

Student Community Service UGM Use Fruit and Vegetable as Fertiliser

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The use of chemical fertilisers by farmers is more rampant presently as a major component for farming. The farmers of Watugudel village, Pitu sub-district in Ngawi city, East Java, also do this practice. While in fact, the use of chemical fertilisers continuously will impact environmental health, particularly the soil. The biology of the soil is decreasing due to pollution of the fertiliser, hence decreasing soil fertility.

To minimise the farmer's dependence on chemical fertilisers, students of Universitas Gadjah Mada that join Student Community Service programme in Watugudel village had the initiative to introduce liquid organic fertiliser as alternative to chemical fertilisers.

Atika Ayu Ratnaningsih, student of Plant Pest and Disease science at Faculty of Agriculture UGM, made this breakthrough under the guidance of Atus Syahbudin, Ph.D.

The liquid fertiliser is organic waste such as those from kitchen vegetable waste. Essentially, organic fertiliser will still decompose by itself that adds up to soil nutrients. But making this waste into liquid organic fertiliser can make it more controlled, because such fertiliser is measured and storable.



Atika said to make this liquid needs buckets that have been punctured on the sides. Organic waste such as fruits and vegetables are the main ingredients. The decomposition process uses decomposing agent which is black flea(*Hermetia illucens*). “The method is simple. The fruit and vegetable waste is stored in the bucket and the bucket is covered. Automatically, the black flea will enter the bucket and decompose the waste and make it into liquid fertiliser,” said Atika on Wednesday (6/9).

This process is introduced to the farmers in a gathering. Later, every week a monitoring is conducted to observe the decomposition process from the arrival of the black flea, waste changing, until the waste getting decomposed. In the fifth week, the liquid organic fertiliser is ready. The students and the farmers collected the liquid and put it into bottles. This activity is expected to be useful to the farmers groups and local community in general.

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