

# **Anaerobic Digestion of Swine Manure by Effective Microorganisms and Methanogenic Bacteria**

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## **Abstract**

The use of Effective Microorganisms (EM) is increasing among swine farmers in Thailand because of documented benefits of odor control and improved animal health. EM cultures are easily administered by treating the animal's drinking water and feed. Odor control is achieved both by oral consumption of EM and by application of EM to animal manure and effluents. Nevertheless, there has been concern of whether EM might interfere in some way with the metabolism of methanogenic bacteria in biogas digesters. Consequently, studies were conducted over a period of three months to compare the effect of EM on swine manure digestion with and without sludge granules of methanogenic bacteria. The presence of EM and methanogenic bacteria enhanced the digestion process of swine manure and the production of biogas. These results suggest the possibility of using swine manure treated with EM for biogas production, and the addition of methanogenic bacteria at the initial stages to promote the digestion process.