UTILIZATION OF COCONUT SHELL ASH *(Cocoa Nucifera)* IN AGRICULTURAL SOIL

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ABSTRACT

UTILIZATION OF COCONUT SHELL ASH *(Cocoa Nucifera)* IN AGRICULTURAL SOIL

Coconut shell ash is one of agricultural waste. This waste was found a lot globally and can cause risk to human health and also environment. An experiment was conducted to study the usage of coconut shell ash in agricultural soil. Coconut shell ash was formed by placing coconut shell in the muffle furnace. The temperature of muffle furnace used for the formation of coconut shell ash was 500°C. After coconut shell ash was formed, Fourier Transform Infrared Spectroscopy (FTIR) was used to determine characterization of calcium oxide in the coconut shell ash. It was found that the wavelength for calcium oxide is 477.10 cm^{-1}. Determination of soil pH and soil properties of all the soil samples were conducted after all soil samples included control soil was collected. There are three portions of coconut shell ash that was applied to each soil sample which were one gram, three grams and five grams respectively. The usage of coconut shell was effective for rising pH of the soil. pH of the soil increase after the application of coconut shell ash. The highest pH of the soil is after the application of five grams of coconut shell ash. Hence, coconut shell ash can be used as a liming agent.

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