

The Optimal Production of Long-Beans in the Swamp Land by Application of Rhizobium and Rice Husk Ash

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Abstract : The swamp land contains high iron, aluminum, and low pH. Calcium and magnesium in the rice husk ash can reduce plant poisoning so that plant growth increases in fertility. The first factor was the doze of rice husk, and the second factor was 0.0 g rhizobium inoculant /kg seed, 4.0 g rhizobium inoculant/kg seed, 8 g rhizobium inoculant /kg seed, and 12 g l rhizobium inoculant /kg seed. The plants were maintained under light conditions with a + 11.45 - 12.15 hour photoperiod. The combination between rhizobium inoculant and rice husk ash has been an interacting effect on the production of long bean pod fresh weight. The mean relative growth rate, net assimilation rate, and pod fresh weight are increased by a combination of husk rice ash and rhizobium inoculant. Rice husk ash affected increases the availability of nitrogen in the land, albeit in poor condition of nutrition. Rhizobium is active in creating a fixation of nitrogen in the atmosphere because rhizobium increases the abilities of intercellular and symbiotic nitrogen in the long beans. The combination of rice husk ash and rhizobium could be effected to create a thriving in the land.

Keywords : aluminium, calcium, fixation, iron, nitrogen

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