

# PRODUCTION OF PALM-BASED BIO FERTILIZER

## DESCRIPTION

Non-oily cake from the decanter is one of the by-products obtained from the processing of FFB to produce crude palm oil (CPO). It is estimated that about 0.4% of decanter cake could be produced for every tone FFB processed. Therefore, from a 90 t/hr mill, 160-200 tonnes of decanter cake can be produced every month.

Decanter cake obtains certain amount of nutrient (Table 1) and the boiler ash containing high % potassium (Table 2). These products can be mixed with inorganic fertilizer to enrich the nutrient content of the palm-based bio-compound fertilizer (Table 3).



Diluted CPO)



Fresh Decanter Cake  
(Moisture content 78%)



Fresh Decanter Cake Mixer (15HP)  
(Fresh decanter + boiler ash + inorganic fertilizer)

Table 1: Chemical Composition (%) and pH value of decanter cake

N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	CaO	MgO	pH
2.42	0.51	1.24	1.68	0.54	4.8

Table 2: Chemical composition (%) and pH value boiler

N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	CaO	MgO	pH
0.14	2.78	21.1	3.85	1.26	12.82

Table 3: Chemical composition (%) and ph value of palm-based bio-compound fertilizer

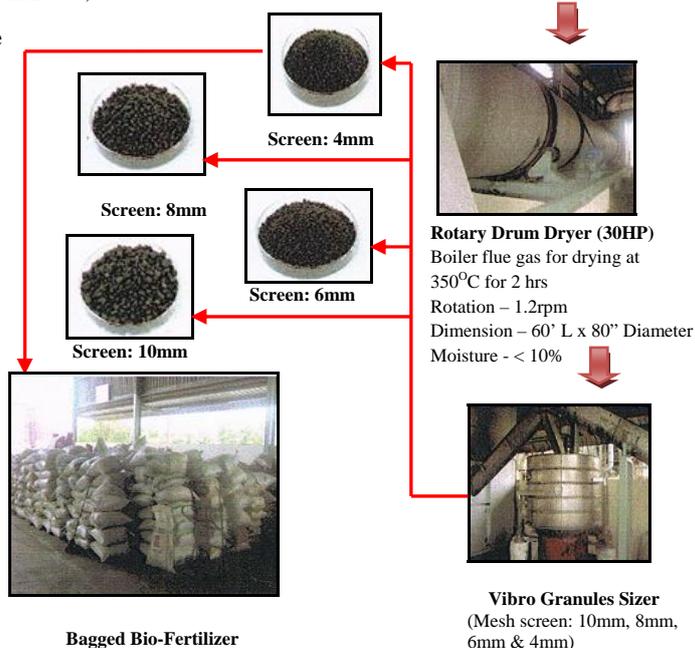
N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	CaO	MgO	SO <sub>2</sub>	C	pH
6.0	6.0	11.0	13.5	3.5	7.5	28	7.0

The vegetative growth of the oil palm seedling using bio-fertilizer

Treatment (kg)	Froned length (cm)	Leaf area Frond 3 (m <sup>2</sup> )	Petiole dry wt
Control	28.85	0.06	0.25
Std fertilizer	53.42	0.18	0.28
Bio-fertilizer	62.03	0.25	0.3

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# MPOB F5 FERTILIZER

## INTRODUCTION

MPOB F5 formulated by MPOB:

- Contains decanter cake from palm oil mill waste and enriched with a balanced formulation of chemicals.
- A product that has examined the effectiveness of fertilizers, especially in oil palm plantation and other crops.
- Provide percentage of nutrient-balanced suitable for oil palm plantations and other crops.
- Contain organic oil and micro-nutrients (TE), which can help improve the growth of palm trees. It can also improve organic carbon in soil that important in improving soil quality.

## ADVANTAGES OF MPOB F5

- Possess suitable chemical and organic nutrient for all types of soil.
- The organic materials inside the fertilizer have the ability to attract micro-organism that is effective for fertilization of the soil. Thus, producing better development of the root system of the oil palm trees. The trees will be able to absorb the nutrients needed with more effectively and efficiency.
- Contained balanced nutrients percentage N-P-K-Mg (6-6-10-1+T.E) in order for the palm oil trees to produce high yield of FFB.

Sown months / trees age	First month kg / tree	Fifth month, kg / tree	Ninth month kg / tree
Pre-cooked	1.0	1.0	1.0
3 years	2.0	2.0	2.0
4 years	2.5	2.5	2.5
5 years & above	3.0	3.0	4.0

Recommendation frequency usage of MPOB F5 once every 4 months

\*\*\* The above recommendations are general recommended and the use and appropriate dosage depends on the age of palm trees or other plant species, soil nutrient content and environmental factors



MPOB

MPOB F5

6-6-10-1 + TE

Palm-Based Bio Fertilizer



MPOB F5

6-6-10-1+TE

6-6-10-1 + TE