

# **STUDY ON THE EFFICACY OF MANAGEMENT PRACTICE AGAINST CHILLI LEAF CURL COMPLEX**

By

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## **ABSTRACT**

Chilli is an important cash crop in Sri Lanka. Leaf curl complex is considered as the major constraint for the cultivation of chilli. Major reasons for Leaf Curl Complex are thrips and mite attacks and involvement of viruses transmitted by whitefly. Effective vector management is one of the way of eradicate the Leaf curl complex on chilli. The present study focused on identifying the effective management practices and resistant varieties of chilli towards the leaf curl incidences.

A field study was conducted at the Agronomy farm of the Eastern University and Kaluthavallai in Batticaloa district during August 2017 to November 2017 to examine the yield response, leaf curl complex incidence percentage, presence of white fly and natural enemy population on chilli varieties against management practices. The different chilli varieties *viz.*, MI2, PC1, Galkiriyagama, KA2, MICH3 recommended by the Department of Agriculture, Sri Lanka were selected for this study. Based on the questionnaire survey at Kaluthavallai, the cultivating varieties, cultivating seasons, farmers' management practices, chilli leaf curl complex incidences and the presence of pest and natural enemies were analyzed. The survey showed that the farmers at Kaluthavallai are highly adapted to the

chemical pesticide management practices. Their chemical management practices positively impacted on vector population of chilli leaf curl virus and suppress the natural enemy population. The field study at the Agronomy Farm, Eastern University was carried out by the inclusion of ecofriendly management practices, namely cow urine, vermiwash, vermicompost and neem extract and one of the chemical insecticide, Abamactin which was highly used by Kaluthavallai farmers and untreated control against different chilli varieties, MI2, PC1, Galkiriyagama, KA2 and MICH3. Among the thirty treatments, cow urine treated to MICH3 variety (181g yield per plant) obtained as a best treatment followed by Abamactin treated MICH3 (176g yield per plant) variety than the other practices via neem leaf extract, vermiwash, vermicompost. The least yield was observed in untreated MI2 variety (19g yield per plant). The study revealed that cow urine management practices had maximum efficacy to manage leaf curl complex in the field. Because of the yield, complex incidence percentage, natural enemy and white fly population parameter data, that was concluded so. Interaction was also observed in the yield of chilli between the management practices and varieties. The study recommended the MICH3 with the application of cow urine for the management of chilli leaf curl complex in the Batticaloa district.

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