

Melinda Khafisatun Nikmah. Compost Mix Effect, Volcanic Ash, And Azolla To Paddy Plant Growth (*Oryza Sativa L.*). Guidance Of Didi Saidi and Supono BS.

ABSTRACT

Volcanic Ash is high enough of SiO₂ content, that can used as a element supplier of plant especially for paddy plant but that nutrient isn't yet available for the plant. It will available for plant if it was weathering. Weathering can be accelerated with organic material. Compost and volcanic ash have low N content, so its needed to increase N content with azolla as a growing media. The purpose of this research is to discover effect of compost mix, volcanic ash and azolla as a growing media also the effect for paddy plant growth. This research was implemented at greenhouse of Agrotechnology majority, Pembangunan Nasional "Veteran" Yogyakarta University, from September 2014 until January 2015. This research is using Random Program Methode complete with 15 treatments and controls. Result observation data analyzed of variety use variance with 5% real ladder. To discover difference between treatments variation use Duncan Multiple Range Test (DMRT), while for the between treatments and controls use Orthogonal Contrast Test. Research result show that ratio of volcanic ash and compost (0:100) is higher than ratio 25:75, 50:50, 75:25, 100:0 for tillers amount parameter at age 2, 4, and 6 mst, malai weight, wet weight, dry weight, production result, C-organic content, N-total content, K-available, and Ca content. Treatment to giving azolla 10 ton/ha show the higher result than giving 5 ton/ha and 15 ton/ha for high of plant parameter at age 2, 4, 6, and 8 mst, tillers amount 2, 4, and 6 mst, malai weight, dry weight, wet weight, percentage of empty unhulled rice, weight of 100 grain, C-organic content, and C/N ratio. There are interaction between ratio volcanic ash : compost and giving azolla at malai weight parameter, dry weight and C/N ratio.

Kata kunci :Volcanic Ash, Compost, Azolla, Paddy.