

Effects of Organic Manure on the Growth of *Jatropha curcas* in Kogi State North Central Nigeria

Authors : S. O. Amhakhian, M. Idenyi

Abstract : A pot experiment was conducted to assess the effects of organic manure on the growth of *Jatropha curcas* L seedlings at the Faculty of Agriculture, Kogi State University, Anyigba. There were seven treatments, namely, three (3) levels of poultry droppings (PD) (20g, 40g and 60g/kg soil) designated as T1, T2 and T3 respectively, three (3) levels of solid cattle dung (CD) (40g, 80g and 120g/kg soil designated as T4, T5, and T6) respectively, and control (no organic manure) designated as T7. All the treatments were replicated three (3) times. *Jatropha curcas* L seeds were sown into the polythene pot and observed for the period of six (6) weeks. Growth parameters measured were plant height, leaf count, stem girth, numbers of branches, and fresh weight. Mean separation using F-LSD0.05 showed that 120g cow dung/kg soil (T6) gave optimal level of organic manure required for *Jatropha curcas* throughout the growth period of the seedlings. All the treatments having organic manure were significantly better than the control ($P < 0.05$) except at two weeks after planting where all the treatments gave the same number of leaves and at the sixth week after planting where only 120g cow dung/kg soil (T6) showed significant difference ($P < 0.05$) in the number of branches. As a result, 120g cow dung/kg soil (T6) is therefore recommended for raising *Jatropha curcas* L seedlings in Anyigba, Kogi State.

Keywords : *Jatropha curcas*, cow-dungs, seedlings, poultry dropping, polythene-pot

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