Nature and Science

Effects of Organic, Organomineral and NPK Fertilizer Treatments on the Quality of Amaranthus Cruentus (L) On Two Soil Types In Lagos, Nigeria

*Makinde Esther. A., **O. Fagbola., **E. A. Akinrinde, and ***E.A. Makinde
*Department of Botany, Lagos State University, Ojo Lagos.Nigeria. ** Department ofAgronomy, Universityof Ibadan.Ibadan.Nigeria. *** Federal College of Agriculture. Ibadan leyesam@gmail.com

Abstarc :

Under tropical soils, the precise requirement of inorganic fertilizer and its possible substitute is yet to be

validated for the production of Amaranthus cruentus L. The nutrient requirement of A. cruentus under two soil types and yield quality under field conditions. Field experiment was conducted at two locations in LagosState: Ikorodu (Orthic Luvisol) and Lagos State (LASU) Ojo Campus (Dystric Fluvisol) to investigate the effects of organic and organomineral and NPK fertilizer treatments on the quality of Amaranthus cruentus L. Eight fertilizer treatments. (1) Control (no fertilizer), (2) Pacesetter's Grade B (PGB) 100 %, (3) PGB + NPK (75:25), (4) PGB + NKP (50:50), (5) Kola Pod Husk (KPH) 100 %, (6) KPH + NPK (75:25), (7) KPH + NPK (50:50) and (8) NPK (100 %) were tested at first planting. Residual effects of the fertilizers were assessed in the second and third planting periods. The experiment was arranged in a randomized complete block design in four Replications. Parameters assessed include proximate analysis. Data were analysed using ANOVA. The KPH + NPK (75:25)resulted in significant ($p<0.05$) higher crude protein content (19.8 and 14.9 %), ether extract (8.5 and 8.2 %) while crude fibre (9.5 and 10.8 %) was lower than control at Ikorodu and LASU respectively. The KPH and PGB had high potential in A. cruentus production. At Ikorodu, KPH + NPK (75:25) was the best while at LASU, PGB + NPK (75:25) was optimum. KPH + NPK (75:25) gave highest crude protein content, ether extract and lowest crude fibre in A. cruentus.

[Nature and Science 2010;8(3):56-62]. (ISSN: 1545-0740).

Key Word :
Amaranthus cruentus, organomineral fertilizer, quality and soil type

Volume 8, Number 3, March 2010 , ISSN 1545-0740