Present Status of Micro Irrigation Systems in Coconut Plantations of Dry and Intermediate Zones of Sri Lanka

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Irrigation, particularly during the dry period, is critical to sustain the coconut production in Sri Lanka. Micro-irrigation is one of the most efficient irrigation technologies that can be adopted as a solution to water scarcity in the dry areas. Large effort has been made to popularise micro-irrigation systems (MISs) among coconut growers, however many of them have failed to adopt them successfully. This study was conducted to assess the present status of the use of MISs in coconut plantations in order to identify the reasons for the failures. Among 53 farmer fields having MISs in Marawila and Kurunegala Regional Office areas of the Coconut Cultivation Board, 35 were selected for a questionnaire survey. Adoption of MISs in the study area is considerably very low (P<0.5%) in comparison to the total extent cultivated, although these areas do not have adequate rainfall. High labor requirement for conventional irrigation is the major reason to use MISs by the adopted farmers. Majority of the MISs were found without filters and pressure gauges, which are essential components of MISs. Mini-sprayers were preferred over drip emitters due to the hardness of well water in the studied area. The most common problem reported by farmers is the frequent pipe-line breakage for which a feasible solution has to be provided. The most important finding of the study is the lack of awareness on technical aspects of operation and maintenance of MISs among farmers. Therefore, awareness programs on those aspects are essential for increasing the adoption of MISs in coconut plantations in the dry and intermediate zones of Sri Lanka.

Keywords: Coconut plantation, Dry zone, Micro irrigation, Water requirement, Water quality

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