

## Abstract

Bean (*Phaseolus vulgaris* L.) is one of the most important crops in (ASALs) as they food and prevent malnutrition among people. However, production has been declining due to low soil moisture which affects absorption of nutrients in the soil. An experiment was carried in field at Kalro-Katamani, to determine the effects of foliar fertilizer application rates on productivity of four commonly grown varieties (Wairimu, Wairimu dwarf, Piriton and KAT B9) in a complete randomized block design. Data was collected on grain yield, biomass yield and harvest index. The data was subjected to analysis of variance (ANOVA) using SAS (version 8.0) to detect differences between treatments. The results showed that grain yield increased with increasing foliar fertilizer application rate. Wairimu had the highest grain yield (1440.87g) followed by Wairimu dwarf (1367.64g), Piriton (1364.38g) and KAT B9 (1195.15g) produced the lowest yields and were not significantly different from each other. KAT B9 and Piriton had the highest and lowest biomass respectively. Wairimu had the highest harvest index (1.18) followed by Wairimu dwarf (1.05), Piriton (1.09) and KAT B9 (0.93).