

## TO STUDY THE COMPOSITION OF COMPOST FERTILIZER BY USING WASTE FOOD FROM CANTEEN POLITEKNIK MERLIMAU

### Abstract:

Collecting waste food from the canteen Politeknik Merlimau to be composted. This study to know the composition of compost fertiliser. Procedure to make compost fertiliser by manually have been done. Put 1kg of food waste that has been isolated and put 1kg compost fertiliser that has been process using compostech machine. Mix all the ingredient using mini shovel until the ingredient blended. Heat the temperature of oven until 63° and then put the ingredient into oven. After 10 minute, the ingredient will be taken out and mix again in front fan. Put the ingredient into the oven again with the same temperature. Repeat the steps for 8 hours. The resulting of compost fertiliser will be used to plant. 2 types of fertilizer such as (compost and chemical) used to obtain a difference result. Plant is monitored for 7-14 days to see the first changes. Sample of compost fertiliser sent to Melaka Biotech Sdn. Bhd to do NPK test. By the result of data through NPK test, the composition of compost fertiliser will be analyze and compared.

**Keyword:** Fertilizer, food waste, plant, compost fertilizer

### IP no:

### Finding:

#### Analysis In Term Of Compost Fertilizer And Chemical Fertilizer

The data was taken from 10 / 01 / 2017 until 24 / 01/ 2017 at site Politeknik Merlimau Melaka by physical observation .

DATE	CLASSIFICATION	OBSERVATION		NOTES
		BEFORE	AFTER	
10 /01/2017 - 24/01/2017	Compost Fertilizer	The tree looks good and still not bear fruit	The tree look same and have a new shoots	
10/01/2017 - 24/01/2017	Chemical Fertilizer	The tree looks good and still not bear fruit	The tree looks withered and leaves are not dense	Effect of the fertilizer

### Data and analysis

Based on NPK result that certificated by Melaka Biotech, the fertilizer have different composition in every fertilizer that made and be tested

This compost fertiliser need more ingredients to be added to get applicable NPK result

TEST PARAMETER	UNIT	TEST METHOD	RESULT	LIMIT
*Nitrogen (as N) (As is basis)	%w/w	MS 417:1994	1.8	Not Applicable
*Phosphorus (as P2O5) (As is basis)	%w/w	MS 417:1994	0.8	Not Applicable
*Potassium (as K2O) (As is basis)	%w/w	MS 417:1994	0.3	Not Applicable

### **Suggestion for future work**

- i. Make the fertilizers quality and qualified.
- ii. Determine the composition of compost fertiliser as a main objective.
- iii. To investigate the presence of contaminants in the soil by checklist of physical observation. Its also creating a more workable fertilizer.
- iv. Reduces the food waste. This product is almost reaching the objective but there are some drawbacks to the data for a final decision.

**Picture related to project**



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