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Application Of Control Functions In Efforts To Slow The Cpo Process (*Crude Palm Oil*) At The Ptp Palm Factory. Nusantara Vi Ophir Business Unit

Penerapan Fungsi Kontrol Dalam Upaya Memperlambat Proses Cpo (Crude Palm Oil) Di Pabrik Sawit Ptp. Unit Bisnis Nusantara Vi Ophir

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Abstract

The main problem of this PKM concerns the implementation of the control function in an effort to increase the smooth running of CPO at PT's palm oil mill. Perkebunan Nusantara VI Ophir Business Unit. This research is expected to have an impact on the company which will serve as a basis for solving the problem of improving the CPO production process so that the company's goals can be achieved optimally. Seeing the existing problems, the solution that can be given to PT. Perkebunan Nusantara VI Ophir Business Unit is to create a master production schedule first in a comprehensive production plan and also by utilizing science and technology which is much more advanced at this time. Free fatty acids are an indicator of the quality of oil, the higher the free fatty acids in the oil, the worse the quality of the oil. For this reason, efforts need to be made to prevent the formation of free fatty acids in oil, so that the company standard of a maximum free fatty acid content of 4.8% is achieved. Companies should improve K3 supervision so that workers do not experience work accidents in the CPO processing process and companies must supervise the sorting implementation so that the types of fruit that come in are of good quality and quality.

Keywords: Implementation, Resources, Productivity, *Crude Palm Oil* and Performance

Abstrak

Permasalahan utama dari PKM ini menyangkut pelaksanaan fungsi pengendalian dalam upaya meningkatkan kelancaran

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CPO di pabrik kelapa sawit PT. Unit Bisnis Perkebunan Nusantara VI Ophir. Riset ini diharapkan dapat memberikan dampak bagi perusahaan yang akan menjadi dasar untuk memecahkan masalah perbaikan proses produksi CPO sehingga tujuan perusahaan dapat tercapai secara optimal. Melihat permasalahan yang ada, solusi yang dapat diberikan kepada Unit Bisnis PT. Perkebunan Nusantara VI Ophir adalah membuat jadwal produksi induk terlebih dahulu dalam rencana produksi yang komprehensif dan juga dengan memanfaatkan ilmu pengetahuan dan teknologi yang jauh lebih maju saat ini. Asam lemak bebas adalah indikator kualitas minyak, semakin tinggi asam lemak bebas dalam minyak, semakin buruk kualitas minyak. Untuk itu, perlu dilakukan upaya untuk mencegah pembentukan asam lemak bebas dalam minyak, sehingga standar perusahaan kandungan asam lemak bebas maksimum 4,8% tercapai. Perusahaan harus meningkatkan pengawasan K3 agar pekerja tidak mengalami kecelakaan kerja dalam proses pengolahan CPO dan perusahaan harus mengawasi pelaksanaan penyortiran agar jenis buah yang masuk berkualitas dan berkualitas baik.

Kata kunci: Implementasi, Sumber Daya, Produktivitas, Minyak Sawit Mentah dan Kinerja

INTRODUCTION

The agricultural sector is a sector that plays a very important role in the economy in various developing countries, including Indonesia. Agricultural production can only be obtained if the necessary requirements can be met, namely land, labor and skill capital. Indonesia is a country that has many oil palm plantations so there is a lot of investor competition in the world market, which can be seen as the price of palm oil is not constant or the price of palm oil changes according to Indonesian standards and laws. Palm oil processing is the process of obtaining oil and kernels from oil palm fruit, through the processes of boiling, piping, grinding, pressing, separating, drying and piling. Palm oil processing carried out mechanically can play a good role if suitable raw materials are available and the factory performs well. To control the processing process requires knowledge and mastery of the processing process, machine and tool performance as well as combining each processing process and the ability to operate. Palm oil processing products are a description of the processing processes and in each processing equipment unit from the time the fruit is received at the factory until palm oil (CPO) and kernels are produced that meet the quality with technical and economic efficiency.

Palm oil is the main raw material for making edible oil. Meanwhile, edible oil is one of the 9 basic needs of the Indonesian people. The demand for edible oil at home and abroad is an indication of the important role of palm oil commodities in the nation's economy. Palm oil is one of four vegetable oils (palm, soybean, rapeseed, and sunflower). Of these four main oils, palm oil is the

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largest contributor, accounting for more than 35% of total production. Palm fruit is a source of raw materials *Crude Palm Oil* (CPO) and *Palm Kernel Oil* (PKO). CPO is produced from the pulp of palm fruit, while PKO is produced from the core of the fruit.

In the development of science and technology, control is very important to advance a company. To ensure that company activities are managed properly, control tools are needed, namely the control function. To achieve its goals, a company must have a plan and the company must have an operational cost budget. In a company, the control function has a very important role in achieving the goals that have been set. Without good control, a company will not be able to monitor its operations and experience has proven that a good control function is a step that can direct all company activities to achieve the goals that have been set.

The implementation of control is an effort to increase the smoothness of the CPO production process (*Crude Palm Oil*) at palm oil mills. However, in the implementation of this control function, there are still irregularities, this results in the refining process being repeated repeatedly, resulting in wasted operating costs. Therefore, the application of the control function in an effort to increase the smoothness of the CPO production process plays an important role in evaluating the effectiveness of management of production activities so that the company's goals can be achieved as planned and desired. The kernel is found inside the oil palm kernel which is coated in the shell. In one fruit there is one seed which contains the core.

The palm kernel or kernel is the fruit of the oil palm plant which has been separated from the flesh and shell and dried. This core contains oil that is clear in color and the quality of the core oil is better compared to the quality of the fruit flesh oil. It's just that the oil content is less than the oil content of the fruit flesh. The oil contained in the dry core is around 44-53%.

At PT. Perkebunan Nusantara VI Ophir Business Unit in kernel processing has the same quality as CPO, namely free fatty acids, water content and impurity content. It's just that the fatty acids will be limited to only 1%, the higher the free fatty acids, the more rancid the smell will be because the kernels are usually used for cosmetics. while the water content will be limited to only 7% and the dirt content caused by the shell included in the core. The weighing station functions to determine the amount of FFB that the factory will receive. Weighing is carried out by weighing the truck containing the FFB entering the factory (Weighing 1), after the FFB is unloaded at the factory. *loading ramp*, the empty truck is weighed again to determine the weight of the empty truck (Weighing 2). The weight of FFB received by the factory can be determined by calculating the difference between weighing 1 and weighing 2. Apart from that, the weighing bridge also weighs the amount of finished oil from the storage tank. Weighing is carried out by weighing the empty truck entering the factory (Weighing 1), after filling the oil from the storage tank, the truck containing the oil is weighed again to determine the weight of the truck already filled with oil (Weighing 2).

Considering the extent of the existing problems, this research concerns the implementation of the control function in an effort to increase the smooth running of CPO at the PT palm oil mill. Perkebunan Nusantara VI Ophir Business Unit.

METHODS OF DEVOTION

Activity Location

The location where this PKM is implemented is at PT. Perkebunan Nusantara VI Ophir

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Business Unit which is located at Kinali, District. Luhak Nan Duo, West Pasaman Regency, West Sumatra.

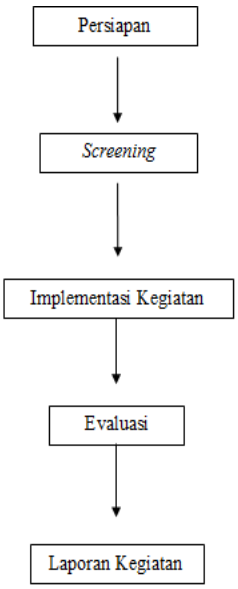
Work Procedures

There are several methods or approaches in implementing this PKM activity, which can be explained as follows:

a. The PKM Mandiri UPI YPTK Padang team held joint coordination meetings in a measured and systematic manner.
b. Choose a theme and important policies related to the form of PKM activities that will be held.
c. Conduct a location survey by visiting directly the place or location at PT. Perkebunan Nusantara VI Ophir Business Unit which is located at Kinali, District. Luhak Nan Duo, West Pasaman Regency, West Sumatra. The activity ended by creating cooperation in the form of scheduling the time for implementing PKM activities.
d. Realize all the scheduling or agenda above in writing in the PKM activity proposal text. Then submit it to LPPM UPI YPTK Padang.

Implementation Method

This PKM activity was carried out with an outreach approach to PT business owners. Perkebunan Nusantara VI Ophir Business Unit to implement human resource management to increase employee work productivity at its place of business. Implementation of activities can be described as follows:



Gambar 1

Diagram proses implementasi kegiatan

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Preparation

After maximizing preparation, screening then becomes the next agenda. There are several stages:

a. Prepare speakers and committee
b. Ensure all tools are ready to be brought to the location
c. Ensure all event needs such as transportation, souvenirs and banners
d. Implementation of

Screening Activities

After maximizing preparation, screening then becomes the next agenda. There are several stages:

a. Prepare speakers and committee
b. Ensure all tools are ready to be brought to the location
c. Ensure all

implementation of activities

This activity is related to the implementation of PKM at a scheduled time. The existing activity plans:

a. Opening of PKM by students
b. Socialization of PKM material regarding the Solo Bude Sri tofu business
c. Conclusion (Documentation)

Evaluation

This activity is an important part of continuous innovation and improvement in the future, in connection with the achievements or limitations that still exist during the implementation of PKM.

Report

The final part of this activity is making a report on the implementation of PKM which has been carried out to become part of and documenting evidence of the implementation of this activity to several parties such as supervisors.

Partner Participation

To achieve the desired goals, in the realization of the program it is hoped that Partners can participate in the following activities:

a. Being a socialization participant receives theories, concepts, discussions, questions and answers and other things provided during the activity process.
b. Providing the space and facilities needed during the activity process.

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RESULTS AND DISCUSSION

In an effort to control the function as seen from product quality, it consists of:
CPO (Crude Palm Oil)

CPO is crude palm oil which is obtained from the extraction or pressing process of palm fruit flesh and has not undergone refining. Palm oil is usually used for food, the cosmetics industry, the chemical industry and the animal feed industry. Palm oil is naturally red due to its high beta-carotene content. Palm oil is different from palm kernel oil(*palm kernel oil)* which are produced from the core of the same fruit. Palm oil is also different from coconut oil which is produced from the kernel of the coconut fruit (*cocos mucifera).* The difference is in the color (palm kernel oil does not have carotenoids so it is not red) and the clear fat content. Palm oil contains 41% saturated fat, palm kernel oil 81% and coconut oil 86%. (Harod McGee, 2004). At PT. Perkebunan Nusantara VI Ophir Business Unit, there are three main things in terms of CPO quality:

Free Fatty Acids

Free fatty acids are an indicator of the quality of oil, the higher the free fatty acids in the oil, the worse the quality of the oil. For this reason, it is necessary to make efforts to prevent the formation of free fatty acids in oil, so that the company standard of a maximum free fatty acid content of 4.8% is achieved.
There are several factors to keep free fatty acids:

a. Human ability to absorb from buyers will be limited by how much they can afford in terms of economic value. If the free fatty acid value is too high, apart from the quality of CPO obtained, the acid will be discarded and, in other words, the damaged parts will be cut and thrown away, which will cause the yield to be lower.
b. Acts as a controller because of the ability to absorb free fatty acids, humans do not exceed 1%. If the free fatty acid reaches the buyer, an average of only 5%, if more, they will be returned.
c. Water in the oil occurs due to the salami process during fertilization and due to factory treatment and landfilling. The water content in the oil also affects the quality or grade of the oil. In terms of management, if we look at the economic value, in contracts water content that is too high will be returned because only the high CPO price will be paid.
d. Dirt levels are substances that cannot dissolve in oil. where the amount of dirt will affect the quality of CPO in large quantities. In general, to reduce the amount of dirt contained in miyak usually by means of sedimentation. Sedimentation will be effective when the temperature of the oil is maintained, between a temperature of 80-85 degrees Celsius.

Sorting aims to determine the quality of FFB that is suitable for processing and the quality of FFB that is not suitable for processing. The quality of the fruit received by the factory must be checked for maturity. The types of fruit that go to PKS are generally tenera and dura. Harvest ripeness criteria are an important factor in checking fruit quality at FFB (Fresh Fruit Bunches) receiving stations. The quality of FFB can be clarified into several fractions based on FFB which can be seen in the following table.

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Figure 2. Production Process

Then stages *Loading ramp* functions as a temporary storage place for FFB before proceeding to the boiling station (*Sterilizer)*. *Loading ramp* has 42 doors and each door has a capacity of 7 tons, so the total capacity *loading ramp* in the PKS PT. Perkebunan Nusantara Unnit Usaha Ophir is 329 tons. TBS located at *loading ramp* entered into TBS *conveyor* and lifted by *transfer conveyor* next to *inclined conveyor* and to *distributing conveyor.*

Figure 3. Station Loading Ramp

CONCLUSION

Based on the results of the analysis and discussion carried out in the previous chapter, several important conclusions can be drawn in this research. It can be seen that there are 3 types of ingredients that cause a decrease in the quality of palm oil or CPO, including free fatty acids which are an indicator of the quality of the oil, the higher the free fatty acids in the oil, the worse the quality of the oil. For this reason, it is necessary to make efforts to prevent the formation of free fatty acids in the oil, so that the company standard of a maximum free fatty acid content of 4.8% is achieved. Water in the oil occurs due to the salami process during fertilization and due to factory treatment and stockpiling. The water content in the oil also affects the quality of the oil. In management, if seen from the economic value, in the contract water content that is too high will be returned because the only thing that will be paid is the high CPO price and impurities are substances that cannot be dissolved in oil. where the level of impurities will affect the quality of

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CPO in large quantities. In general, to reduce the level of impurities contained in oil, usually by means of deposition. Deposition will be effective if the temperature of the oil is maintained, between 80-85 degrees Celsius. In the end, it is recommended that companies should improve K3 supervision so that workers do not experience work accidents in the CPO processing process.

And the company must supervise the sorting process so that the types of fruit that come in are of good quality.

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