

**Tests of the agronomic performance of industrial origin organic fertilizers in the agro-ecological conditions of Rwanda. Case study of Earth Boost on maize cultivation in Kicukiro District**

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**Abstract**

This study was designed to test the agronomic performance of industrial origin organic fertilizers currently introduced on the Rwandan agricultural market and widely disseminated. The work presents like advantage ahead of their wide dissemination in Rwandan agricultural systems and test their effectiveness. It is in this framework that the agronomic performance of three types of fertilizers, T2 (Traditional organic manure), T3 (Traditional organic manure + Earth boost) and T4 (Traditional organic manure + Earth boost + DAP) have been tested and compared with the untreated control T1 in a Completely Randomized Block Design (CRBD) with 5 replications. The effects of different treatments on the seed emergence rate, the vigor of maize seedlings (diameter and height of the stem) as well as agricultural yield are agronomic parameters selected for analysis.

The data collected for each parameter of observation have always been the subject of the analysis of variance. At different levels of significance and by calculating the Least Significant Difference (LSD), averages of treatments were compared and separated into homogeneous groups whenever real and statistically significant differences were evident between them. The overall look and feel of the results of the analyses carried out in this sense shows that with the exception of the seed emergence rate parameter, the differences between treatments were real and statistically very highly significant for all other parameters of observation with each time the coronation of T4 treatment. Moreover, T2 and T3 treatments have almost the same effect of on all settings but very positively higher than that of the untreated control T1. For agricultural yield, the T4 treatment stands very positively from other three treatments under study. However, when comparing the effects of T4 and T3 treatments, we easily notice that the effectiveness of Earth Boost is always related to its association with the DAP.

**Keywords:** Earth boost; traditional organic manure; Maize fertilization; Agronomic performance.