

ABSTRACT

This study aimed to examine the effect of application of the various dose of cow manure and boiler ash on the growth and yield of lettuce. Research was conducted at CV. Tani Organik Merapi, Dusun Balangan, Desa Wukirsari, Cangrangan, Sleman, Yogyakarta from April to June 2015. The experiment was arranged in the Split Plot Design. The main plot was the dose of cow manure i.e., P1 (10 tons/ha), P2 (15 tons/ha), P3 (20 tons/ha). The subplots were doses of boiler ash i.e., A0 (without ash), A1 (3 tons/ha), A2 (6 tons/ha), A3 (9 tons/ha). Parameter observed were number of leaves, plant fresh weight, dry weight of plants, economic weight, root volume, root length, self life, and soil water content. The data were analyzed statistically using analysis of variance level of 5%, and the average difference test by Duncan's Multiple Range Test (DMRT) at 5%. There was no interaction between dose of cow manure and boiler ash in affecting number of leaves, plant fresh weight, dry plants weight, economic weight, root volume, root length, self life and soil water content. The application of cow manure at dose of 10 tons/ha or 15 tons/ha resulted in significantly higher fresh weight than the application of cow manure at a dose of 20 tons/ha. The application of cow manure at dose of 10 tons/ha produced statistically similar fresh weight of that of 15 tons/ha. The application of cow manure at a dose 10 tons/ha resulted in significantly higher dry weight. The application of boiler ash at a dose of 3 tons / ha, 6 tons / ha and 9 tons/ha had no significant effect on the growth and yield of lettuce plants.

Keywords: lettuce, cow manure, boiler ash, growth, results.