

WAYAN SOMA. The Growth and Yield of Lettuce (*Lactuca sativa* L.) New Grand Rapid Variety Response by Given In Situ Compost and Cow Urine. Under Guidance: Supono Budi Suyanto Sutoto and H. Zaenal Arifin.

ABSTRACT

This study aimed to determine the interaction of dose of in situ compost and a dose of cow urine on the growth and yield of lettuce, established which lettuce plants that grew well and had high yield of lettuce, and to get an appropriate dose of compost in situ and cow urine to enhance the growth and yield of lettuce. The research was conducted at CV. Tani Organik Merapi (Merapi Organic farmer), Dusun Balangan, Wukisari Village, Cangrangan, Sleman, Yogyakarta, in April 2015 until May 2015. The study was conducted by field research which arranged in completely randomized block design. The first factor was the dose of in situ compost which consists of three, namely K1 (10 ton/ha), K2 (15 ton/ha), K3 (20 ton/ha). Second Factor was the dose of cow urine in four levels, they were U1 (15%), U2 (30%), U3 (45%), U4 (60%). The data was analyzed statistically using variance level of 5% analysis and used the mean difference based on Duncan's Multiple Range Test (DMRT) at 5%. There were interaction between the treatment used in situ compost and cow urine on lettuce plants toward parameters of Fe and vitamin C by treated in situ compost 20 tons/ha with dose 60% cow urine could give good result. There is no interaction on plants parameter, number of leaves, fresh weight of plants, and dry weight of plants, the economic weight, and root volume.

Keywords: lettuce, In Situ compost, cow urine.