THE EFFECTIVENESS OF DIFFERENT TYPE OF SPENT MUSHROOM COMPOST (SMC) AS BIOFERTILIZER ON THE GROWTH OF *Ipomoea reptans L. poir*

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ABSTRACT

THE EFFECTIVENESS OF DIFFERENT TYPE OF SPENT MUSHROOM COMPOST (SMC) AS BIOFERTILIZER ON THE GROWTH OF *Ipomoea reptans L. poir*

Spent Mushroom Compost (SMC) is made from agricultural by-product, such as cotton waste, bagasse and coconut husk. The soil from the cultivation of the mushroom is then used as a growing medium for other crops such as tomato and chilies. Spent mushroom compost has been widely used as bio fertilizer in agricultural application because it can replace inorganic fertilizer and reduce waste for a good use, it is also important to study the effectiveness of the compost. The trial was conducted in Kuala Pilah, Negeri Sembilan starting from March until May 2019. The aims were to measure the growth and development of *Ipomoea reptans L. poir* by using different type of SMC as bio fertilizer and evaluate the effectiveness of different type of SMC on the growth of *Ipomoea reptans L. poir*. The types of SMC used were cotton waste, coffee and bagasse. 200 gram of SMC was added in 400 gram of soil. 600 gram soil, cotton waste, coffee and bagasse were used as control. The parameters observed were plant height, number of branches, dry mass and chlorophyll. The results showed that the height of plant, number of branches, dry mass and the amount of chlorophyll were the highest for growing medium with spent coffee ground while the lowest was growing medium with bagasse. As a conclusion, use of SMC of spent coffee ground as bio fertilizer obtained the highest growth and the present of the spent ground coffee is the most effective for promoting the growth of the land spinach.