

## **ABSTRACT**

### **STUDY OF CLEANER PRODUCTION IMPLEMENTATION ON ORGANIC MANURE PROCESSING UNIT AT LANGGENG JAYA FARMER GROUP ADILUWIH**

by

**FERY AMRIYANTO**

Organic manure processing unit at langgeng jaya farmer group produces unpleasant gas smell as waste during the production process. Although the waste which is produced is still in small amount, but the waste will pollute environment and it will become disease sources if the production runs continuously while the location is near to people resident. Actually, the waste still can be used, but at this moment, it is not used yet. It is just thrown away.

Wahyuni (2009) states that biogas is a mixture of gases which is produced by methanogenic bacteria which happens to materials that can decompose naturally under anaerobic condition. Generally, biogas consists of methane (CH<sub>4</sub>), carbon dioxide (CO<sub>2</sub>), hydrogen (H<sub>2</sub>), and other gases in small amounts.

Cleaner production is a preventive and integrated strategy for environmental management which needs to be applied continuously on production and decomposing process to reduce risks to human and environment. The object of this research is organic manure processing unit which changes cow feces into organic manure. The production process will be evaluated to get the possibility of Cleaner production implementation based on economic and environmental benefits.

Step process which is performed on organic manure processing unit at langgengjaya farmer group was good enough, but based on assessment principle of cleaner production, it still needs to be done improvement process in order to be able to use the waste which is produced.

Alternative implementation of Cleaner production can be given based on the priority scale of Cleaner production option as in this order follows: (1) the biogas usage, (2) collecting the scattered organic manure, and (3) adding fermentation tub for the last. Based on calculation of feasibility study cleaner production option biogas usage can bring benefits for 10 household are Rp. 400.000,- per month with Pay Back Period (PBP) 24,2 months.

Keywords: organic manure, cleaner production, biogas.