

<p><b>KLM Technology Group</b></p> <p>Practical Engineering Guidelines for Processing Plant Solutions</p>	<table border="1"><tr><td data-bbox="548 128 800 247"><b>KLM</b></td><td data-bbox="800 128 1133 247"><b>Technology Group</b></td></tr></table> <p><b>Engineering Solutions Consulting, Guidelines, and Training</b></p> <p><a href="http://www.klmtechgroup.com">www.klmtechgroup.com</a></p>	<b>KLM</b>	<b>Technology Group</b>	<p>Page 1 of 8</p> <p>Rev 1.1</p>
<b>KLM</b>	<b>Technology Group</b>			

## **Palm Oil Harvesting Safety Concepts Training Course**

### **Importance of Palm Oil**

Palm oil is an incredibly efficient crop, producing more oil per land area than any other equivalent vegetable oil crop. Globally, palm oil supplies 40% of the world's vegetable oil demand on just under 6% of the land used to produce all vegetable oils. To get the same amount of alternative oils like soybean, coconut, or sunflower oil you would need anything between 4 and 10 times more land. Furthermore, there are millions of smallholder farmers who depend on producing palm oil for their livelihoods.

### **Introduction**

The success of every company depends on each employee's understanding of the key business components. Employee training and development will unlock the companies' profitability and reliability. When people, processes, and technology work together as a team developing practical solutions, companies can maximize profitability and assets in a sustainable manner. Training and development are an investment in future success - give yourself and your employees the keys to success.

It is strategically important that your Palm Oil team understands the fundamentals of Palm Oil Harvesting Safety Concepts. This is the difference between being in the best quartile of operational ability / Safety and being in the last quartile. There is vast difference in the operational ability / Safety of companies and most benchmarking studies have confirmed this gap in operational abilities and safety.

<p style="text-align: center;"><b>KLM Technology Group</b></p> <p style="text-align: center;">Practical Engineering Guidelines for Processing Plant Solutions</p>	<div style="text-align: center;">  <p><b>Engineering Solutions Consulting, Guidelines, and Training</b></p> <p><b>www.klmtechgroup.com</b></p> </div>	<p style="text-align: center;">Page 2 of 8</p> <p style="text-align: center;">Rev 1.1</p>
---	---	---

Whether you have a team of new or seasoned employees, an introduction or review of these concepts are very beneficial in closing the gap if you are not in the best quartile or maintaining a leadership position. Most studies show that a continuous reinforcement of best practices in operational principles is the most effective way to obtain the desired results. Training and learning should be an ongoing continuous lifelong goal.

### **Course Objective**

This course will guide the participants to develop key concepts and techniques for Palm Oil Harvesting Safety. These key concepts can be utilized to make operating decisions that can improve your unit's performance and safety.

Many aspects of Palm Oil Harvesting Safety can be improved including Falls, Ergonomics, Exposure, Injuries, Equipment Malfunctions and Snake / Insect Bites. These hazards need to be understood in advance of harvesting.

This seminar focuses on the core building blocks of safe Palu Oil Harvesting. This program will emphasize the safe fundamentals development and then safe utilization of these fundamentals by operations, engineering, maintenance, and support personnel.

### **Course Duration and Delivery**

A typical course duration is 3 to 5 days based on the background of the participants. One of our Senior Technical Professional with over 25 years of experience would lead the class. Instruction can be in a regional seminar, in house or in an online webinar.

This course is an advanced course for these topics – for a more introductory course consider attending our introductory course. Each of the topics will be covered in more technical detail.

<p style="text-align: center;"><b>KLM Technology Group</b></p> <p>Practical Engineering Guidelines for Processing Plant Solutions</p>	<div style="text-align: center;">  <p><b>Engineering Solutions Consulting, Guidelines, and Training</b></p> <p><a href="http://www.klmtechgroup.com">www.klmtechgroup.com</a></p> </div>	<p style="text-align: center;">Page 3 of 8</p> <p style="text-align: center;">Rev 1.1</p>
---	--	---

## Syllabus

### Introduction

- The Global Oils and Fats Markets

### Review of Process Incidents

- Safety for the Processing Industry

### Hazards of Palm Oil Harvesting

- Accidental Injuries
- Musculoskeletal Injuries
- Skin Abrasions
- Eye Damage
- Exposure to Pesticides
- Sun Exposure
- Tropical Infections
- Snake and Insect Bites
- Mechanical Equipment Malfunctions
- Health and Lifestyle Issues

### Accidental Injuries

- Review Palm Oil Harvesting Accidental Injuries
  - Falling
  - Hit by objects
  - Cutting themselves with tools like long sickles and machetes
- Develop a plan to reduce accidental injuries
- Develop proper Personal Protective Equipment for these tasks
- Develop proper techniques to reduce hazard

<p style="text-align: center;"><b>KLM Technology Group</b></p> <p>Practical Engineering Guidelines for Processing Plant Solutions</p>	 <p><b>Engineering Solutions Consulting, Guidelines, and Training</b></p> <p><a href="http://www.klmtechgroup.com">www.klmtechgroup.com</a></p>	<p>Page 4 of 8</p> <p>Rev 1.1</p>
---	---	-----------------------------------

### Musculoskeletal Injuries

- Review Palm Oil Harvesting Musculoskeletal Injuries
  - Repetitive movements
  - Heavy Lifting
  - Awkward Postures
- Develop a plan to reduce Musculoskeletal Injuries
- Develop proper Personal Protective Equipment for these tasks
- Develop proper techniques to reduce hazard

### Skin Abrasions Injuries

- Review Palm Oil Harvesting Skin Abrasions
  - Contact with Palm Oil Fruit
  - Thorns
  - Pesticides
- Develop a plan to reduce Skin Abrasions Injuries
- Develop proper Personal Protective Equipment for these tasks
- Develop proper techniques to reduce hazard

### Eye Damage

- Review Palm Oil Harvesting Eye Damage
  - Contact with falling palm fronds
  - Thorns
- Develop a plan to reduce Eye Damage Injuries
- Develop proper Personal Protective Equipment for these tasks
- Develop proper techniques to reduce hazard

<p style="text-align: center;"><b>KLM Technology Group</b></p> <p>Practical Engineering Guidelines for Processing Plant Solutions</p>	<div style="text-align: center;">  <p><b>Engineering Solutions Consulting, Guidelines, and Training</b></p> <p><a href="http://www.klmtechgroup.com">www.klmtechgroup.com</a></p> </div>	<p style="text-align: center;">Page 5 of 8</p> <p style="text-align: center;">Rev 1.1</p>
---	--	---

### Exposure to Pesticides

- Review Palm Oil Harvesting Exposure to Pesticides
- Develop a plan to reduce Exposure to Pesticides
- Develop proper Personal Protective Equipment for these tasks
- Develop proper techniques to reduce hazard

### Sun Exposure

- Review Palm Oil Harvesting Sun Exposure
  - High Sun Exposure
  - Heat Exhaustion
- Develop a plan to reduce Sun Exposure
- Develop proper Personal Protective Equipment for these tasks
- Develop proper techniques to reduce hazard

### Tropical Infections

- Review Palm Oil Harvesting Tropical Infections
  - Malaria
  - Leptospirosis
  - Dengi Fever
- Develop a plan to reduce Tropical Infections
- Develop proper Personal Protective Equipment for these tasks
- Develop proper techniques to reduce hazard

<p style="text-align: center;"><b>KLM Technology Group</b></p> <p>Practical Engineering Guidelines for Processing Plant Solutions</p>	<div style="text-align: center;">  <p><b>Engineering Solutions Consulting, Guidelines, and Training</b></p> <p><a href="http://www.klmtechgroup.com">www.klmtechgroup.com</a></p> </div>	<p style="text-align: center;">Page 6 of 8</p> <p style="text-align: center;">Rev 1.1</p>
---	--	---

### Snake and Insect Bites

- Review Palm Oil Harvesting Snake and Insect Bites
  - Snake identification
  - Mosquitoes
  - Fire Caterpillars
- Develop a plan to reduce Snake and Insect Bites
- Develop proper Personal Protective Equipment for these tasks
- Develop proper techniques to reduce hazard

### Mechanical Equipment Malfunctions

- Review Palm Oil Harvesting Mechanical Equipment Malfunctions
  - Equipment Rollover
  - Trucking Issues
  - Roadway Issues
- Develop a plan to reduce Equipment Malfunctions
- Develop proper Personal Protective Equipment for these tasks
- Develop proper techniques to reduce hazard

### Health and Lifestyle Issues

- Review Palm Oil Harvesting Health and Lifestyle Issues
  - Surveys show 53% of Harvesters Smoke
  - Surveys show 36% of Harvesters Drink Alcohol
- Develop a plan to Improve Health and Lifestyle Issues Knowledge

<p style="text-align: center;"><b>KLM Technology Group</b></p> <p>Practical Engineering Guidelines for Processing Plant Solutions</p>	<table border="1" style="margin: auto;"> <tr> <td style="padding: 5px;"><b>KLM</b></td> <td style="padding: 5px;"><b>Technology Group</b></td> </tr> </table> <p><b>Engineering Solutions Consulting, Guidelines, and Training</b></p> <p><b><a href="http://www.klmtechgroup.com">www.klmtechgroup.com</a></b></p>	<b>KLM</b>	<b>Technology Group</b>	<p>Page 7 of 8</p> <p>Rev 1.1</p>
<b>KLM</b>	<b>Technology Group</b>			

### **Who Should Attend:**

- People who are making day to day decisions regarding safety, operation, design, and economics of harvesting.
  1. 1<sup>st</sup> Line Operations / Harvesting personnel,
  2. Operation / Harvesting Supervisors,
  3. 1<sup>st</sup> Line Maintenance personnel,
  4. Maintenance Supervisors,
  5. Senior Plant Supervisors,
  6. Operations Engineers
  7. Process Support Engineers,
  8. Design Engineers,
  9. Cost Engineers
  10. Environmental Professionals
  11. Chemist
  12. Sales and Marketing Specialist
  
- Ideal for veterans and those with only a few years of experience who want to review or broaden their understanding in Safe Operations.
  
- This is an opportunity for new plant personnel and for those who are experienced to meet and discuss current problems and learn how to enhance their operations and safety
  
- Other professionals who desire a better understanding of subject matter

<p><b>KLM Technology Group</b></p> <p>Practical Engineering Guidelines for Processing Plant Solutions</p>	<table border="1"><tr><td data-bbox="548 128 800 247"><b>KLM</b></td><td data-bbox="800 128 1133 247"><b>Technology Group</b></td></tr></table> <p><b>Engineering Solutions Consulting, Guidelines, and Training</b></p> <p><a href="http://www.klmtechgroup.com">www.klmtechgroup.com</a></p>	<b>KLM</b>	<b>Technology Group</b>	<p>Page 8 of 8</p> <p>Rev 1.1</p>
<b>KLM</b>	<b>Technology Group</b>			

**What you can expect to gain:**

- A detailed overview of Harvesting Hazards and Hazard Reductions
- Gain an understanding of the Harvesting Opportunities for improved safety
- Gain an insight to safety optimization strategies