B-28: Effect of time of planting and microclimatic variations on the yield and other agronomic characters of Okra (*Abelmoschus esculentus* L. Moench) in the mid country wet zone of Sri Lanka

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Okara is at present a valuable export crop by Sri Lanka. Varietal evaluation and plant density experiments conducted for several years in the Mid Country Wet Zone, when planted at different dates during the Maha and Yala seasons showed significant variation in yield and other agronomic characters in Okra.

Hence this study was carried out to determine the optimum time of planting of the crop in this region, and to observe the influence of microclimatic variations on the yield and other agronomic characters.

The experiment was carried out in a randomized complete block design with 4 replicates. Six times of planting at fortnightly intervals was done. Cultural practices were done according to the Dept. of Agriculture recommendations. The seeds were soaked in water for one day before planting to ensure early germination. Agronomic and other data were collected. Climatological data were also recorded.

The yield data shows that there is a significant yield reduction as the time of planting advanced. High marketable yields were obtained, when the plantings were done early in the season.

The other agronomic characters such as plant height at 50% flowering, plant height at last harvest, internodal distance at last harvest, number of picks, number of pods per plant also declined as the time of planting advanced.

The incidence of pests such as leaf-eating caterpillars, leaf-minor, pod borer and aphids declined gradually as the time of planting advanced.

The incidence of diseases such as collar-rot decreased and yellow mosaic virus increased gradually as the time of planting advanced.

When the weekly mean sunshine hours and crop yields were compared, there was medium + ve linear correlation ($r = +0.583$). This means, as the time of planting advanced, the mean Sunshine hours decrease, and subsequently the yield decreased. Similarly, maximum and minimum temperature, rainfall, number of rainy days, soil temperature, relative humidity & wind speed were also analysed.

The results indicate that the optimum time of planting Okra in the Mid Country Wet Zone during the Yala season was from the second week to fourth week of March, and for the Maha season from the second week of November, upto the second week of December. Early sowing gives higher yields and better quality pods.

The influence of microclimatic variations on the agronomic characters was clearly shown.

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