvesting, pest and disease control, manuring, weed management, and leadership, participants are equipped to improve yields, enhance safety practices, and uphold sustainable management standards in alignment with the Malaysian Sustainable Palm Oil (MSPO) certification and global sustainable development goals.

As the industry evolves, continuous learning and operational discipline remain the foundation of long-term estate productivity and profitability. We trust that the knowledge gained from this programme, embracing A.I. Technology application can be implemented meaningfully in your plantations, bringing tangible improvements to your field operations, your people, and your harvests.

Together, we cultivate innovative knowledge for a better tomorrow.

“The harvest you reap tomorrow depends on the knowledge you plant today.”

— Nobel Konsult

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