

Agronomic and Yield performance of Amaranths varieties

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INTRODUCTION

Amaranth is one of the key indigenous and commercially cultivated leafy vegetable in Tanzania. Amaranth grows in adverse conditions and provides high quality nutritional benefits relevant for human health. Commercial farmers usually grow the crop through broadcasting seeds and reap from its harvest once per growing season.

The crop's ability to flower early poses a serious challenge to farmers especially when the crop exceeds 21-24 days. Once Amaranth has developed inflorescences, its consumer quality is reduced and its value is lowered. This leads to low economic returns. Identification of late flowering amaranths vegetable varieties that aligns with the common practices by the farmers is essential to ensure good crop performance and high economic returns.



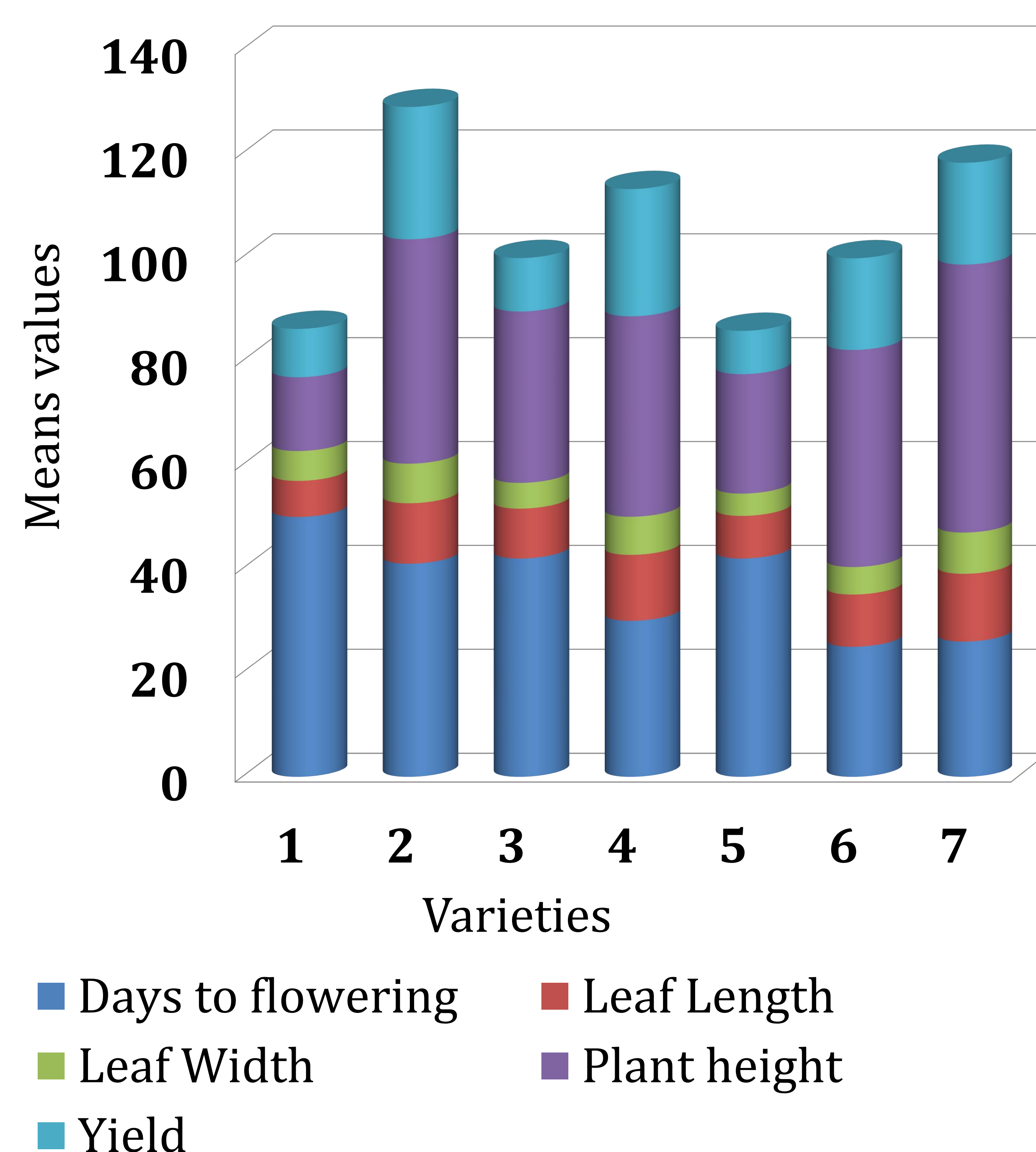
METHODOLOGY

This experiment was established in order to compare agronomic, phenology and yield performance of 3 introduced and 4 local varieties of amaranths. The experiment has been laid out in a completely randomized design with three replications, and each variety occupies a plot size of 1 square meter. The following data were collected after 25 days on plot bases: Total biomass of the harvested plants of each variety, leaf size, plant height and days to flowering. The results were subjected to a one-way ANOVA in genstat in order to identify the best performing variety with respect to agronomic, phenology and yield trait



RESULTS AND FINDINGS

Means Traits against variety



DISCUSSION

The results show significant difference in days to flowering, yields and other agronomic traits, variety no 2 results in high yield and late in flowering for 21 days from variety no 7 (local check). This variety was selected for introduction, because the two traits will have an impact in production of amaranths.

CONCLUSION

Identification of best performing varieties for cultivation is useful to farmers as they would maximize their return on investment and reduce losses by utilizing good varieties. This variety will be trial in different locations with the farmers before introduction.

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