

ABSTRACT

Blackberry (*Rubus* L. sub-genus *Rubus* Watson) fruits grow wild in Kenya; though in some parts of the world they have been adopted and are cultivated commercially. However, limited information is available regarding, growth characteristics, fruit yield and quality of wild species growing in Kenya under conventional production. The objective of the study was to contribute towards increased blackberry cultivation, by evaluating the performance of wild blackberry species under conventional production in Kenya. Two seasons involving four wild blackberry species (*Rubus volkensii*, *Rubus steudneri*, *Rubus apetalus*, and *Rubus pinnatus*) growing in Kenya and one cultivated species (*Rubus fruticosus* variety “Ruben”) were carried out to evaluate their performance under conventional production. Season 1 was carried out in January 2016 to December 2016 and season 2 was carried out in June 2016 to July 2017. Both seasons were carried out at the Horticulture Research and demonstration Field 3, Egerton University, Njoro. The seasons were laid out in a Randomized Complete Block Design (RCBD), with three replications. A block consisted of five plots each measuring 4 m by 4 m and separated with a path of 1.5 m wide between blocks and 1 m wide between plots. Data collection was on: plant height, number of laterals, internode length, number of internodes per cane, cane diameter, number of canes per stool, days to first and 50% flowering, duration of blooming and harvesting, number of flower buds and fruits, days to fruit maturity, fruit number per cane, fresh fruit weight (g), fruit dry matter, fruit size and estimated yield per hectare. All the data were subjected to Analysis of Variance (ANOVA) using PROC GLM procedure of SAS program (SAS Institute, Cary Inc, 2001). Significant means were separated using Tukey’s Honestly Significant Difference Test (Tukey’s HSD) at $p \leq 0.05$. The results indicate that wild blackberry species *Rubus apetalus*, exhibited the most vigorous growth in terms of cane height (154.13 cm), cane diameter (19.90 mm) and fruit number per lateral (56 fruits). Cultivated species *Rubus fruticosus* was the earliest to flower and fruit at 123 days and had significantly ($p \leq 0.05$) higher fruit yield per plant 373.00 g and fresh weight of 5.60 g per fruit. *Rubus volkensii* was the second in fruit yield per plant 139.00 g and 134.00 g season 1 and 2 respectively. Two (2) wild blackberry species *Rubus pinnatus* and *Rubus steudneri* flowered but did not set fruits. From this study it is recommended that *Rubus volkensii* should be considered for further improvement as it had the higher fruit yield per plant and fresh fruit yield after cultivated species *Rubus*

fruiticosus var “Ruben”. This study showed that under conventional production, wild blackberry species have different growth characteristics, fruit yield components and fruit quality.