AFFECTION OF POTASSIUM AND SILICEOUS FERTILIZER ON DRY MATTER ACCUMULATION AND GRAIN YIELD OF DIFFERENT RICE VARIETIES UNDER SALINITY CONDITION

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Summary

The experiment was conducted to estimate the affect of potassium fertilizer (90 kg K$_2$O/ha) and potassium combined with siliceous fertilizer (90 kg K$_2$O + 100 kg SiO$_2$/ha) in compared with control fertilizer dose 60 kg K$_2$O/ha on growth, dry matter accumulation and grain yield of two salinity tolerance rice varieties including improved variety (M6) and local variety (Cuom) in two spring season (2016 and 2017) in salted soil in Thai Thuy district, Thai Binh province. The experiment showed that as increasing potassium and siliceous fertilizer, the leaf dry weight was significantly increased in improved rice at active tillering and drough-ripen stage, whereas the increase was significant in local variety at dough-ripen stage. The crop growth rate was increased in improved variety at the growth stage from flowering to dough-ripen stage, whereas it increased in local variety at two growth stage from active-tillering to flowering and from dough-ripen to harvesting. As increasing potassium and siliceous, there was non-effect on the number of panilce per hill but increasing grain yield of both rice varieties due to increase the number of grain per panicle in the improved variety, whereas due to the increase in both the percentage of filled grain and 1000-grain weight in local variety. Thus, the increase amount of potassium fertilizer together with siliceous fertilizer application increased grain of improved rice variety (12.7%-16.3%) and local rice variety (8.1%-9.2%) under salt condition.

Keywords: Dry matter accumulation, potassium, siliceous, salinity, rice variety.