



EFFECTS OF DIFFERENT SOURCES OF LIMING MATERIALS ON GROWTH AND DEVELOPMENT OF AMARANTHUS (*Amaranthus hybridus*) IN ABUJA, NIGERIA.

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ABSTRACT

A field experiment was conducted at University of Abuja Teaching and Research farm, F.C.T-Abuja, Nigeria to determine the effects of different sources of lime on growth of maranthus (*Amaranthus hybridus*). The experiment was laid out in a Randomized Complete Block Design (RCBD) in factorial fashion comprising six treatments replicated three times. The treatment includes two types of industrial lime (ultrasol - V_1 and agricultural lime - V_2) applied at three different levels. Data collected from the study were analyzed using Analysis of Variance (ANOVA) and means were separated with Duncan's New Multiple Range Test (DNMRT). The result obtained showed a high significant effects of treatments on growth of *Amaranthus hybridus*. Growth parameters such as plant height at 5 Weeks after Transplanting (WAT) had significantly higher value with the application of V_1L_2 (2000kg/ha) compared to other treatments and control. There was no significant effect on treatments and control at 2, 3 and 4WAT. Leaf count showed significant influence at 5WAT with the application of V_1L_1 (1000kg/ha), at 2 and 3WAT, there was no significant effect on treated plots and control. At 4WAT treatments had no significant effect on number of leaves. Plot treated with limes had no significant effect on Shoot Fresh Weight (SFW) at 4 and 5WAT. There was no significant effect on SFW at 2 and 3WAT. Shoot Dry Weight (SDW) showed a significantly higher value at 5WAT with V_1L_1 (1000kg/ha) compared to other treatments and control. At 4WAT control plot had a significant higher value on SDW. There was no significant effect on SDW at 4WAT with treatments. At 2 and 3WAT, SDW showed no significance difference on amended plots and control. Based on the following results, the use of ultrasol lime (V_1) both at 1000kg/ha and 2000kg/ha could be recommended for improving growth of *Amaranthus hybridus*.

Keywords: Abuja, *Amaranthus*, Different Sources of Lime, Growth.