

UGM Students Use Turmeric to Know Soil pH Level

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UGM students use turmeric to know the acidity level of agricultural land. This method is expected to help farmers increase agricultural productivity.

“The level of soil pH which is not neutral is among the reasons that decrease agricultural productivity. Turmeric has the properties to respond to soil pH level by changing colour,” said Arsyadani Tri, agricultural student, on Monday (17/6) at UGM.

In Boyolali regency, Central Java, the rice production has decreased from 286,237 to 275,073 tonnes in 2017. Actually, from the size of 13,402 hectares of land of Boyolali, as much as 287,334 tonnes can be produced.

To deal with the matter, Asyadani along with fellow students Praditya Rizqi, Dwi Rahmasari, Annisa Kurniawati, and Eli Budia use turmeric as soil pH level indicator. The programme is named as CurcuMarvel programme for the Student Creativity Programme under the guidance of lecturer Ratih Ineke Wati.SP., M.Agr., Ph.D.



To know the soil pH level is by observing the turmeric colour index. The index can also be used to know the soil pH level identification. Arsyadani explained to detect soil pH level through the turmeric is simple. First, turmeric bits are kept in soil sample mix that is taken from a number of different spots in a piece of land. After 10 minutes, the turmeric is removed and compared with those not kept in the soil sample mix.

If the colour of turmeric is pale, he said, it can be confirmed that the soil has a pH level below 7, which is acidic. If the colour turns dark yellow, the pH level is above 7 which means alkaline. If the colour remains the same, the soil is neutral.

“If the soil pH level is not neutral, the next thing to do is soil rehabilitation by giving feces and bionet organic fertiliser to neutralise the soil,” he concluded.

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