Agronomic and yield performance of amaranthus varieties based on the common farmers practices

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Amaranthus 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 amaranthus vegetable varieties that aligns with the common practices by the farmers is essential to ensure good crop performance and high economic returns. An ongoing experiment has been established in order to compare agronomic, phenology and yield performance of 3 introduced and 4 local varieties of amaranthus. The experiment has been laid out in a completely randomized design with three replications, and each variety occupies a plot size of 1square meter. The following data will be 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 will be subjected to a one-way ANOVA in genstat in order to identify the best performing variety with respect to agronomic, phenology and yield traits. The 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.