SUMMARY

ADELINA MELINDA. Neutralizer, Agriculture Lime , and Urea-based Fertilizer Effect Toward Caisin Tosakan Variety on Podzolic Jasinga. Supervised by BUDI NUGROHO and ARIEF HARTONO.

Podsolik is one of the acid soil which is poor in nutrient and also contains relatively high exchangeable Aluminium (Al). The level of the exchangeable Al causes low crops production. This condition could be improved by fertilization and manipulating soil reaction. Fertilizers are used to supply nutrients so that it can improve crops growth, increase production, and improve crops quality. The Improvement of soil reaction can be achieved by liming or adding the other materials which have characteristic of lime or increasing soil pH. Liming can be done by agriculture lime or soil ameliorant substance which is expected can be function as lime material. One of the soil ameliorant is “Neutralizer”.

Podsolik was used as soil and Caisin as test plant. Treatments which used were Neutralizer, Agriculture Lime, dan Urea. The rates of Neutralizer were N₀ (0 mL/polybag), N₁ (0,1 mL/polybag), and N₂ (0,2 mL/polybag). While rates of agriculture lime were K₀ (0 g/polybag), K₁ (16,75 g/polybag), and K₂ (33,50 g/polybag). For N source, Urea was used and the rates were U₁ (4 g/polybag), U₂ (8 g/polybag) and U₃ (12 g/polybag). The treatments were set up in Completely Randomize Design (CRD) with 3 times replications.

The results of the study showed that Neutralizer treatment did not significantly affect on the weight of fresh caisin leaf whereas Agriculture Lime treatment from K₀ up to K₂ dosage significantly increased the weight of fresh caisin leafs. The Combination of lime with urea and “neutralizer” with urea did not significantly affect on the weight of fresh caisin leaf. Urea treatment significantly increased N level on K₀, K₁ and K₂ but agriculture lime treatment tended to decrease N level of Caisin. By increasing the rates of lime from K₀ to K₂ the P level of Caisin significantly increased, on the contrary the U₁ to U₃ treatments significantly decreased P level although between U₁ to U₂ were not significantly different. Agriculture lime treatment significantly increased K level of Caisin, but Urea treatment tended to reduce K level of Caisin. Urea treatment tended to increase Ca level of Caisin. By increasing the rates of lime from K₀ to K₂ the pH of soil significantly increased and significantly decreased the exchangeable Al whereas the U₁ to U₃ treatment only significantly increased the pH of soil.

In general, the addition of Neutralizer did not significantly affect on the increase of fresh weight and the decrease of soil exchangeable compare to agriculture lime.