

Eco-Agriculture for Effective Solid Waste Management in Minna, Nigeria

Authors : A. Abdulkadir, Y. M. Bello, A. A. Okhimamhe, H. Ibrahim, M. B. Matazu, L. S. Barau

Abstract : The increasing volume of solid waste generated, collected and disposed daily complicate adequate management of solid waste by the relevant agency like Niger State Environmental Protection Agency (NISEPA). In addition, the impacts of solid waste on the natural environment and human livelihood require identification of cost-effective ways for sustainable municipal waste management in Nigeria. These signal the need for identifying environment-friendly initiative and local solution to address municipal solid waste. A research field was secured at Pago, Minna, Niger State which is located in the guinea savanna belt of Nigeria, within longitude 60 3614311- 4511 and latitude 90 291 37.6111- .6211 N. Poultry droppings, decomposed household waste manure and NPK treatment were used. The experimental field was divided into three replications and four (4) treatments on each replication making a total of twelve (12) plots. The treatments were allotted using Randomized Complete Block Design (RCBD) and Data collected was analyzed using SPSS software and RCBD. The result depicts variation in plant height and number of leaves at 50% flowering; Poultry dropping records the highest height as a number of leaves for waste manure competes fairly well with NPK treatment. Similarly, the varying treatments significantly increase vegetable yield, as the control (Nontreatment) records the least yield for the three vegetable samples. Adoption of this organic manure for cultivation does not only enhance environment quality and attainment of food security but will contribute to local economic development, poverty alleviation, and social inclusion.

Keywords : environmental issues, food security, NISEPA, solid waste

Conference Title : ICGEM 2015 : International Conference on Geography and Environmental Management

Conference Location : Rome, Italy

Conference Dates : September 17-18, 2015