# EVALUATION OF SOYBEAN GENOTYPES IN GUINEA SAVANNAH LACATION OF NIGERIA

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## ABSTRACT

A field trial was conducted in 2016,to evaluate the new soybean genotypes for their agronomic performance against the local check. The experiment was conducted in two locations namely Makurdi(lat. 7.73'N, long. 8.53'E,) and Wukari(lat. 7.88''N, long. 9.78E,) in each location a triplicated trial involving ten genotypes of soybeans were implemented. The effects of genotype, location and genotype x environment interaction under combined analysis on agronomic yield, and soybean yield were found significant at P<0.05. The highest mean yield was found from TGX 1835-10F and TGX 1985-10F in all locations. Correlations coefficient for seed yield revealed a positive and significant association with all agronomic yield except 100 seed weight in all locations. The Eigen value and percent variation estimates were significant for days to first flowering (5.45 /0.41), while 100 seed weight had the lowest values (0.03/100) The finding also revealed that the differences between the eigen values and percent variation were significantly lower for ,number of branches (0.13), and number of pod per plant (0.05),. The result suggests that the environment had less effect on the expression of these traits. Therefore, selection based on these traits might increase soybeans performance in all locations. The findings have demonstrated the stability of traits in different locations which is useful information in soybean breeding. TGX-, 1448-2E, and TGX-1945-4E had yields above the grand means, and the yield were stable, TGX 1987-10F, TGX 1835-10F and TGX-1945-4E had better performance compared To TGX-1485-1D

**Keywords:** Soybeans, genotype, yield component, yield.