

A Field Screening of Okra (*Abelmoschus esculentus* L.) Germplasms for Identifying Resistance Sources for Okra Yellow Vein Mosaic Virus in Dry Zone of Sri Lanka.

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Abstract

Okra (*Abelmoschus esculentus* L.) is one of widely cultivated vegetable crop in Sri Lanka. Many pests' attacks and diseases significantly decrease the quality and quantity of okra production in dry zone. Okra Yellow Vein Mosaic virus (OYVMV) is the major disease affecting the okra production. Therefore, identification of germplasms with strong resistance to OYVMV has become an urgent need. As such an experiment was carried out in RARDC*, Kilinochchi during Yala 2024. Eighteen locally popular germplasms (*Meeharak-An Bandakka*, *Thei Bandakka*, Red local (Perennial), *Athupahe bandakka*, *Katu bandakka*, *Athdala bandakka*, *Idipandam bandakka*, *Pal wendi*, *Kiri bandakka*, *Rathu bandakka*, MI-07, MI-05, Jaffna Local, Kilinochchi Local, *Haritha*, Red local (Annual), *Hean bandakka*) and advanced breeding line (TV 08) were screened with 4 control lines (OP 7, OP 10, T 09 and *Sarika* F1) (Total 24 treatments). A randomized complete block design was used with 3 replications. (60cm and 90 cm) spacing was used to accommodate plants in a plot. Disease severity was assessed and percentage disease incidence (PDI) was calculated using internationally recognized disease rating scale. Means of PDI was compared using Tukey HSD method and disease progressive curve was developed. After 6th week of observation. All control entries show "Resistance" response to OYVMV with 0% PDI. Local cultivar "*Pal wendi*" was "Susceptible" with 66.97% PDI. Other all 17 germplasms showed "Highly susceptible" disease responses with more than 70% PDIs. This experiment revealed urgent need of changing the recommended cultivars for local cultivation and producing the novel high-yielding disease resistance okra germplasms.

Keywords – Okra, OYVMV, Screening, PDI

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