

Growth and yield performances of selected okra varieties grown in different environmental conditions in Kilinochchi, Sri Lanka

A F Nusra^a, M Anusiya^{*a} and K Jeyavanan^b

^a Department of Biosystems Technology, Faculty of Technology, University of Jaffna, Sri Lanka

^b Department of Agronomy, Faculty of Agriculture, University of Jaffna, Sri Lanka

*Correspondence: anusiya@univ.jfn.ac.lk

Okra (*Abelmoschus esculentus* L. Moench) is a popular heat-tolerant vegetable crop with high economic and nutritional importance, cultivated in many parts of Sri Lanka. Red okra is a newly released variety in Sri Lanka. Recently, among okra varieties, extent of red okra is increasing in Dry zone of Sri Lanka. This study was carried out from January to March 2021 at the Agriculture Farm, Department of Agronomy, Faculty of Agriculture, University of Jaffna to investigate the growth performances of growth and yield performances of selected okra varieties grown in different environmental conditions. Three different types of okra varieties, such as "Hybrid variety" (V1), "Milk variety" (V2), and "Red variety" (V3) were grown under two different environmental conditions, such as insect-proof (T1) and open field (T2). The experiment was arranged in a completely randomized design (CRD) with six replicates. Growth parameters: plant height, number of leaves per plant, number of branches per plant, and yield parameters: pod length, number of pods per plant, and yield were measured. The data were analyzed in ANOVA test using SAS software. The results revealed that Hybrid variety (v1) was significantly ($p < 0.05$) showed better performance among the okra varieties in insect proof net than open field. The maximum height (102.6 cm), number of leaves (29.1), number of branches per plant (10.6) were recorded in Hybrid variety under insect-proof net than the open field, which was observed similarly in yield parameters. Maximum Number of pods per plant (8), longest pod length (19.26cm) maximum yield (1.54kg per plant) were recorded in Hybrid okra variety under insect proof condition. Therefore, this study revealed that among the okra varieties, the Hybrid variety was performed well in the insect-proof net than in the open field. Insect-proof net could be improved the performance of okra variety than the open field.

Keywords: hybrid variety, insect-proof, okra, open field