APPLICATION OF HUSK ASH AND EXTRACT HUSK ASH WITH LIQUID SMOKE TO THE AVAILABILITY OF LATOSOL SILICA AND GROWTH OF GOGO RICE

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ABSTRACT

Silica is a functional nutrient that is very important to achieve optimal productivity of rice plants. Latosol has the potential as a growing medium for rice plants but is constrained by the availability of silica. Giving rice husk ash and husk ash extract dissolved in liquid smoke which is rich in silica is an alternative in an effort to overcome the problem of latosol silica. This study aims to determine the effect of the addition of husk ash and husk ash extract dissolved in liquid smoke on the availability of latosol silica and the growth of upland rice. This research was a pot experiment using a completely randomized design with 7 treatments, namely without adding husk ash and husk ash extract with liquid smoke solvent (A0), husk ash extract dissolved in liquid smoke 5% (A1), husk ash extract dissolved in liquid smoke 10% (A2), husk ash extract dissolved in liquid smoke 15% (A3), husk ash 1.4 ton/ha (A4), husk ash 2.8 yon/ha (A5), and husk ash 4.2 ton/ha (A6) . Each treatment was repeated 4 times. The soil parameters analyzed were soil reaction, soil Cation Exchange Capacity, and available silica content in the soil while the rice plant growth parameters were plant height, wet weight, and plant dry weight. Research results obtained Silica values of 1.21% (A0), 2.58% (A1), 1.81% (A2), 1.44% (A3), 1.58% (A4), 1.97% (A5), 2.06% (A6).

Keywords: Husk Ash, Latosol, Liquid Smoke, Silica, Upland Rice