

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

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### Abstract :

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 Lagos State: 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 + NPK (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