**Fermented Organic Bio-liquid Fertilizer Made from Banana Inflorescence and Molasses**

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Abstract

Following observation on the organic fertilizer was made on Matara district on 09th February 2023. Major raw materials that utilized for this fertilizer are banana inflorescence and molasses. During the preparation a 1:1 ratio of chopped banana inflorescence and molasses are mixed and fermented for 21 days by adding cow dung as microbial inoculum to improve the fermentation process. End product of fermentation can be apply to crops by mixing with the water at 1: 80 ratio. This fertilizer mixture can be used for all types of crops at their reproductive stage to get higher flower setting and eventually higher yield. This can be applied as a soil application and foliar application. It has been resulting notable improvement in plant yield with good quality and quantity. It is a proven fact through researches that the minerals such as Potassium, Phosphorus, and Calcium are abundant in banana inflorescence, also Potassium play a vital role in plant reproduction stage and involved in controlling about 50 enzymes in a plants. Hence by merging above two facts it can conclude that this bio liquid fertilizer contains higher amount of Potassium. Molasses is frequently added to organic fertilizers to provide plants with the trace minerals it also enhance the fermentation. The raw materials used in this fertilizer are common ingredients in the Sri Lanka. Economic significance of this fertilizer is that with the proper improvement, this fertilizer has the potential to replace synthetic potassium fertilizer while playing an eco-friendly role.

**Keywords:** Fermentation, Fertilizer, Banana inflorescence, Molasses