

IMPLEMENTATION OF OCCUPATIONAL HEALTH AND SAFETY (OHS) FOR HARVESTING EMPLOYEES IN PALM OIL PLANTATIONS

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Abstract

This research aims to determine the implementation, potential hazards, and factors that can influence the application of occupational health and safety (OHS) among oil palm harvest workers in oil palm plantations. This research was conducted over a period of 4 months, from March to July 2023. The testing used a quantitative descriptive method and Ishikawa diagram analysis. The research population consists of 45 harvesting employees, and the sample used is a saturated sample, meaning the entire population was taken as respondents for this study. The research results indicated that the implementation of Occupational Health and Safety (OHS) for harvest employees at a palm oil plantation in one of the government plantations has been carried out very well. Socialization and education for workers, accompanied by supervision, are very helpful in preventing workplace accidents on the oil palm plantation. Supervision from the company helps change employees' behavior to comply with safety and health work SOPs.

Keywords: *palm oil plantation, accident, safety, health, harvest*

1. INTRODUCTION

Indonesia, as the second-largest country among more than 100 surveyed nations, shows the ILO survey's competitiveness level in occupational safety and health factors. Every year, the world experiences 270 million work-related accidents, 160 million workers suffer from work-related diseases, 2.2 million cases of death, and financial losses of 1.25 trillion dollars. In Indonesia, according to data from PT. Jamsostek (Persero), from 2002 to 2005, there were more than 300,000 workplace accidents, 5,000 fatalities, 500 permanent disabilities, and compensation exceeding Rp 550 billion. This compensation is part of the direct losses of 7.5 million formal sector workers who are active participants of PT. Jamsostek (Persero). The indirect losses of the entire formal sector are estimated to exceed Rp. 2 trillion, mostly due to business losses. In other words, the loss of productivity in the business world due to Occupational Safety and Health factors. (Prasetyo dan Budiati, 2016).

According to the Minister of Manpower Regulation Number 5 of 2018 concerning Occupational Safety and Health in the Work Environment, worker protection must be prioritized by implementing OHS Standards in the work environment for both small and large companies. It is very important to adhere to the principles of occupational safety and health (OSH) in the workplace. OSH is important in all fields of work. The implementation of Occupational Safety and Health (OSH) is one of the main efforts to create a safe, healthy, and pollution-free workplace. This is done to reduce and ensure the safety of employees from work accidents and occupational diseases, thereby increasing work productivity and efficiency. However, due to the high potential hazard levels in the company, management must take action to control workers to prevent any undesirable incidents. Occupational Safety and Health is very important to protect employees from work-related diseases and accidents. (Fitri, 2021).

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The accident process involves 4 production factors, namely People, Equipment, Materials, Environment (PEME) that interact with each other and together produce goods or services. Accidents occur during this interaction, especially when there is human contact with tools, materials, and the environment wherever we are. Accidents can occur due to poor or unsafe conditions of tools or materials. Accidents can also be triggered by hazardous environmental conditions that exceed the threshold. Therefore, the implementation of Occupational Health and Safety (OHS) is necessary. (Aldin, 2018).

Oil palm plantations are one of the business sectors that are also identical with work risks, where the threat level of accidents and occupational health becomes very high for the workers if not adhered to properly and correctly. Occupational Health and Safety (OHS) in palm oil is very important because this field of work has a high potential for workplace accidents. Every worker has the right to receive K3 protection to enhance productivity and well-being. K3 prevents occupational accidents and diseases and creates a conducive business climate. K3 protection is very important for worker protection, decent work, productivity, and welfare, as well as the advancement of the business world, including in palm oil plantations.

But there are still challenges in implementing safety in palm oil plantations, because it is not easy to apply due to the low education level of field workers, making it difficult to instill a culture of safety or safe work practices, especially since field workers are always in contact with sharp tools such as machetes, hoes, and sickles, as well as chemicals like pesticides and fertilizers. Here are the steps that should be taken based on my experience to establish a good work safety culture and a sustainable safety system.

The analysis of the implementation of occupational health and safety (OHS) is very important to ensure the safety and health of workers in palm oil plantations. Some of the risks include heat exposure, heavy workloads, exposure to hazardous chemicals, fires, and accidents caused by heavy machinery and harvesting equipment. This analysis requires the identification of risks associated with work processes in the factory through workplace inspections, employee interviews, and the analysis of previous work accident data. After that, a risk assessment must be conducted to evaluate the level of danger and the likelihood of accidents or diseases caused by the work processes. The results of the risk assessment will be used as a basis for planning and implementing appropriate OHS procedures. Accidents that often occur in the fields usually happen during the harvesting process, because harvesting employees do not use PPE such as helmets, shoes, and gloves, which can lead to them being struck by fronds, fruit bunches, and even harvesting tools.

Occupational Health and Safety (OHS) is an effort to create a safe, healthy, and environmentally conscious workplace to protect and prevent workers from workplace accidents, which ultimately can optimize work efficiency and productivity. Work accidents are not just about death. One way to minimize the risk of workplace accidents is by using personal protective equipment, because accidents in plantations will certainly have a negative impact on the company. The use of personal protective equipment reduces the likelihood of accidents in the workplace. Personal protective equipment is part of the OHS management in minimizing workplace accidents. Therefore, both employees and the company must pay attention to personal protective equipment. (Elisupiaty, Ayiek sih sayekti dan Fitri kurniawati, 2016).

Good planning and implementation of occupational health and safety (OHS) are key factors in preventing and reducing risks in palm oil plantations. The planning steps that need to be taken include the formulation of clear OHS policies, the establishment of OHS teams, training and education for workers, the installation of warning and safety signs, and the use of appropriate personal protective equipment (PPE). The implementation of OHS involves the application of safe work procedures, monitoring compliance with OHS policies and procedures, and the maintenance and routine inspection of work equipment and factory facilities. Regular supervision and evaluation are also necessary to ensure the success of OHS implementation, as well as to identify potential problems and shortcomings that may arise. By conducting a comprehensive analysis of the implementation of occupational health and safety (OHS), operational activities in plantations can create a safe working environment, protect workers' health, and improve overall productivity and



work quality. This research is important to help the Company reduce accident rates and even eliminate accidents during work, therefore attention must be paid to the use of PPE, harvesting machines and tools, signage, and employee behavior. Therefore, the company and employees must implement the safety procedures provided by the company and the government.

2. IMPLEMENTATION METHOD

The type of research is descriptive method, which is a scheme focusing on actual and real problems. This descriptive method is carried out by collecting information, organizing and analyzing the information, and drawing conclusions. The researcher also conducted observations by analyzing case studies in plantations, specifically those that have experienced work accidents during activities in the oil palm plantation.

The population of this study consists of all harvesting employees in the plantation, totaling 45 people, which includes permanent employees (24 people) and contract employees. (21 orang). The research sample used is a saturated sample, so the entire population is used as the sample for this study.

The types of data in this research are (1) primary data, obtained from questionnaires, observations, and interviews with employees and plantation assistants, and (2) secondary data, obtained from company documentation (oil palm plantation) and literature studies acquired by the researcher to support the validity of the primary data.

Table 1 Type of Harvest Employees

No.	Type of Employee	Number
1	Permanent	24
2	Contract	21
Total		45

3. RESULTS AND DISCUSSION

3.1 Characteristics of Research Respondents

Harvesting employees are predominantly male because men are considered to have the capacity and competence suitable for the type of harvesting work, which involves heavy workloads and risks. The results of the interview with the field assistant also mentioned that the productivity of male harvest workers is much better, over 80%, compared to female workers who have participated in harvesting, making them more effective in meeting the plantation targets. Additionally, the company recruits more men as employees because, in its business process, the company requires more technical manpower than non-technical, such as in the field of palm oil harvesting. This field of work necessitates many male roles because technical skills are generally possessed by male employees who tend to have stronger physical capabilities than women.

For age identity, it is known that more employees in the plantation harvesting sector are aged 31-40 years (60%) because this age group is considered productive, with the expectation of having higher productivity or performance at this age. The majority of employees in the productive age group can enhance the internal strength of the company, as these employees have high mobility.

The identity of the respondents in terms of education level, the harvest employees are dominated by low education levels because the majority of them have a high school equivalent education (55%), with junior high school and elementary school equivalents each making up more than 20%. This indicates that the majority of the respondents are employees with a middle to upper education level. Employees with such education are expected to have good knowledge and skills in understanding the company's K3 (Occupational Health and Safety). A high level of education from an employee will affect their ability to achieve optimal performance.

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3.2 Implementation of K3 SOP in Harvesting Activities at Palm Oil Plantations

1. Adequate PPE in relation to the number of employees

It is known that out of 45 respondents, the majority responded positively regarding the adequacy of PPE in relation to the number of employees, with 21 respondents (46.7%) agreeing. Subsequently, 24 respondents (53.3%) stated that the adequacy of PPE in relation to the number of employees was in the strongly agree category. On average, the respondents' assessment of the adequacy of PPE was 4.53 in the strongly agree category. (4,24 s.d 5,04). This indicates that the adequacy of PPE in relation to the number of employees has been well implemented by the company. PPE has been useful for protecting employees while working. Adequate PPE for employees will reduce the rate of workplace accidents faced by employees. The adequacy level of PPE already meets the Company's SOP.

2. Completeness of PPE

It is known that out of 45 respondents, the majority responded to the level of completeness of the company's PPE, with 21 respondents (46.7%) agreeing. Meanwhile, 24 respondents (53.3%) stated that the level of completeness of the company's PPE was in the very agree category. On average, respondents rated the level of completeness of PPE at 4.53 in the very agree category (4.24 to 5.04). This indicates that the company is capable of providing PPE completeness well. The level of PPE completeness meets the company's SOP.

3. Regulations on the Use of PPE

Out of 45 respondents, 51% agreed with the regulations on the use of PPE during the harvesting process. This figure also indicates that the level of compliance in the use of PPE is already very good.

4. Personal Protective Equipment (PPE) Usage Guidelines

For this variable, it is known that 44% strongly agree that the Company has provided clear guidelines for PPE usage. The category of the PPE usage guidelines variable also received a good rating because employees are seen using PPE correctly.

5. Machines and Tools

It is known that 55.6% of employees stated that the machines and equipment used in the harvesting process meet safety standards. One of them is that there are already guards and safety devices on the egrek/dodos poles. The company has paid attention to the completeness of protective and safety equipment for the machines and harvesting tools used. Safety devices are installed on work facilities or dangerous machines to prevent accidents and ensure the safety of workers. The protective and safety equipment already meets the Company's SOP. This condition also shows that the company pays attention to the safety of the harvesters because they are the spearhead of production, so they need to be monitored in detail.

6. Protectors and Safety Devices on Harvesting Tools

It is known that 32 respondents (71%) of employees stated that the company made regulations for egrek/dodos to provide protectors in a strongly agree condition. On average, respondents' assessment of the company's regulation requiring protective gear for egrek/dodos is 4.71 in the strongly agree category (4.24 to 5.04). This indicates that the company has established regulations to ensure the availability of protective gear for egrek/dodos in order to guarantee the health and safety of the harvesters in the field..

7. Signs

There are 71% of respondents who strongly agree and fall into the category of having been well implemented, indicating that the company has done well in installing signs in the office as reminders for the harvesters. Warning signs for K3 hazards in the workplace are useful as visual management in the workplace. Some signs must be installed as part of the required occupational health and safety regulations to help reduce hazardous risks, while posters provide explanations that describe an activity in terms of cause and effect. All of the above are applied as a framework to remind the importance of procedures, work processes, and work results that are safe and meet the qualification standards set by the applicable occupational safety laws. The installation of signals known as signs in the workplace is very important because it serves as a

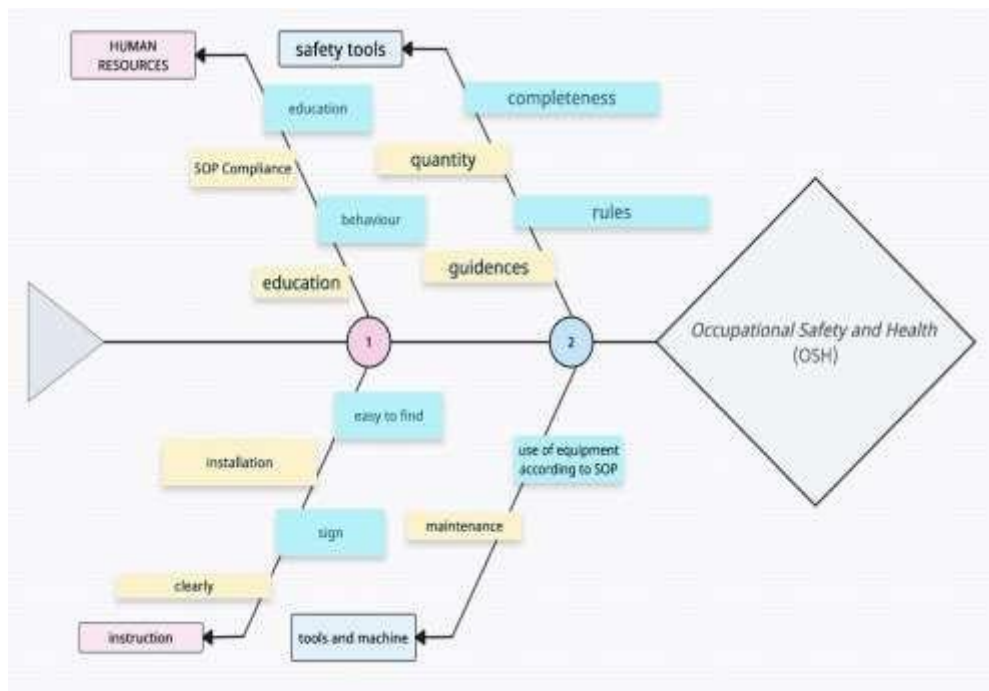
control function to provide information about conditions such as prohibitions, warnings, requirements, and even assistance. Therefore, it is very necessary to have ease in finding and reading workplace safety signs. The role of these K3 signs is very helpful for companies to minimize the risk of workplace accidents, allowing the company to create a zero-accident environment in the workplace.

8. Employee behavior

On average, respondents' assessment of the understanding of occupational health by the harvesters is 4.80 in the strongly agree category. This indicates that the majority of harvesters have a good understanding of the importance of occupational health. It is known that 31 respondents (69%) of the employees strongly agreed, indicating that the willingness to follow the rules by the harvesters is functioning well. This shows that the majority of employees have a high willingness to comply with the rules regarding the importance of occupational health and safety (OHS). Additionally, it is known that 80% of employees strongly agreed that being careful while working by the harvesters is functioning well. This indicates that the majority of employees apply the principle of caution in their work. In fact, 82.2% of employees strongly agreed, indicating that the concern for safety among the harvesters is functioning well. This shows that the majority of employees are applying the principle of concern for safety.

a. Ishikawa Chart

The following analysis will be conducted using a cause-and-effect diagram (Ishikawa) to identify the root causes that may occur during the production process by searching for factors that could lead to the implementation of K3 being less in line with the established quality standards.



The basic concept of the Fishbone Diagram is that the fundamental problem is placed on the right side of the diagram or at the head of the fishbone structure. The causes of the problem are depicted on the fins and spines. The categories of problem causes in this study are 4, namely: Human Resources (HR), Personal Protective Equipment (PPE), Signage, and Machinery and Equipment. The first factor is PPE, where PPE is one of the important components in workplace protection. Many cases are caused by inadequate PPE provided by the company and poor regulations regarding PPE. Wearing PPE is the last resort in efforts to prevent workplace accidents. These workplace accidents often occur due to workers not wearing the PPE provided

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by the company. However, in this case, all workers have adhered to the proper and correct use of PPE SOPs. Thus, the results of this research testing show good outcomes. The second factor is human resources or human capital. Employee behavior in the workplace can cause this. Non-compliance with the applicable SOP, lack of focus, daydreaming. According to the author's observation, the employees perform their tasks well, but they appear to be lazy in wearing personal protective equipment while working. This is because the completeness and functionality of the PSA offered by the company have declined. Even training also affects the behavior of the employees themselves, most of whom are high school students. Low-level workers do not have good knowledge and understanding of the company's K3 (Occupational Health and Safety). However, in this study, the results on human resources show good outcomes. This means that the workers have been trained on the importance of occupational health and safety (OHS). Another factor that causes workplace accidents is the installation of non-standard signs. In principle, K3 signs are not only placed in the workplace but can be placed anywhere in general. The signs in the company are considered very clear and good by the workers, as seen from the test results which show good outcomes.

The fourth factor causing workplace accidents is the machines and equipment commonly used by harvesters for harvesting. The operation of harvesting machines and equipment in accordance with company regulations is mandatory for all employees. Employee ignorance regarding the equipment used for harvesting fruit in the orchard has a high likelihood of being a cause of workplace accidents. The absence or inadequate provision of protective equipment. These are devices provided by management for use by workers at the workplace to protect against all forms of injury to their sensitive body parts. (Diannita, 2022). These are helmets, clothing, gloves, hard shoes, and so on. The use of these gadgets is related to the nature of the job, comfort, availability, and affordability. However, the lack of access to these gadgets has caused workers to suffer injuries and fatalities. (Rajput Sharma and Joshi, 2023). In a study by Kasim, Alabi, and Wusu (2020), a decrease in the number of injuries in general hospitals was found to be a result of the availability and use of protective devices by workers, while Benson et al. (2024) revealed that the lack of access to these devices is a major issue.

Not only that, the lack of maintenance is also another factor, because the machines and harvesting equipment, which are usually made of iron, are prone to rusting that can reduce the function of these tools. However, in this study, the author found that there is regular maintenance and employee compliance with the SOP for using harvesting equipment. Thus, work accidents due to this factor rarely occur. Addressing these concerns is crucial to ensure employee well-being and enhance overall productivity and safety inside the organization. Establishing comprehensive health and safety protocols, regular maintenance schedules, and rigorous cleanliness procedures will be essential measures to attain these enhancements. These findings corroborate the research conducted by Lohela-Karlsson et al. (2018) and Dewanti, Jingga, and Wahyudiono (2024), which identified a detrimental environment as a significant concern.

9. CONCLUSION

The implementation of the Occupational Health and Safety (OHS) Program in this plantation company has been carried out well. The signs installed by the company in the afdeling office have been put up, and the harvesters can see them clearly. The signs installed by the company are easy for the harvesters to understand and clear, so the harvesters can see them. The harvesters have already developed an awareness of the importance of occupational safety and health because they have been educated about it. The company also conducts thorough supervision of the harvesting activities in accordance with occupational safety standards for employees, thereby minimizing workplace accidents in the oil palm plantation environment. To prevent workplace accidents, the company conducts socialization of work procedures and safety measures, carries out regular health checks, and always adjusts PPE according to deadlines to ensure they are always in usable condition.

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