

Co-composting of palm oil mill wastes.

ABSTRACT

Co-composting is one of the important bio-waste treatments in the palm oil industry for achieving sustainable process and zero waste. However, improper conditions of composting may cause several problems such as gas emission, bad odour, low quality product, production delay and high handling cost. Enhancing the efficiency of waste composting becomes a vital issue to overcome these problems. This review provides information on the practices and developments related to co-composting of the palm oil mill waste. The description on a typical palm oil mill process and the wastes generated, i.e. empty fruit bunch and palm oil mill effluent, as composting substrates are given. The common windrow composting system is described. The recent venture of using microorganisms in composting processes are also covered under the pretext of several researchers' interpretation that composting can be accelerated by the introduction of microorganism to the process through its influence on the physical, dynamic and biological behaviours of organic material. The criteria of choosing functional microbes for fast composting are discussed.

Keyword: Palm oil mill; Waste; Review.