


UGM Doctoral Student Develops Sugar Cane Cultivation Technology in Dry Land

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Sugar cane in Indonesia is cultivated to fulfill the needs of national sugar production. The national sugar production in 2016 was up to 2.2 million ton while the sugar consumption demand was up to 2.6 million ton. The total of national sugar necessity reaches 6 million ton. Therefore, it needs an effort to increase the national sugar production. Currently, the sugar cane cultivation uses flower-stalk. On the other hand, based on various research reports, the utilization of flower-stalk was considered inefficient due to the high necessity of flower-stalks per hectare, a minimum number of new shoots and the growing power of the seeds is not uniform. In order to solve sugar cane cultivation problem in the dry land, an alternative cultivation technology is needed to solve limited water access issue.

The research which was conducted by a doctoral student at Agronomy Department, Faculty of Agriculture UGM, Wawan Sulistiono said the planting of flower-stalk in dry land is difficult to be performed due to its shoot that is very susceptible to drought. One of the methods he had developed was using single bud seed that is seeded and this is done by move cropping. "This planting system aims to avoid limited water access on dry land, prevent the planting decline, and increase the number of shoots," said Wawan during an open examination for his doctoral program at Faculty of Agriculture UGM on Thursday (27/7).



Wawan who previously was a researcher at Agricultural Technology Assessment Centre in North Maluku, Ministry of Agriculture, succeeded to conduct research on the development of move cropping technology for cultivating sugar cane in the dry land by using wood charcoal powder as a medium to maintain the seed's growth power. The research was done in a one-hectare dry land. Wawan used wood charcoal powder to maintain the seed's growth power which can reach 82.% and 66.25%. "The media can maintain sucrose, suppress the respiration rate and maintain the total sugar of the seed higher until 12 days of saving," said Wawan.

He further said the move cropping system using single bud seed with 60 cm for the spacing between rows is more beneficial, particularly for increasing the productivity. That planting distance is optimum to move cropping using single bud seed on dry land because it can increase the productivity by 34.9% higher than using flower-stalk.

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